Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Weekly / Vol. 64 / No. 37
September 25, 2015

National Gay Men's HIV/AIDS Awareness Day — September 27, 2015

National Gay Men's HIV/AIDS Awareness Day is observed each year on September 27 to direct attention to the ongoing and disproportionate impact of human immunodeficiency virus (HIV) infection and acquired immune deficiency syndrome (AIDS) on gay, bisexual, and other men who have sex with men (MSM) in the United States. MSM represent approximately 2% of the U.S. population (*1*). However, in 2013, MSM accounted for 67% of all new HIV diagnoses, including 3% who were also injection drug users (*2*).

In 2011, among all persons living with HIV infection, an estimated 647,700 (54%) were MSM (3). Of these MSM, an estimated 84% received a diagnosis of HIV, 38% were in HIV medical care, antiretroviral therapy was prescribed for 35%, and 30% achieved viral suppression.

CDC supports efforts to reduce HIV infection among MSM, including HIV prevention services that increase diagnosis of HIV infection, support the linkage and engagement of MSM in care and treatment, and reduce the risk for acquiring and transmitting HIV. Additional information about these efforts is available at http://www.cdc.gov/hiv/risk/gender/msm. Additional information about National Gay Men's HIV/AIDS Awareness Day is available at http://www.cdc.gov/features/ngmhaad.

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Unreported Male Sex Partners Among Men with Newly Diagnosed HIV Infection — North Carolina, 2011–2013

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Human immunodeficiency virus (HIV) prevention interventions, such as preexposure prophylaxis (PrEP), are often targeted to men who have sex with men (MSM) who self-report high-risk behaviors (*1*). Data from a prospective study evaluating methods to detect acute HIV infection among a primarily young (aged <25 years) and black or African American (African American) population from North Carolina were analyzed (*2*). In the study, participants were asked about risk behaviors during pretest counseling (at the time of testing) and then during a partner services (*3*) interview (at HIV diagnosis). Participants whose disclosure of sexual risk behaviors during pretest counseling was different from their disclosure of sexual

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risk behaviors during their partner services interview were identified, and factors associated with these discordant responses were examined. Among 113 HIV-infected men, 26 (23.0%) did not disclose male sex partners at pretest counseling, but subsequently did disclose this information during their partner services interview. When compared with men who disclosed having male partners at pretest counseling, these 26 MSM who did not disclose male partners during pretest counseling were found to have a similar number of male partners during contact tracing, but were more likely to have a female partner (30.8% versus 6.9%). In addition, the proportions of MSM found to have at least one HIV-infected partner were similar for both groups (MSM who disclosed having male partners during pretest counseling and those who did not). To better customize HIV prevention interventions for MSM, HIV prevention programs might consider using novel strategies to accurately assess risk in this population.

The Screening Targeted Populations to Interrupt Ongoing Chains of HIV Transmission with Enhanced Partner Notification (STOP) project was a prospective study evaluating acute HIV infection diagnosis linked to partner services at 12 HIV testing venues in North Carolina, New York City, New York, and San Francisco, California (*2*,*4*). Participants were asked about sex partners during pretest counseling, and those diagnosed with HIV infection were asked again during a partner services interview following diagnosis. During pretest counseling a counselor recorded demographics and risk behaviors within the past 12 months. After HIV diagnosis, HIV-infected participants were offered partner notification services. Contact information was elicited for sex partners from the previous 3 months for participants receiving a diagnosis of acute HIV infection and from the previous 12 months for participants receiving a diagnosis of established HIV infection (*3*). Disease intervention specialists contacted sex partners by telephone or internet-based communication (e.g., e-mail and social network messaging) and text messaging when available. HIV testing was offered to notified partners.

This analysis included participants from three sexually transmitted disease (STD) clinics in North Carolina. MSM were defined as male participants with newly diagnosed HIV infection (either acute or established) who reported a male sex partner during the partner services interview. Factors associated with not reporting male sex partners during pretest counseling were determined among MSM who did not report a male sex partner during pretest counseling but subsequently did during the partner services interview. Sexual networks for MSM who named at least one sex partner during partner services interviews were also reviewed to evaluate their connections to other MSM. Data were analyzed using Chi-squared tests, t-tests, and Fisher's exact tests to compare groups; statistical significance was defined as two-sided $p<0.05$.

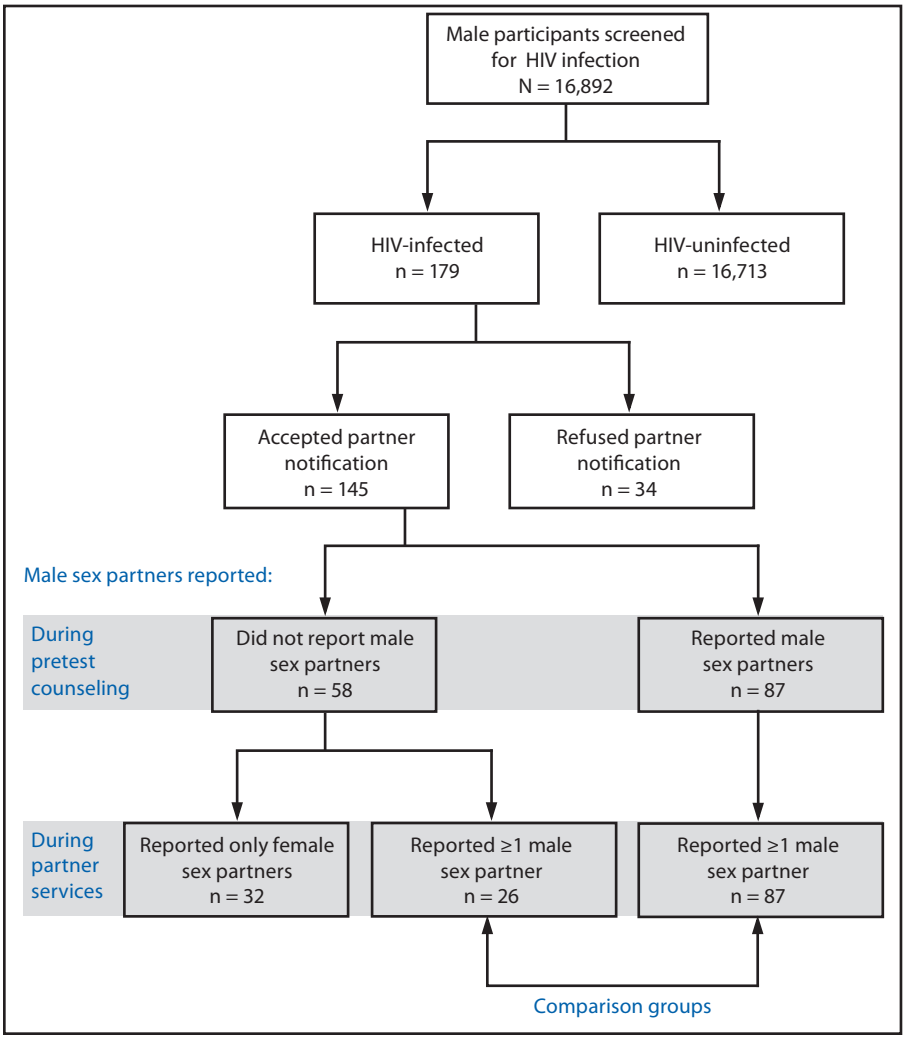
Among 16,892 male participants tested during September 2011–October 2013 in North Carolina, 179 (1.1%) received a diagnosis of HIV infection; 145 of the 179 (81.0%) participated in partner services interviews. Among 113 HIV-infected men (median age = 24 years; 85.0% African American)

The *MMWR* series of publications is published by the Center for Surveillance, Epidemiology, and Laboratory Services, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, GA 30329-4027.

Suggested citation: [Author names; first three, then et al., if more than six.] [Report title]. MMWR Morb Mortal Wkly Rep 2015;64:[inclusive page numbers].

who reported having male sex partners during their partner services interviews, 26 (23.0%) had not disclosed male sex partners at the time of HIV testing (pretest counseling) (Figure). Compared with MSM who reported male sex partners during pretest counseling, those who did not had a similar number of male sex partners (median three versus four male sex partners, p = 0.41), but were more likely to have at least one female sex partner (30.8% versus 6.9%, p = 0.001) (Table). Among all MSM participants who tested positive for HIV, 23 (20.4%) reported sex with an HIV-infected partner during pretest counseling; however, partner services determined that 70 (61.9%) had one or more HIV-infected sex partners. Among 14 MSM who reported male and female sex partners during partner services interviews, three had also accurately reported male and female sex partners during pretest counseling. Sexual networks were diagrammed for 86 MSM who provided contact information for at least one sex partner (available at http://www.cdc.gov/hiv/pdf/cdc-hiv-msm-risk-behavior.pdf). Among 17 HIV-infected MSM who did not report male sex partners during pretest counseling and provided contact information for at least one sex partner, nine (52.9%) shared sexual networks with other participants who did report male sex partners and who also had newly diagnosed HIV infection.

FIGURE. Reported risk behaviors at the time of testing and during partner services among participants who received human immunodeficiency virus (HIV) testing — North Carolina, September 2011–October 2013



Discussion

Approximately 23% of newly identified HIV-infected MSM tested at STD clinics in North Carolina did not report male partners at the time of HIV testing, despite having been asked about male and female sex partners. Nondisclosure of same-sex sexual contact was not associated with number of male partners but was associated with reporting at least one female sex partner during partner services; these men also often shared sexual networks with other MSM with newly diagnosed HIV infection.

Nondisclosure of risk for HIV infection (including same-sex sexual contacts) to health care providers has been previously reported (*5*,*6*). In a survey in New York City, 39% of MSM did not disclose their sexual orientation to health care providers (*5*), and in a study evaluating HIV screening strategies in an emergency department, 51% of newly diagnosed patients reported no HIV risk factors (*6*). Participants in this analysis were recruited from STD clinics, where staff members were experienced in taking a sexual history; participants in this study, who were seeking STD evaluation, might also have been more prepared to discuss their sexual history with their providers, compared with those recruited from the community or in an emergency department. Despite the apparent advantages of the STD clinic setting, nearly a quarter of HIV-infected MSM did not report their male sex partners during pretest counseling.

Health care providers often assess the need for HIV and STD prevention services on the basis of clients' self-reported risk behaviors, which might be underreported. MSM might misreport risk behaviors for several reasons. First, clients might not be aware of the importance and potential benefits of reporting risk behaviors accurately (e.g., that PrEP is recommended for persons, especially MSM, at high risk for HIV acquisition). Second, concerns about privacy, confidentiality, fear of being judged, and perceived or experienced

TABLE. Characteristics of men who have sex with men with newly diagnosed HIV infection, by whether they did or did not report male sex partners at the time of HIV testing — North Carolina, September 2011–October 2013

Characteristic	MSM who reported male sex partners at testing (n = 87)			MSM who did not report male sex partners at testing (n = 26)			*p*-value
	No.	IQR	(%)	No	IQR	(%)	
Median age (yrs)	24	22–30		23.5	20–28		0.37
Race/Ethnicity							0.77
White	13		(14.9)	3		(11.5)	
Black/African-American	73		(83.9)	23		(88.5)	
Other	1		(1.2)	0		(0.0)	
HIV final status							0.73
Established HIV infection	76		(87.4)	24		(92.3)	
Acute HIV infection	11		(12.6)	2		(7.7)	
Median number of reported male sex partners in past 12 mos	4	2–6		3	2–5		0.41
Reporting sex with an HIV-infected partner at the time of testing							0.002
Yes	23		(26.4)	0		(0.0)	
No	64		(73.6)	26		(100.0)	
Reported ≥1 female sex partner in past 12 mos							0.001
Yes	6		(6.9)	8		(30.8)	
No	81		(93.1)	18		(69.2)	
Named ≥1 sex partner in partner services							0.14
Yes	69		(79.3)	17		(66.7)	
No	18		(20.7)	9		(33.3)	
Had ≥1 named sex partner confirmed with HIV infection through partner services							1.00
Yes	56		(81.2)	14		(82.4)	
No	13		(18.8)	3		(17.7)	

Abbreviations: HIV = human immunodeficiency virus; IQR = interquartile range; MSM = men who have sex with men.

homophobia might interfere with accurate reporting of sexual risk behavior (*7*). Third, although risk for HIV acquisition is more closely correlated with sexual behavior than with sexual orientation, mistaking sexual orientation or identity (*8*) as sexual behavior can contribute to misreporting. Reporting at least one female sex partner during partner services interviews was associated with nondisclosure of male sex partners during pretest counseling in this study. Other studies have also noted that MSM who self-identified as bisexual or heterosexual were less likely than those who self-identified as gay to report same-sex behaviors (*5*,*7*). Bisexual-identifying MSM might have additional barriers to accurately reporting risk behavior. A qualitative study conducted in New York City reported that society often views bisexuality as non-monogamous and indicative of infidelity (*9*). This additional stigma might play a role in misreporting sex behaviors.

Numbers of male sex partners and HIV-infected partners were similar among HIV-infected MSM who did and did not disclose male sex partners during pretest counseling. More than half of HIV-infected MSM who did not report male sex partners during pretest counseling shared sexual networks with those who reported male sex partners. Taken together, these observations suggest similar levels of risk for HIV acquisition across the two groups (*10*). This potential for missed opportunities to deliver effective prevention services to MSM highlights the importance of accurately identifying risks among this population, which remains the population most affected by HIV infection.

The findings in this report are subject to at least three limitations. First, only HIV-infected participants who accepted partner services were included. Those who had the greatest concerns about stigma or privacy might have been less likely to participate in partner services (19% did not participate) resulting in an underestimate in the frequency of men not accurately reporting male sex partners. In addition, the proportion of HIV negative MSM who did not report male partners could not be estimated. Second, barriers to accurately reporting risk behaviors were not assessed. Third, the results were observed among clients (most of whom were African American) at three STD clinics in North Carolina and might not be generalizable.

A substantial proportion of MSM with newly diagnosed HIV infection (predominately young and African American) at three STD clinics in North Carolina did not disclose their male sex partners during HIV testing. To customize HIV prevention interventions effectively in disproportionately affected persons such as young African American MSM, HIV prevention programs might consider implementing novel strategies to accurately assess risk. Examples of potential strategies include

Summary

What is already known on this topic?

Patients do not always report sexual risk behaviors to their health care providers. Unreported risk behaviors lead to missed opportunities to provide appropriate human imunodeficiency virus (HIV) prevention services.

What is added by this report?

Among the primarily young and African American study population, a significant proportion of HIV-infected men who have sex with men (MSM) did not disclose their sexual risk behaviors at the time of HIV testing. In this population, HIV-infected MSM who did and those who did not report male sex partners during HIV testing had similar levels for risk of HIV acquisition and shared sexual networks.

What are the implications for public health practice?

To effectively customize HIV prevention interventions in disproportionately affected persons such as young African American MSM, novel strategies are needed to accurately assess risk. Bisexual men might also have additional barriers to accurately reporting HIV risk behaviors.

increased access to testing venues that are customized for young African American MSM, increased use of technology to administer risk screening privately (e.g., a risk screening tool that can be completed on a mobile device or a clinic's tablet computer), and increased education regarding the benefits of new HIV prevention interventions, such as PrEP, that can be offered if the patient's risk for HIV infection is accurately ascertained.

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Alcohol Use and Binge Drinking Among Women of Childbearing Age — United States, 2011–2013

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Excessive alcohol use* is risk factor for a wide range of health and social problems including liver cirrhosis, certain cancers, depression, motor vehicle crashes, and violence (*1*). Alcohol use during pregnancy can lead to fetal alcohol spectrum disorders (FASDs) and other adverse birth outcomes (*1*). Community studies estimate that as many as 2% to 5% of first grade students in the United States might have an FASD, which include physical, behavioral, or learning impairments (*2*). In 2005, the Surgeon General reissued an advisory† urging women who are or might be pregnant§ to abstain from alcohol consumption to eliminate the risk for FASDs or other negative birth outcomes. To estimate current prevalences of any alcohol use and binge drinking (consuming four or more drinks on an occasion) among pregnant and nonpregnant women aged 18–44 years in the United States, CDC analyzed 2011–2013 Behavioral Risk Factor Surveillance System (BRFSS) data. Among pregnant women, the prevalences of any alcohol use and binge drinking in the past 30 days were 10.2% and 3.1%, respectively. Among nonpregnant women, the prevalences of any alcohol use and binge drinking in the past 30 days were 53.6% and 18.2%, respectively. Among binge drinkers, pregnant women reported a significantly higher frequency of binge drinking than nonpregnant women (4.6 and 3.1 episodes, respectively); the largest amount consumed during binge drinking was also higher among pregnant women than nonpregnant women (7.5 versus 6.0 drinks), although this difference was not statistically significant. Implementation of evidence-based clinical and community-level strategies would be expected to reduce binge drinking among pregnant women and women of childbearing age, and any alcohol consumption among women who are or might be pregnant. Healthcare professionals can support these efforts by implementing alcohol screening and brief interventions in their primary care practices, and informing women that there is no known safe level of alcohol consumption when they are pregnant or might be pregnant (*3*).

BRFSS is a state-based, random-digit–dialed telephone survey¶ of the noninstitutionalized U.S. population aged ≥18 years that collects information on health conditions and risk behaviors, including alcohol use. CDC aggregated and analyzed BRFSS data from 2011–2013 from all 50 states and the District of Columbia for 206,481 women aged 18–44 years, 8,383 (4.0%) of whom were pregnant at the time of interview. The median response rate** among states ranged from 45.2% to 49.7% for 2011–2013. The prevalence of any alcohol use (any alcohol consumption in the past 30 days) and the prevalence of binge drinking (four drinks or more on at least one occasion in the past 30 days) were estimated for both pregnant and nonpregnant women. The prevalences and 95% confidence intervals (CIs) of these drinking patterns also were examined across different sociodemographic characteristics (age, race/ethnicity, education, employment status, and marital status). Adjusted prevalence ratios (aPRs) and CIs were calculated using logistic regression analysis to examine the association between the prevalences of the two drinking patterns and each sociodemographic characteristic, while controlling for the other sociodemographic characteristics. Finally, among women who reported binge drinking, frequency (the number of binge drinking episodes in the past 30 days) and intensity (the largest number of drinks consumed during any episode in the past 30 days) were estimated. Frequency and intensity across sociodemographic characteristics could only be estimated for nonpregnant women who reported binge drinking, because of the small sample size among pregnant women. Data were weighted to represent state-level population estimates and aggregated to represent a nationwide estimate. Analyses using SUDAAN 11.0 accounted for the complex sampling design.

Among nonpregnant women, the prevalence of any alcohol use was 53.6% and the prevalence of binge drinking was 18.2% (Table 1). Among pregnant women, the prevalence of any alcohol use was 10.2% and the prevalence of binge drinking was 3.1% (Table 2); within this group, women aged 35–44 years

* Excessive alcohol use includes binge drinking (≥4 drinks on an occasion for women, ≥5 drinks on an occasion for men), high weekly consumption (≥8 drinks a week for women, ≥15 drinks a week for men), any alcohol consumption by pregnant women, or any alcohol consumption by those under the minimum legal drinking age of 21 years.

† Additional information available at https://wayback.archive-it.org/3926/20140421162517/http://www.surgeongeneral.gov/news/2005/02/sg02222005.html.

§ Women who might be pregnant include those who are trying to get pregnant, and those who are not trying to get pregnant, but are nonsterile, sexually active, and not effectively using contraception.

¶ Beginning in 2011, BRFSS surveyed participants using both cellular and landline phones; before 2011, surveys were conducted over landline phones only.

** As calculated using the American Association of Public Opinion Research guidelines, the response rate is the number of respondents who completed the survey as a proportion of all eligible and likely eligible persons. As an alternate measure, the cooperation rate is the percentage of respondents interviewed among all eligible persons who were contacted. The median cooperation rate among states for the combined landline and cellular phone sample ranged from 65.7% to 73.8% for 2011–2013.

TABLE 1. Estimated percentages* and adjusted prevalence ratios of nonpregnant women aged 18–44 years (N = 198,098) who reported any alcohol use or binge drinking,† by selected characteristics — Behavioral Risk Factor Surveillance System, United States, 2011–2013

Characteristic	Any use				Binge drinking			
	%	(95% CI)	aPR§	(95% CI)	%	(95% CI)	aPR§	(95% CI)
Overall	**53.6**	**(53.2–54.0)**	—	—	**18.2**	**(17.9–18.5)**	—	—
Age group (yrs)¶								
18–20	32.5	(31.0–33.9)	0.6	(0.6–0.6)	15.0	(14.0–16.1)	0.5	(0.5–0.6)
21–24	66.1	(64.9–67.2)	Referent		29.2	(28.2–30.3)	Referent	
25–29	60.1	(59.1–61.1)	0.9	(0.9–0.9)	23.6	(22.8–24.5)	0.9	(0.8–0.9)
30–34	53.6	(52.7–54.5)	0.8	(0.8–0.8)	16.5	(15.9–17.2)	0.7	(0.6–0.7)
35–44	52.7	(52.1–53.3)	0.8	(0.8–0.8)	13.4	(13.0–13.8)	0.5	(0.5–0.6)
Race/Ethnicity								
White, non-Hispanic	59.7	(59.2–60.1)	1.3	(1.2–1.3)	21.4	(21.0–21.8)	1.5	(1.4–1.6)
Black, non-Hispanic	49.6	(48.4–50.7)	1.1	(1.0–1.1)	13.6	(12.8–14.4)	0.9	(0.8–1.0)
Hispanic	40.9	(39.8–42.0)	Referent		13.2	(12.4–14.0)	Referent	
Other, non-Hispanic	47.6	(45.9–49.3)	1.0	(0.9–1.0)	14.9	(13.7–16.1)	1.0	(0.9–1.1)
Education								
High school diploma or less	39.4	(38.6–40.1)	Referent		14.6	(14.1–15.2)	Referent	
Some college	56.3	(55.6–57.0)	1.3	(1.3–1.3)	19.8	(19.2–20.4)	1.2	(1.2–1.3)
College degree	69.6	(69.0–70.1)	1.6	(1.5–1.6)	21.0	(20.5–21.5)	1.3	(1.3–1.4)
Employment status								
Employed	60.8	(60.3–61.3)	1.2	(1.2–1.2)	20.3	(19.9–20.7)	1.3	(1.2–1.3)
Not employed	43.6	(42.9–44.3)	Referent		15.2	(14.7–15.7)	Referent	
Marital status								
Married	54.0	(53.4–54.5)	Referent		13.4	(13.1–13.8)	Referent	
Not married	53.3	(52.7–53.9)	1.1	(1.1–1.1)	21.7	(21.2–22.2)	1.6	(1.5–1.7)

Abbreviations: aPR = adjusted prevalence ratio; CI = confidence interval.
* Percentages weighted to represent nationwide estimates of the U.S. population.
† Defined as having consumed four or more drinks on an occasion at least one time in the past 30 days.
§ Model includes age, race/ethnicity, education, employment status, and marital status.
¶ Women aged 18–20 years were included as a separate age group to examine underage drinking patterns. Since drinking among this age group is illegal, the next age group (21–24 years) was selected as the referent.

reported a significantly higher prevalence of any alcohol use (18.6%) than all other age groups. Among pregnant women, the prevalence of any alcohol use was twice as high among those with a college degree than among those with a high school diploma or less (aPR = 2.1), and was 2.4 times higher among nonmarried women than among married women. The prevalence of binge drinking among nonmarried pregnant women was 4.6 times the prevalence among married pregnant women.

Although the overall prevalence of binge drinking was higher among nonpregnant women, among all women who reported binge drinking in the past 30 days, pregnant women reported an average of 4.6 binge drinking episodes, which was significantly higher than the average of 3.1 such episodes reported by nonpregnant women (p = 0.044); the intensity of binge drinking was not significantly higher among pregnant women (7.5 drinks) than among nonpregnant women (6.0 drinks). Among nonpregnant women who reported binge drinking, those aged 18–20 years reported the highest frequency (3.9 episodes) and intensity (7.1 drinks) (Table 3).

Discussion

During 2011–2013, one in 10 pregnant women reported consuming alcohol in the past 30 days and one in 33 reported binge drinking; similar to nonpregnant women, about one third of pregnant women who consume alcohol engage in binge drinking. Among all women who reported binge drinking, pregnant women reported a higher frequency of binge drinking than nonpregnant women. One possible explanation for this might be that women who binge drink during pregnancy are more likely to be alcohol-dependent than the average female binge drinker, and therefore binge drink more frequently. A recent U.S. study found that among adult binge drinkers, the prevalence of alcohol dependence increased significantly with the frequency of binge drinking (*4*). Women who binge drink during pregnancy and are not alcohol-dependent would benefit from alcohol screening and brief intervention, which involves screening patients using validated questions, followed by a brief counselling intervention to advise patients who screen positive to set goals and take steps toward reducing their alcohol consumption (*3*,*5*). Patients with more severe alcohol problems should be referred for specialized care (*3*).

TABLE 2. Estimated percentages* and adjusted prevalence ratios of pregnant women aged 18–44 years (n = 8,383) who reported any alcohol use or binge drinking,† by selected characteristics — Behavioral Risk Factor Surveillance System, United States, 2011–2013

Characteristic	Any use				Binge drinking			
	%	(95% CI)	aPR§	(95% CI)	%	(95% CI)	aPR§	(95% CI)
Overall	**10.2**	**(9.1–11.4)**	—	—	**3.1**	**(2.6–3.8)**	—	—
Age group (yrs)¶								
18–20	8.0	(5.6–11.2)	0.8	(0.5–1.3)	4.3**	(2.7–6.7)**	1.0**	(0.6–1.8)**
21–24	10.0	(7.7–12.8)	Referent		4.2	(2.9–5.9)	Referent	
25–29	8.0	(6.4–10.1)	0.9	(0.6–1.3)	2.2**	(1.4–3.4)**	0.7**	(0.4–1.2)**
30–34	8.7	(6.9–11.0)	1.0	(0.7–1.5)	2.7**	(1.6–4.4)**	1.0**	(0.5–1.9)**
35–44	18.6	(14.8–23.2)	2.1	(1.5–2.9)	3.6**	(2.3–5.5)**	2.1**	(1.5–2.9)**
Race/Ethnicity								
White, non-Hispanic	9.6	(8.5–10.9)	1.0	(0.7–1.3)	3.5	(2.8–4.4)	NA††	NA††
Black, non-Hispanic	13.9	(10.0–19.0)	1.2	(0.8–1.9)	NA††	NA††	NA††	NA††
Hispanic	9.1	(6.9–12.0)	Referent		2.9	(1.7–4.9)	NA††	NA††
Other, non-Hispanic	11.0**	(7.2–16.3)**	0.9**	(0.6–1.5)**	NA††	NA††	NA††	NA††
Education								
High school diploma or less	7.7	(6.2–9.6)	Referent		2.9	(2.0–4.1)	Referent	
Some college	10.9	(8.9–13.3)	1.6	(1.2–2.1)	3.8	(2.7–5.2)	1.6	(1.0–2.5)
College degree	13.0	(11.0–15.4)	2.1	(1.5–2.9)	2.9	(2.1–3.9)	1.6	(0.9–2.8)
Employment status								
Employed	12.0	(10.4–13.9)	1.3	(1.0–1.6)	3.6	(2.8–4.5)	1.4	(0.9–2.0)
Not employed	8.1	(6.8–9.8)	Referent		2.7	(1.9–3.7)	Referent	
Marital status								
Married	7.9	(6.7–9.3)	Referent		1.6	(1.1–2.2)	Referent	
Not married	12.9	(11.1–15.0)	2.4	(1.8–3.1)	5.0	(3.9–6.3)	4.6	(2.8–7.5)

Abbreviations: aPR = adjusted prevalence ratio; CI = confidence interval; NA = not available.

* Percentages weighted to represent nationwide estimates of the U.S. population.

† Defined as having consumed four or more drinks on an occasion at least one time in the past 30 days.

§ Model includes age, race/ethnicity, education, employment status, and marital status.

¶ Women aged 18–20 years were included as a separate age group to examine underage drinking patterns. Since drinking among this age group is illegal, the next age group (21–24 years) was selected as the referent.

** Estimate might be unstable because the relative standard error is 0.2–0.3.

†† Estimate suppressed or NA because the relative standard error is >0.3.

Since previous research found no significant difference in binge drinking frequency between pregnant and nonpregnant binge drinkers, future surveillance should monitor the frequency of binge drinking to see if this pattern persists (*6*). Consistent with previous reports, the prevalence of alcohol consumption among pregnant women was higher among those with a college degree than among those with less education (*6*). This might be related to higher discretionary income among women with college degrees, or social acceptability of alcohol consumption and binge drinking established during college years, or a combination of these or other determinants.

The prevalence of any alcohol use and binge drinking among pregnant and nonpregnant women in this study is slightly higher than estimates reported for 2006–2010 (*6*). The differences in estimates between the two periods are likely related to methodological changes in the BRFSS in 2011, rather than actual shifts in the prevalence of alcohol use (*7*). Specifically, the BRFSS began sampling respondents using cellular phones in addition to landline phones, and changed the weighting method from poststratification to "raking" (iterative proportional fitting) (*7*). These changes have been associated with a higher estimated prevalence of excessive alcohol use among U.S. adults (*7*).

The findings in this study are subject to at least five limitations. First, self-reported alcohol use is generally underreported (*8*). Second, pregnancy status might also have been underreported because a majority of women do not recognize they are pregnant until at least 4 weeks gestation (*9*). Third, some prevalence estimates and ratios of binge drinking among pregnant women had to be suppressed because of unreliable estimates (relative standard errors >0.3). Fourth, the results could be subject to selection bias since the median response rate was <50% for all 3 years. Finally, changes in BRFSS methodology in 2011 did not allow estimates from 2011–2013 to be compared with estimates from earlier years.

There is a need for a comprehensive approach to reduce alcohol use and binge drinking among pregnant women, and binge drinking among women of childbearing age. *Healthy People 2020* established objectives†† to increase the percentage

†† Additional *Healthy People 2020* maternal, infant, and child health objectives are available at http://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives.

TABLE 3. Estimated average frequency* and intensity† of binge drinking§ among nonpregnant women of childbearing age who reported binge drinking in the past 30 days, by selected characteristics — Behavioral Risk Factor Surveillance System, United States, 2011–2013

Characteristic	Frequency			Intensity		
	Sample size¶	Weighted mean	(95% CI)	Sample size¶	Weighted mean	(95% CI)
Overall	**35,231**	**3.2**	**(3.1–3.2)**	**33,423**	**6.0**	**(5.9–6.1)**
Age group (yrs)						
18–20	1,837	3.9	(3.5–4.3)	1,709	7.1	(6.7–7.4)
21–24	5,905	3.3	(3.1–3.5)	5,594	6.2	(6.1–6.3)
25–29	7,106	3.0	(2.8–3.1)	6,749	6.0	(5.8–6.1)
30–34	6,858	2.9	(2.7–3.0)	6,509	5.7	(5.6–5.9)
35–44	13,525	3.1	(2.9–3.2)	12,862	5.6	(5.4–5.9)
Race/Ethnicity						
White, non-Hispanic	27,033	3.2	(3.1–3.3)	25,867	6.0	(6.0–6.1)
Black, non-Hispanic	2,556	3.5	(3.2–3.8)	2,344	5.8	(5.2–6.5)
Hispanic	2,978	2.8	(2.6–3.0)	2,738	5.9	(5.7–6.1)
Other, non-Hispanic	2,664	3.2	(2.9–3.4)	2,474	6.1	(5.8–6.4)
Education						
High school diploma or less	8,702	3.5	(3.4–3.7)	8,000	6.5	(6.2–6.7)
Some college	11,309	3.2	(3.1–3.3)	10,722	6.0	(5.9–6.1)
College degree	15,220	2.7	(2.7–2.8)	14,701	5.6	(5.5–5.6)
Employment status						
Employed	25,328	3.1	(3.0–3.2)	24,074	5.9	(5.8–5.9)
Not employed	9,903	3.3	(3.1–3.4)	9,349	6.2	(6.0–6.4)
Marital status						
Married	14,600	2.7	(2.6–2.8)	13,984	5.5	(5.4–5.6)
Not married	20,631	3.4	(3.3–3.5)	19,439	6.2	(6.1–6.4)

Abbreviation: CI: confidence interval.
* Defined as the number of binge drinking episodes in the past 30 days.
† Defined as the largest number of drinks consumed during any episode in the past 30 days.
§ Defined as having consumed ≥4 drinks on an occasion at least one time in the past 30 days.
¶ Number of nonpregnant women who reported binge drinking.

of pregnant women reporting abstinence from any alcohol use to 98% (MCH 11.1), and to increase the percentage reporting abstinence from binge drinking to 100% (MCH 11.2). The Community Preventive Services Task Force recommends several population-level strategies for reducing excessive alcohol consumption and related harms. These include limiting alcohol outlet density (the number of places in a given area where alcohol may be legally sold for onsite consumption), holding alcohol retailers liable for harms related to the sale of alcohol to minors and intoxicated patrons (dram shop liability), and increasing alcohol taxes (*10*). The U.S. Preventive Services Task Force also recommends alcohol screening and brief intervention in primary care settings for persons aged ≥18 years, including pregnant women (*5*). Under the Affordable Care Act, many health insurance plans cover alcohol screening and brief intervention at no cost to the insured.[§§] In addition, CDC funded and is working with Fetal Alcohol Spectrum Disorders Practice and Implementation Centers and National Partners[¶¶] to promote systems level practice changes among providers, through training and implementation of evidence-based FASD prevention approaches. Adopting this comprehensive approach to reduce excessive alcohol use among pregnant women and women of childbearing age is an important step toward achieving the *Healthy People 2020* objectives of reducing alcohol use among pregnant women, and ultimately reducing FASDs and other alcohol-related adverse birth outcomes.

[§§] Alcohol screening and brief intervention (SBI) was given a grade B recommendation by the U.S. Preventive Services Task Force, meaning that under the Affordable Care Act, all non-grandfathered insurance plans must cover alcohol SBI at no cost to the person (Section 1001 of the Patient Protection and Affordable Care Act, Public Law 111-148, 2010, available at http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/html/PLAW-111publ148.htm).

[¶¶] Additional information available at http://www.cdc.gov/ncbddd/fasd/training.html.

Acknowledgments

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Summary

What is already known on this topic?

Excessive alcohol use is a risk factor for a wide range of health and social problems including liver cirrhosis, certain cancers, depression, motor vehicle crashes, and violence. Alcohol consumption during pregnancy is also a risk factor for fetal alcohol spectrum disorders (FASDs) and other adverse birth outcomes, making alcohol use during pregnancy a leading preventable cause of birth defects and developmental disabilities. There is no known safe amount of alcohol consumption during pregnancy.

What is added by this report?

Based on 2011–2013 Behavioral Risk Factor Surveillance System data, one in 10 (10.2%) pregnant women aged 18–44 years reported consuming alcohol in the past 30 days, and 3.1% reported binge drinking in the past 30 days. Similar to nonpregnant women, about one third of pregnant women who consume alcohol engage in binge drinking. Among binge drinkers, pregnant women reported a statistically significant higher frequency of binge drinking than nonpregnant women.

What are the implications for public health practice?

Implementation of evidence-based strategies would be expected to reduce binge drinking among pregnant women and women of childbearing age, and any alcohol consumption among women who are or might be pregnant. These strategies include alcohol screening and brief intervention as recommended by the U.S. Preventive Services Task Force, and community-level strategies as recommended by the Community Preventive Services Task Force.

Adults Eligible for Cardiovascular Disease Prevention Counseling and Participation in Aerobic Physical Activity — United States, 2013

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Cardiovascular disease (CVD) is the leading cause of death in the United States, and physical inactivity is a major risk factor (*1*). Health care professionals have a role in counseling patients about physical activity for CVD prevention. In August 2014, the U.S. Preventive Services Task Force (USPSTF) recommended that adults who are overweight or obese and have additional CVD risk factors be offered or referred to intensive behavioral counseling interventions to promote a healthful diet and physical activity for CVD prevention (*2*). Although the USPSTF recommendation does not specify an amount of physical activity, the *2008 Physical Activity Guidelines for Americans** state that for substantial health benefits adults should achieve ≥150 minutes per week of moderate-intensity aerobic physical activity or ≥75 minutes per week of vigorous-intensity aerobic activity, or an equivalent combination of moderate- and vigorous-intensity aerobic physical activity. To assess the proportion of adults eligible for intensive behavioral counseling and not meeting the aerobic physical activity guideline, CDC analyzed data from the 2013 Behavioral Risk Factor Surveillance System (BRFSS). This analysis indicated that 36.8% of adults were eligible for intensive behavioral counseling for CVD prevention. Among U.S. states and the District of Columbia (DC), the prevalence of eligible adults ranged from 29.0% to 44.6%. Nationwide, 19.9% of all adults were eligible and did not meet the aerobic physical activity guideline. These data can inform the planning and implementation of health care interventions for CVD prevention that are based on physical activity.

BRFSS is an annual, random-digit–dialed telephone survey of the noninstitutionalized U.S. civilian population aged ≥18 years. The survey is conducted independently in all 50 states and DC, and BRFSS data can be pooled to produce valid national estimates (*3*). Based on standards set by the American Association of Public Opinions Research,† the median survey response rate for all states and DC in 2013 was 46.4% (range = 29.0%–60.3%). In 2013, data were collected from 483,865 respondents. However, this analysis excluded 75,776 respondents because of missing information.

Respondents were defined as eligible for intensive behavioral counseling for CVD prevention if they were overweight or obese, and had one or more CVD risk factors (hypertension, dyslipidemia, or impaired fasting glucose). Body mass index (BMI) (weight [kg] / height [m]^2) was calculated from self-reported weight and height (overweight = BMI 25.0–29.9, obese = BMI ≥30.0). Respondents were defined as having hypertension, dyslipidemia, or impaired fasting glucose if they responded "yes" to a question asking if a doctor, nurse, or other health professional ever told them they had a specific condition (e.g., high blood pressure, high blood cholesterol, diabetes, pre-diabetes, or borderline diabetes).

To assess physical activity, respondents were asked to report the frequency and duration of the two physical activities, outside of regular job duties, that they spent the most time doing during the past month or week. Respondents were classified as meeting the aerobic guideline if they participated in ≥150 minutes per week of moderate-intensity aerobic activity, or ≥75 minutes per week of vigorous-intensity aerobic activity, or an equivalent combination of the two (*4*). Data were analyzed by demographic characteristics and weighted by iterative proportional fitting (raking) to provide prevalence estimates and 95% confidence intervals. Orthogonal polynomial contrasts and pairwise t-tests were used to identify significant trends and differences by subgroup.

In 2013, an estimated 36.8% of U.S. adults met criteria to be classified as eligible for intensive behavioral counseling for CVD prevention, including 40.0% of men and 33.5% of women (Table 1). By age group, the prevalence of eligibility increased as age increased, from 6.6% among those aged 18–24 years to 56.4% among those aged ≥65 years (p-value for trend <0.001). Among racial/ethnic groups, prevalence was higher among non-Hispanic blacks (43.3%) than among Hispanics (32.6%) (p<0.001) and non-Hispanic whites (37.6%) (p<0.001). By education level, prevalence decreased as education level increased, from 42.3% for persons with less than a high school diploma to 31.8% for college graduates (p-value for trend <0.001).

Among the 50 states and DC, the prevalence of eligible adults ranged from 29.0% in Utah to 44.6% in Tennessee (Table 2). States in the South had the highest proportion of eligible adults (39.4%), compared with the Midwest (36.9%) (p<0.001), the Northeast (36.0%) (p<0.001), and the West (33.2%) (p<0.001) (Table 1).

* Available at http://www.health.gov/paguidelines.

† Additional information available at http://www.cdc.gov/brfss/annual_data/annual_2013.html.

TABLE 1. Proportion of U.S. adults eligible for intensive behavioral counseling for CVD prevention and not meeting aerobic physical activity guideline, by selected characteristics — Behavioral Risk Factor Surveillance System, United States, 2013

	Overall population (N = 408,089)				Eligible population* (n = 174,859)	
	Eligible for intensive behavioral counseling for CVD prevention*		Eligible and not meeting aerobic physical activity guideline†		Not meeting aerobic physical activity guideline†	
Characteristic	%	(95% CI)	%	(95% CI)	%	(95% CI)
Total	**36.8**	**(36.5–37.1)**	**19.9**	**(19.6–20.1)**	**54.0**	**(53.5–54.5)**
Sex						
Men	40.0	(39.6–40.5)	20.2	(19.8–20.6)	50.5	(49.7–51.2)
Women	33.5	(33.1–33.9)	19.5	(19.2–19.8)	58.2	(57.5–58.8)
Age group (yrs)						
18–24	6.6	(6.1–7.2)	3.4	(3.1–3.8)	51.5	(47.5–55.5)
25–34	16.6	(15.9–17.2)	8.6	(8.1–9.1)	51.9	(49.8–54.1)
35–44	29.4	(28.6–30.1)	16.5	(15.9–17.1)	56.1	(54.6–57.6)
45–54	43.8	(43.0–44.5)	24.4	(23.8–25.1)	55.8	(54.6–56.9)
55–64	55.0	(54.3–55.6)	30.1	(29.5–30.8)	54.8	(53.9–55.8)
≥65	56.4	(55.9–57.0)	29.2	(28.6–29.7)	51.7	(50.9–52.5)
Race/Ethnicity§						
White, non-Hispanic	37.6	(37.3–37.9)	19.5	(19.3–19.8)	51.8	(51.3–52.3)
Black, non-Hispanic	43.3	(42.3–44.3)	25.7	(24.8–26.6)	59.4	(57.9–60.9)
Hispanic	32.6	(31.5–33.7)	19.9	(18.9–20.8)	60.9	(58.9–62.9)
Other race	27.1	(25.7–28.4)	14.1	(13.0–15.2)	52.0	(49.0–54.9)
Education level						
Less than high school diploma	42.3	(41.2–43.4)	28.1	(27.1–29.1)	66.3	(64.7–67.8)
High school diploma	38.8	(38.2–39.3)	22.5	(22.0–22.9)	57.9	(57.1–58.8)
Some college	36.8	(36.2–37.3)	19.0	(18.6–19.4)	51.6	(50.7–52.5)
College degree	31.8	(31.4–32.3)	13.9	(13.5–14.2)	43.6	(42.8–44.4)
U.S. Census region¶						
Midwest	36.9	(36.3–37.4)	19.5	(19.1–20.0)	52.9	(52.0–53.8)
Northeast	36.0	(35.4–36.7)	19.5	(19.0–20.1)	54.2	(53.1–55.3)
South	39.4	(38.9–39.9)	23.0	(22.6–23.4)	58.4	(57.7–59.2)
West	33.2	(32.4–33.9)	15.4	(14.8–16.0)	46.5	(45.1–47.9)

Abbreviations: CVD = cardiovascular disease; CI = confidence interval.

* To meet the U.S. Preventive Services Task Force recommendation eligibility criteria for intensive behavioral counseling for CVD prevention, respondents had to report a body mass index (weight [kg] / height [m]^2) of ≥25.0 and one or more of the following CVD risk factors: hypertension, dyslipidemia, or impaired fasting glucose.

† To meet the aerobic guideline from the *2008 Physical Activity Guidelines for Americans*, respondents had to report engaging in ≥150 minutes per week of moderate-intensity aerobic physical activity or ≥75 minutes per week of vigorous-intensity aerobic activity, or an equivalent combination of moderate- and vigorous-intensity aerobic physical activity.

§ Other includes multiracial, Asian, Native Hawaiian or Other Pacific Islander, or American Indian/Alaska Native.

¶ *Midwest:* Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; *Northeast:* Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; *South:* Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; *West:* Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Among adults who were eligible for intensive behavioral counseling for CVD prevention, 54.0% did not meet the aerobic physical activity guideline (Table 1). By age group, this percentage increased as age increased until it leveled off for adults aged 35–64 years, after which it decreased for adults aged ≥65 years (p-value for trend <0.001). This percentage was significantly higher in men than women; was higher in Hispanics and non-Hispanic blacks than non-Hispanic whites; decreased as education level increased (p-value for trend <0.001); and was greatest in the South and lowest in the West. The percentage of eligible adults who did not meet the aerobic physical activity guideline (54.0% [95% confidence interval = 53.5%–54.5%]) was significantly higher than the percentage of ineligible adults who did not meet the guideline (46.4% [95% confidence interval = 46.0%–46.8%]) (p<0.001).

Of the entire adult population, 19.9% were eligible for intensive behavioral counseling for CVD prevention and did not meet the aerobic physical activity guideline (Table 1). Among the 50 states and DC, the prevalence of being eligible and not meeting the aerobic physical activity guideline ranged from 12.4% in Hawaii to 28.8% in Mississippi (Table 2) (Figure).

Discussion

Approximately one in three U.S. adults were eligible for intensive behavioral counselling for CVD prevention in 2013.

TABLE 2. Proportion of U.S. adults (N = 408,089) eligible for intensive behavioral counseling for CVD prevention and not meeting aerobic physical activity guideline, by state — Behavioral Risk Factor Surveillance System, United States, 2013

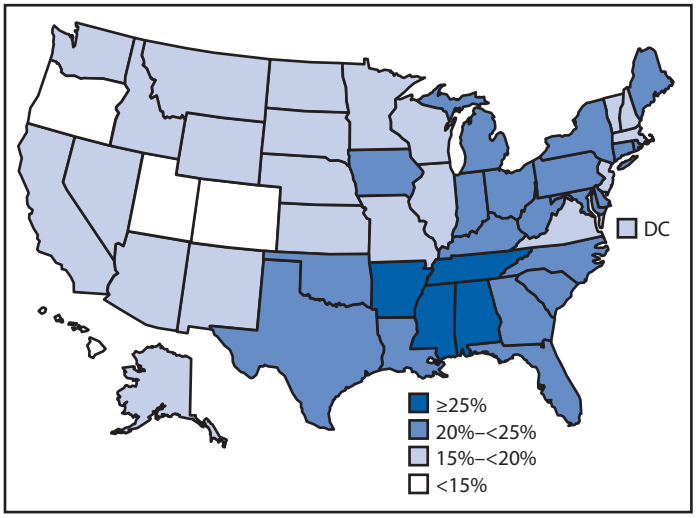
State	Eligible for intensive behavioral counseling for CVD prevention*		Eligible and not meeting aerobic physical activity guideline†	
	%	(95% CI)	%	(95% CI)
Total	**36.8**	**(36.5–37.1)**	**19.9**	**(19.6–20.1)**
Alabama	43.5	(41.7–45.4)	25.6	(24.1–27.1)
Alaska	35.5	(33.4–37.6)	18.0	(16.3–19.8)
Arizona	34.2	(31.6–36.9)	17.6	(15.6–19.8)
Arkansas	42.7	(40.7–44.8)	25.9	(24.2–27.7)
California	33.3	(32.0–34.6)	15.3	(14.3–16.4)
Colorado	30.2	(29.1–31.2)	13.4	(12.6–14.2)
Connecticut	36.8	(35.1–38.5)	20.3	(18.9–21.7)
Delaware	39.6	(37.7–41.5)	21.5	(20.0–23.1)
District of Columbia	30.5	(28.4–32.7)	15.1	(13.6–16.8)
Florida	38.8	(37.5–40.1)	21.3	(20.2–22.5)
Georgia	38.9	(37.4–40.5)	21.7	(20.4–23.0)
Hawaii	29.0	(27.5–30.6)	12.4	(11.3–13.6)
Idaho	35.2	(33.3–37.1)	17.0	(15.5–18.5)
Illinois	34.9	(33.1–36.7)	17.7	(16.4–19.2)
Indiana	38.6	(37.3–39.9)	23.2	(22.1–24.3)
Iowa	36.8	(35.4–38.3)	20.9	(19.7–22.0)
Kansas	35.9	(35.1–36.7)	19.5	(18.9–20.2)
Kentucky	43.0	(41.5–44.5)	24.8	(23.6–26.1)
Louisiana	41.1	(39.0–43.3)	24.3	(22.6–26.2)
Maine	38.9	(37.4–40.3)	20.3	(19.2–21.5)
Maryland	37.9	(36.5–39.3)	21.4	(20.2–22.6)
Massachusetts	33.5	(32.3–34.8)	16.8	(15.8–17.8)
Michigan	40.3	(39.1–41.6)	20.1	(19.1–21.1)
Minnesota	32.4	(30.9–33.9)	16.7	(15.5–18.0)
Mississippi	42.9	(41.1–44.6)	28.8	(27.2–30.4)
Missouri	36.9	(35.2–38.6)	19.2	(18.0–20.6)
Montana	33.6	(32.3–35.0)	16.3	(15.3–17.4)
Nebraska	36.2	(35.0–37.4)	18.5	(17.6–19.5)
Nevada	35.5	(32.9–38.1)	17.7	(15.7–19.8)
New Hampshire	35.5	(33.8–37.1)	17.3	(16.0–18.6)
New Jersey	36.7	(35.3–38.0)	18.7	(17.7–19.8)
New Mexico	33.4	(31.9–34.9)	16.0	(15.0–17.2)
New York	35.4	(34.0–36.8)	20.1	(18.9–21.3)
North Carolina	39.7	(38.2–41.2)	22.1	(20.8–23.3)
North Dakota	34.7	(33.2–36.2)	19.1	(17.9–20.4)
Ohio	37.8	(36.5–39.2)	21.0	(19.9–22.1)
Oklahoma	39.5	(38.1–41.0)	23.7	(22.6–25.0)
Oregon	33.9	(32.2–35.6)	13.8	(12.6–15.1)
Pennsylvania	37.3	(36.0–38.5)	20.6	(19.5–21.6)
Rhode Island	38.8	(37.1–40.5)	21.4	(20.0–22.8)
South Carolina	41.3	(39.9–42.7)	22.6	(21.4–23.8)
South Dakota	36.0	(34.0–38.0)	17.5	(16.0–19.1)
Tennessee	44.6	(42.6–46.7)	28.7	(27.0–30.6)
Texas	36.4	(34.8–38.0)	23.2	(21.8–24.6)
Utah	29.0	(28.0–30.0)	13.9	(13.1–14.7)
Vermont	34.6	(33.0–36.2)	16.5	(15.4–17.8)
Virginia	37.1	(35.6–38.5)	19.5	(18.3–20.7)
Washington	34.0	(32.8–35.3)	15.9	(14.9–16.8)
West Virginia	43.4	(41.9–45.0)	24.8	(23.5–26.2)
Wisconsin	37.0	(35.1–39.1)	18.7	(17.1–20.3)
Wyoming	33.1	(31.4–34.7)	16.3	(15.0–17.6)

Abbreviations: CVD = cardiovascular disease; CI = confidence interval.

* To meet the U.S. Preventive Services Task Force recommendation eligibility criteria for intensive behavioral counseling for CVD prevention, respondents had to report a body mass index (weight [kg] / height [m]^2) of ≥25.0 and one or more of the following CVD risk factors: hypertension, dyslipidemia, or impaired fasting glucose.

† To meet the aerobic guideline from the *2008 Physical Activity Guidelines for Americans*, respondents had to report engaging in ≥150 minutes per week of moderate-intensity aerobic physical activity or ≥75 minutes per week of vigorous-intensity aerobic activity, or an equivalent combination of moderate- and vigorous-intensity aerobic physical activity.

FIGURE. Proportion of U.S. adults eligible for intensive behavioral counseling for cardiovascular disease prevention and not meeting the aerobic physical activity guideline,* by state — United States, Behavioral Risk Factor Surveillance System, 2013



* To meet the U.S. Preventive Services Task Force recommendation eligibility criteria for intensive behavioral counseling for cardiovascular disease prevention, respondents had to report a body mass index (weight [kg] / height [m]^2) of ≥25.0 and one or more of the following risk factors: hypertension, dyslipidemia, or impaired fasting glucose. To meet the aerobic guideline from the *2008 Physical Activity Guidelines for Americans*, respondents had to report engaging in ≥150 minutes per week of moderate-intensity aerobic physical activity or ≥75 minutes per week of vigorous-intensity aerobic activity, or an equivalent combination of moderate- and vigorous-intensity aerobic physical activity.

Summary

What is already known on this topic?

Health care professionals have a role in counseling patients about physical activity, which can help prevent cardiovascular disease (CVD) among persons with risk factors, such as hypertension, high cholesterol, or impaired fasting glucose. To prevent CVD, the U.S. Preventive Services Task Force recommended in August 2014 that obese and overweight adults with additional CVD risk factors be offered or referred to intensive behavioral counseling interventions to promote a healthful diet and physical activity.

What is added by this report?

Based on 2013 data from a national telephone survey, an estimated 36.8% of U.S. adults were eligible for intensive behavioral counseling for CVD prevention according to new recommendations issued by the U.S. Preventive Services Task Force in 2014. Prevalence of eligibility ranged from 29.0% in Utah to 44.6% in Tennessee. Nationwide, approximately 19.9% of U.S. adults were eligible and did not meet the guideline for aerobic physical activity from the *2008 Physical Activity Guidelines for Americans*.

What are the implications for public health practice?

One in five U.S. adults are eligible to receive intensive behavioral counseling for CVD prevention and do not meet the aerobic physical activity guideline and could benefit from increasing their physical activity levels. The Affordable Care Act's preventive services mandate might facilitate the implementation of this preventive intervention.

State-based estimates of eligible adults ranged from 29.0% to 44.6%. The prevalence of eligibility was higher among men, non-Hispanic blacks, older adults, and persons residing in southern states. Nationwide, an estimated 19.9% of U.S. adults were eligible for intensive behavioral counselling and did not meet the aerobic physical activity guideline, accounting for 54.0% of eligible adults. This group might particularly benefit from physical activity intensive behavioral counseling for CVD prevention.

Primary care providers are well positioned within the health care system to promote preventive health behaviors through activities such as assessment, counseling, and referral. Primary care provider offices are the most common places where clinical care services are provided (*5*), and advice from these providers influences patient behaviors (*6*). However, primary care providers face barriers to providing preventive services, including lack of time, limited patient receptiveness, lack of remuneration, and limited counseling skills (*7*). The Affordable Care Act's preventive services mandate might mitigate some barriers by requiring most health plans to cover evidence-based preventive services with a USPSTF rating of "A" or "B" (*8*). The USPSTF recommendation for intensive behavioral counseling for CVD prevention received a "B" rating, making it eligible for coverage (*2*) and improving the potential for implementing intensive behavioral counseling for CVD prevention.

Given the health care system barriers to implementation, monitoring the percentage of eligible adults who receive counseling is important. Existing surveys such as the National Ambulatory Medical Care Survey (NAMCS) and the National Health Interview Survey assess some aspects of physician counseling or providing education about exercise or physical activity, but none can comprehensively assess this USPSTF recommendation. For example, the 2010 NAMCS estimates that 12.3% of office visits made by patients with a diagnosis of CVD, diabetes, or hyperlipidemia involved a clinician's ordering or providing exercise education (*9*). Although the NAMCS measure identifies a potential gap between persons eligible for behavioral counseling and persons receiving it, it does not directly assess the USPSTF recommendation because it pertains to general education and not intensive behavioral counseling. Further, these data precede the 2014 USPSTF recommendation that establishes the basis for coverage of these services under the Affordable Care Act. Efforts to monitor the implementation of this USPSTF recommendation are needed to document its uptake and impact on health.

The findings in this report are subject to at least five limitations. First, BRFSS data are self-reported and might be susceptible to recall and social-desirability bias. Second, the eligible population might be overestimated because the survey questions asked respondents whether they had ever received a diagnosis and not whether they currently had a diagnosed condition. Third, the low response rates (median = 46.4%) could have resulted in response bias; however, weighting and survey methodology adjust estimates to reduce the effect of nonresponse bias (*10*). Fourth, because of lack of available data, the inclusion criteria did not include metabolic syndrome; however, inclusion criteria covered individual components of the metabolic syndrome definition. Finally, respondents reported their top two physical activities outside of regular job duties. Some respondents classified as not meeting the aerobic guideline might have been misclassified because information about additional aerobic activities or job duties was not included.

The USPSTF recommendation for intensive behavioral counselling to prevent CVD could benefit a third of the U.S. adult population, especially the one in five adults who did not meet the aerobic physical activity guideline. Because of increased coverage by the Affordable Care Act, this recommendation provides an opportunity for primary care providers to increase provision of such preventive services for this population at risk for CVD. Continued monitoring of the recommendation's target population and implementation, potential barriers, and impact on health behaviors and outcomes will help determine the impact of this recommendation on preventing CVD.

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Global Progress Toward Rubella and Congenital Rubella Syndrome Control and Elimination — 2000–2014

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Rubella virus usually causes a mild fever and rash in children and adults. However, infection during pregnancy, especially during the first trimester, can result in miscarriage, fetal death, stillbirth, or a constellation of congenital malformations known as congenital rubella syndrome (CRS). In 2011, the World Health Organization (WHO) updated guidance on the preferred strategy for introduction of rubella-containing vaccine (RCV) into national routine immunization schedules, including an initial vaccination campaign usually targeting children aged 9 months–15 years (*1*). The Global Vaccine Action Plan endorsed by the World Health Assembly in 2012 and the Global Measles and Rubella Strategic Plan (2012–2020) published by Measles and Rubella Initiative partners in 2012 both include goals to eliminate rubella and CRS in at least two WHO regions by 2015, and at least five WHO regions by 2020 (*2*,*3*). This report updates a previous report (*4*) and summarizes global progress toward rubella and CRS control and elimination during 2000–2014. As of December 2014, RCV had been introduced in 140 (72%) countries, an increase from 99 (51%) countries in 2000 (for this report, WHO member states are referred to as countries). Reported rubella cases declined 95%, from 670,894 cases in 102 countries in 2000 to 33,068 cases in 162 countries in 2014, although reporting is inconsistent. To achieve the 2020 Global Vaccine Action Plan rubella and CRS elimination goals, RCV introduction needs to continue as country criteria indicating readiness are met, and rubella and CRS surveillance need to be strengthened to ensure that progress toward elimination can be measured.

Immunization Activities

Data were obtained from the WHO and United Nations Children's Fund (UNICEF) Joint Reporting Form, which is used to collect information from countries on vaccination campaigns, vaccination schedules, and number of doses of RCV administered through routine immunization services, and from other WHO monitoring data (*5*). Data from 2000–2014 were analyzed to assess changes in rubella and CRS control activities.

According to data from 2014 (last updated in July 2015), RCV had been introduced in 140 (72%) of the 194 WHO countries, a 39% increase compared with the 99 (51%) countries that had introduced RCV in 2000, and a 6% increase over the 132 (68%) countries that had introduced RCV in 2012. RCV was introduced in seven (15%) countries in the African Region, 35 (100%) countries in the American Region, 15 (71%) countries in the Eastern Mediterranean Region, 53 (100%) countries in the European Region, six (55%) countries in the South-East Asia Region, and 24 (89%) countries in the Western Pacific Region (Table 1). The proportion of infants globally who received an RCV dose was 22% in 2000 and 46% in 2014.*

During 2000–2012, RCV was introduced into national immunization schedules in 33 countries. Among the 62 countries where RCV was not introduced by December 2012, RCV was introduced in eight countries during 2013–2014. During that period, 49 countries where RCV had not yet been introduced were eligible for Gavi Alliance immunization support,† and 13 countries were not eligible for Gavi support; RCV was introduced in seven of the Gavi-eligible countries during this period (Figure) (Table 2). A wide age-range campaign was part of the implementation for introduction in all eight countries (Table 2).

Among 140 countries where RCV has been introduced, the first RCV dose was provided with the first routine dose of measles-containing vaccine (MCV) in 137 (98%) countries. In 2014, the first RCV dose was administered at age 8–11 months in 15 (11%) countries, at age 12–18 months in 120 (85%) countries, and at age >18 months in five (4%) countries. RCV is provided in combination with measles vaccine only in 22 (19%) countries and in combination with measles and mumps vaccine (with or without varicella vaccine) in 117 (84%) countries; in one country, monovalent rubella vaccine is administered simultaneously with measles-mumps vaccine.

Surveillance Activities

Rubella and CRS surveillance are necessary to evaluate the disease burden before and after RCV introduction, to identify pregnant women infected with rubella virus who require follow-up to assess pregnancy outcomes, and to identify, diagnose, and medically manage CRS-affected infants. Countries report surveillance data, including cases of rubella and CRS, using standard case

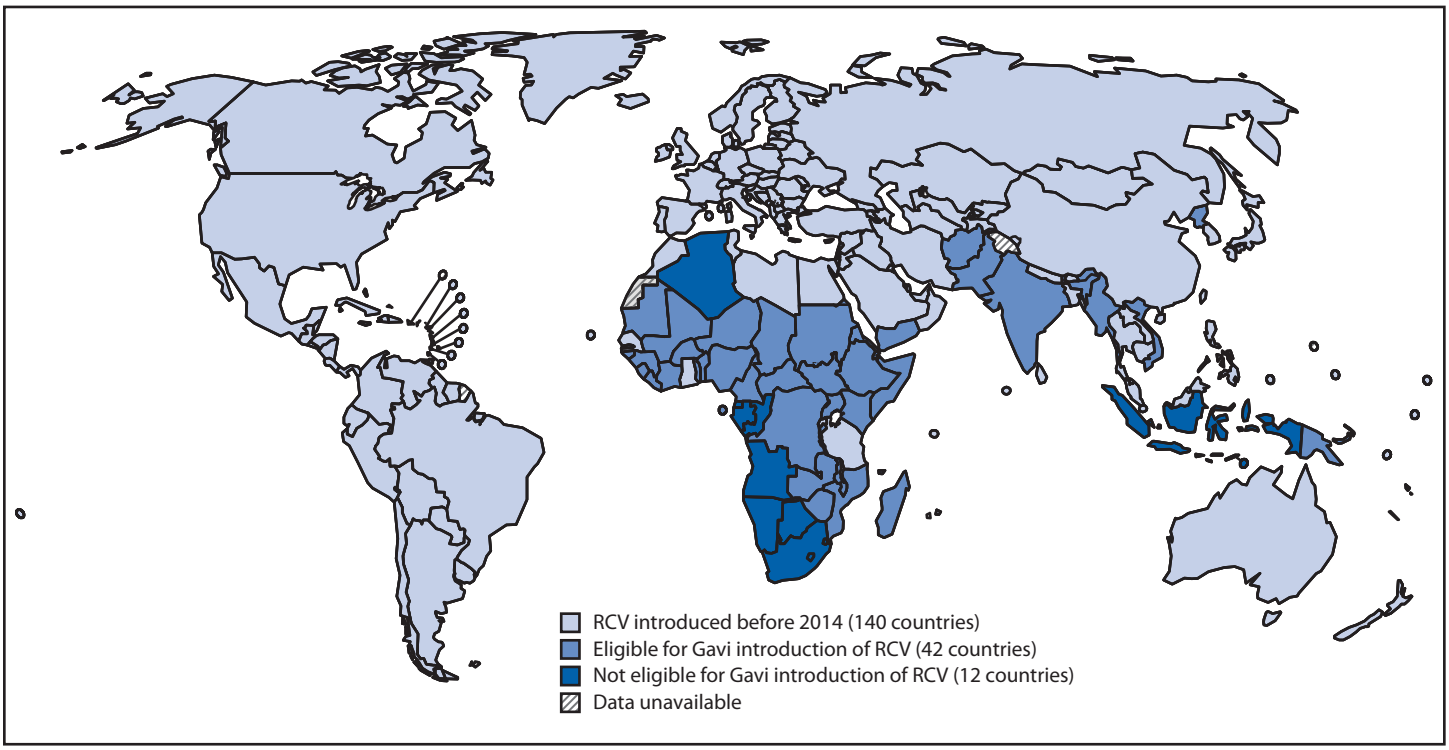
* Estimate is based on the 2014 World Health Organization–United Nations Children's Fund joint estimate, adjusted for the 2014 United Nations Development Programme estimate of surviving infants per region.

† The Gavi Alliance provides support for low-income countries to introduce RCV into the national routine infant immunization schedule and to conduct vaccination campaigns for children aged 9 months–15 years if criteria indicating readiness for introduction are met.

TABLE 1. Global progress in rubella and congenital rubella syndrome (CRS) control and elimination — World Health Organization regions, 2000 and 2014

Region (no. of countries)	Region target	No. of countries with rubella-containing vaccine in schedule		No. of countries reporting CRS		No. of reported CRS cases		No. of countries reporting rubella cases		No. of reported rubella cases	
		2000	2014	2000	2014	2000	2014	2000	2014	2000	2014
Africa (46)	None	2	7	3	17	0	14	7	44	865	7,402
Americas (35)	Elimination	31	35	18	35	80	0	25	35	39,228	4
Eastern Mediterranean (22)	None	12	15	6	8	0	2	11	19	3,122	2,945
Europe (53)	Elimination	40	53	34	35	47	27	41	37	621,039	640
South-East Asia (11)	Control	2	6	2	7	26	86	3	10	1,165	9,263
Western Pacific (27)	Elimination	12	24	12	12	3	12	15	16	5,475	12,814
Global (194)	**None**	**99**	**140**	**75**	**114**	**156**	**141**	**102**	**161**	**670,894**	**33,068**

FIGURE. Countries that have already introduced rubella-containing vaccine (RCV) and countries that have not introduced RCV, by eligibility status for Gavi Alliance support* — World Health Organization, 2015



* The Gavi Alliance provides support for low-income countries, including support to introduce RCV into the national routine infant immunization schedule and to conduct vaccination campaigns for children aged 9 months–15 years if criteria indicating readiness for introduction are met.

definitions[§] and the WHO-UNICEF Joint Reporting Form (*6*); for this report, data from 2000–2014 were analyzed. The number of countries reporting rubella cases increased from 102 in 2000 to 172 in 2012 and then declined to 161 in 2014 (Table 1); the decline in countries reporting rubella cases from 2012 to 2014 was greatest in the European Region (47 to 37 countries), and the Western Pacific Region (23 to 16 countries). The number of countries reporting CRS cases increased from 75 in 2000 to 130 in 2012 and decreased to 114 in 2014. Of the 24 countries reporting rubella cases in 2012 but not in 2014, 21 are in regions with elimination goals. Of the 33 countries reporting CRS cases in 2012, but not in 2014, 18 are in regions with elimination goals. Of 140 countries where RCV was introduced by December 2014, 125 (89%) reported rubella cases, and 111 (79%) reported CRS surveillance results (either number of cases or zero reports) in 2014.

[§] Congenital rubella syndrome (CRS) is laboratory-confirmed in an infant who has a positive blood test for rubella-specific immunoglobulin M or, where available, detection of rubella virus in specimens from pharynx and urine. CRS is clinically confirmed in an infant if a qualified physician detects at least two of the following complications in the infant: cataracts, congenital glaucoma, congenital heart disease, loss of hearing, or pigmentary retinopathy, or one of those complications plus one of the following: purpura, splenomegaly, microcephaly, mental retardation, meningoencephalitis, radiolucent bone disease, or jaundice that begins within 24 hours after birth.

TABLE 2. Countries that introduced rubella-containing vaccine, by characteristics of national routine immunization programs and introductory campaigns — World Health Organization (WHO), 2012–2014

			Routine immunization		Introductory vaccination campaign			
Country	WHO region	Gavi support for introduction	Year introduced	Vaccination coverage (2013/2014)* (%)	Year	Target age group (No.)	Vaccination coverage by report (%)	Vaccination coverage by survey (%)
Cambodia	WPR	Yes	2013	(90/94)	2013	9 mos–14 yrs (4,345,392)	105	Not done
Ghana	AFR	Yes	2013	(89/92)	2013	9 mos–14 yrs (11,169,557)	99	96
Morocco	EMR	No	2014	(99/99)	2013	9 mos–14 yrs (11,179,000)	91	Not reported
Nepal	SEAR	Yes	2013	(88/88)	2012	9 mos–14 yrs (9,958,196)	100	Not done
Rwanda	AFR	Yes	2014	(97/98)	2013	9 mos–14 yrs (4,278,528)	103	98
Senegal	AFR	Yes	2013	(84/80)	2013	9 mos–14 yrs (6,013,830)	101	97
Solomon Islands	WPR	Yes	2013	(93/93)	2014	6 mos–29 yrs (376,286)	93	Not reported
Tanzania	AFR	Yes	2014	(99/99)	2014	9 mos–14 yrs (21,159,130)	96	Not reported

Abbreviations: AFR = African Region; EMR = Eastern Mediterranean Region; Gavi = The Gavi Alliance; SEAR = South-East Asian Region; WPR = Western Pacific Region.
* Measles-containing vaccine was used as a proxy for rubella-containing vaccine in countries that have introduced rubella vaccine. (Sources: World Health Organization–United Nations Children's Fund joint estimates revised July 2015, and Meeting of the Strategic Advisory Group of Experts on immunizations, October 2014—conclusions and recommendations. Wkly Epidemiol Rec 2014;89:561–76).

In 2014, a total of 33,068 rubella cases were reported to WHO from 161 countries, a 95% decrease from the 670,894 rubella cases reported in 2000 from 102 countries (Table 1). In the Americas, the last endemic rubella and CRS cases were reported in 2009, and the region was declared free of endemic rubella virus transmission in April 2015. The number of rubella cases decreased in the European Region from 621,039 in 41 countries in 2000 to 640 cases in 37 countries in 2014. In the Western Pacific Region, the number of cases increased from 5,475 in 15 countries in 2000 to 44,275 cases in 23 countries in 2012, before decreasing with improved reporting to 12,814 in 16 countries in 2014 with the end of a large outbreak in Japan. The number of rubella cases reported during 2000–2014 increased in the African region (from 865 cases in seven countries to 7,402 cases in 44 countries) and South-East Asia region (1,165 cases in 3 countries to 9,263 cases in 10 countries)(Table 1).

Discussion

Since the last progress report in 2012, which described the beginning of a new phase of accelerated rubella control and CRS prevention with updated WHO RCV introduction guidance (*1*) and Gavi Alliance funding for rubella vaccine introduction, countries have begun to increase introduction of RCV into immunization schedules, although greater efforts are needed to improve monitoring of elimination. RCV has been introduced into national immunization schedules in 41 countries since 2000, including eight countries with introduction during 2013–2014. RCV needs to be introduced in countries as WHO criteria (*1*) for introduction are met. Gavi Alliance funding support is instrumental in ensuring continued RCV introduction. Forty-two (78%) of the 54 countries where RCV is not in the national immunization schedule are eligible for Gavi Alliance funding support. Leadership, coordination, technical expertise, and financial resources provided by the Measles and Rubella Initiative partners also have provided critical support to accelerate RCV introduction and increase RCV coverage.

Recent and future RCV introductions provide an opportunity and motivation to establish and achieve regional rubella and CRS elimination goals. During 2012–2014, a rubella elimination goal was established in the Western Pacific Region, and a rubella and CRS control goal was established in the South-East Asia Region as an initial step toward establishing an elimination goal (*7*). The interruption of rubella virus transmission announced this year in the Region of the Americas provides evidence that rubella and CRS elimination can be achieved by introduction of rubella vaccine into routine infant vaccination schedules accompanied by a wide age range (i.e., infants to 15 years, and in some cases up to 39 years) immunization campaign. However, key challenges to achieving rubella elimination goals include civil unrest (Eastern Mediterranean Region), weak health care delivery systems with low routine vaccination coverage (African and South-East Asia Region), and vaccination hesitancy (European Region).

High-quality rubella and CRS surveillance is needed to monitor the impact of rubella vaccination programs, and verify achievement of rubella and CRS elimination goals. Guidelines

Summary

What is already known on this topic?

In 2011, the World Health Organization (WHO) updated guidance on the preferred strategy for introduction of rubella-containing vaccine into national routine immunization schedules, including an initial vaccination campaign for children aged 9 months–15 years. Global immunization targets five of six WHO regions to eliminate rubella and congenital rubella syndrome (CRS) by 2020.

What is added by this report?

During 2000–2014, reported rubella cases declined 95%, from 670,894 cases reported in 2000 in 102 countries to 33,068 cases reported in 2014 in 162 countries. As of December 2014, countries of four WHO regions had met rubella control and elimination goals (Western Pacific Region, Region of the Americas, European Region, and South-East Asia Region).

What are the implications for public health practice?

To achieve rubella elimination and control goals, a strong commitment is required at national and subnational levels in all countries to introduce rubella-containing vaccine, achieve high rubella vaccine coverage in routine immunization services, and conduct high-quality rubella and CRS surveillance.

for rubella and CRS surveillance (*1*), and a framework for verifying elimination of rubella and CRS have been published (*8*). Countries need to institute CRS surveillance and report both rubella and CRS cases in order to monitor the impact of the vaccination program on the epidemiology of both rubella and CRS. This need for reporting is especially true of countries with elimination goals and is necessary for the elimination verification process; the recent decrease in the number of countries reporting their rubella and CRS cases is particularly concerning regarding the attention given to monitoring elimination goals.

A vaccine delivery system that achieves and maintains high coverage with both RCV and MCV and integrated measles and rubella surveillance is a foundation for continued progress toward rubella and CRS control and elimination. Implementation of additional global WHO recommendations regarding the use of RCV can help countries that have introduced RCV optimize their use of the vaccine (*9*). The recommendations include the use of RCV when measles vaccine is administered in routine immunization services for vaccination of health workers; use of RCV for all measles campaigns; and a review of measles and rubella epidemiology to determine target age ranges. In addition, the recommendations improve monitoring of activities reflecting RCV use, including joint measles and rubella vaccination coverage surveys and regular analysis of measles and rubella surveillance data. Such analyses are needed to identify geographic areas and population groups with low immunity who are at greater risk for outbreaks, so that vaccination campaigns and other prevention and control measures can be directed toward them.

Immunization and surveillance activities are the foundation for rubella control and CRS prevention and reaching the Global Vaccine Action Plan goals. To reach regional elimination goals, countries at all levels need to follow the WHO recommendations for introducing RCV, strengthening routine immunization services, improving surveillance, and accelerating coordinated rubella control and elimination efforts.

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Notes from the Field

Vancomycin-Resistant *Staphylococcus aureus* — Delaware, 2015

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Vancomycin-resistant *Staphylococcus aureus* (VRSA) is a rare, multidrug-resistant bacterium of public health concern that emerged in the United States in 2002. VRSA (*S. aureus* with vancomycin minimum inhibitory concentration [MIC] ≥16 μg/mL) arises when vancomycin resistance genes (e.g., the *vanA* operon, which codes for enzymes that result in modification or elimination of the vancomycin binding site) from vancomycin-resistant enterococci (VRE) are transferred to *S. aureus* (*1*). To date, all VRSA strains have arisen from methicillin-resistant *S. aureus* (MRSA). The fourteenth VRSA isolate (VRSA 14) identified in the United States was reported to CDC in February 2015.

VRSA 14 was cultured from the chronic toe wound of a patient in Delaware with diabetes mellitus and end-stage renal disease requiring hemodialysis; vancomycin-resistant *Enterococcus faecalis* was also isolated from this culture. The wound was first noted during an inpatient admission in April 2014. MRSA was isolated in August and October 2014, and MRSA and VRE were isolated in January 2015; these isolates are not available for further characterization. No antibiotic use was reported in the 4 months before VRSA isolation.

The VRSA and VRE toe wound isolates (February 2015) and an MRSA isolate from a nasal swab from the patient (March 2015) were sent to CDC for further characterization. The VRSA and VRE were confirmed to be resistant to vancomycin (MICs = 512 μg/mL for both); polymerase chain reaction testing confirmed the presence of *vanA* in both isolates. Pulsed-field gel electrophoresis and *S. aureus* protein A (*spa*) typing identified both the VRSA and MRSA as types USA100 and t002, placing them in staphylococcal clonal complex 5. This indicates that VRSA 14 has a health care–associated strain background, as do VRSA 1–12. Among VRSA isolated in the United States, only VRSA 13 had a community-associated strain background (*2*).

Persons considered to be at increased risk for VRSA acquisition were health care providers at the wound clinic and the dialysis clinic and dialysis patients sharing the same dialysis shift as the VRSA patient. Three of six wound clinic health care workers, all 13 dialysis clinic workers, and the three health care providers who evaluated the wound at an outpatient clinic consented to groin and nasal swab surveillance cultures. Twelve of 13 patients who shared a dialysis shift with the VRSA patient consented to nasal swabs. No MRSA, VRSA, or VRE were cultured from the health care workers or dialysis patients, indicating that close contacts did not share precursor organisms or VRSA with the patient. To facilitate immediate use of contact precautions in the event the patient presented for care, Delaware public health authorities notified facilities where the patient routinely sought health care. Notably, the last four VRSA isolates confirmed by CDC have been isolated from patients in Delaware.

All 14 VRSA identified in the United States appear to have independently acquired the *vanA* operon. Transmission of VRSA beyond the index patients has not been detected. However, VRSA arise from highly transmissible MRSA progenitor strains, and a robust public health response to all reported VRSA is recommended. Guidelines for VRSA investigation were revised in 2015 and are available at http://www.cdc.gov/hai/pdfs/vrsa-investigation-guide-05_12_2015.pdf. Isolation of suspected or confirmed VRSA should be reported immediately through state and local health departments (e.g., the state antibiotic resistance program coordinator) to CDC's Division of Healthcare Quality Promotion (haioutbreak@cdc.gov).

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Announcement

World Heart Day — September 29, 2015

World Heart Day will be observed September 29, 2015. The focus of World Heart Day is creating heart-healthy environments where persons live, work and play. Cardiovascular disease (CVD), including heart disease and stroke, is the leading cause of death in the world. An estimated 17.5 million persons died from CVD in 2012 (*1*). Of these deaths, 7.4 million were attributable to coronary heart disease (*1*), the most common type of heart disease. With about 610,000 deaths from heart disease in the United States every year (*2*), all persons in the United States should learn more about preventing heart disease.

World Heart Day encourages persons to reduce their risk for heart disease by making environmental and lifestyle changes (e.g., quitting smoking and promoting smoke-free environments, increasing physical activity, and increasing access to heart-healthy foods such as low-fat and low-sodium foods). About 80% of premature heart disease and stroke is preventable; however, in the United States, one in every four deaths is from heart disease (*2*). Heart disease is the leading cause of death for persons of most racial/ethnic groups, including blacks, Hispanics, and whites (*2*).

On September 1, 2015, *MMWR* published a Vital Signs report indicating that three out of four U.S. adults have a heart age that is older than their chronological age (*3*). That report was the first to provide population-level estimates of heart age and to highlight disparities in heart age nationwide. Persons wishing to learn their heart age and how to improve it can access a heart age calculator at http://www.cdc.gov/vitalsigns/cardiovasculardisease/heartage.html.

Among the many ways CDC is working to help create heart-healthy environments are supporting the Million Hearts initiative and the Sodium Reduction in Communities Program. Million Hearts aims to prevent 1 million heart attacks and strokes by 2017 by improving community and clinical linkages and working with public and private partners to address risk factors for heart disease, especially hypertension. The Sodium Reduction in Communities Program explores strategies to make food more heart-healthy and lower in sodium in work sites, hospitals, restaurants, and distributed meals for older adults and preschool children.

Additional information about World Heart Day is available at http://www.world-heart-federation.org/what-we-do/awareness/world-heart-day/plans/countries/country/united-states.

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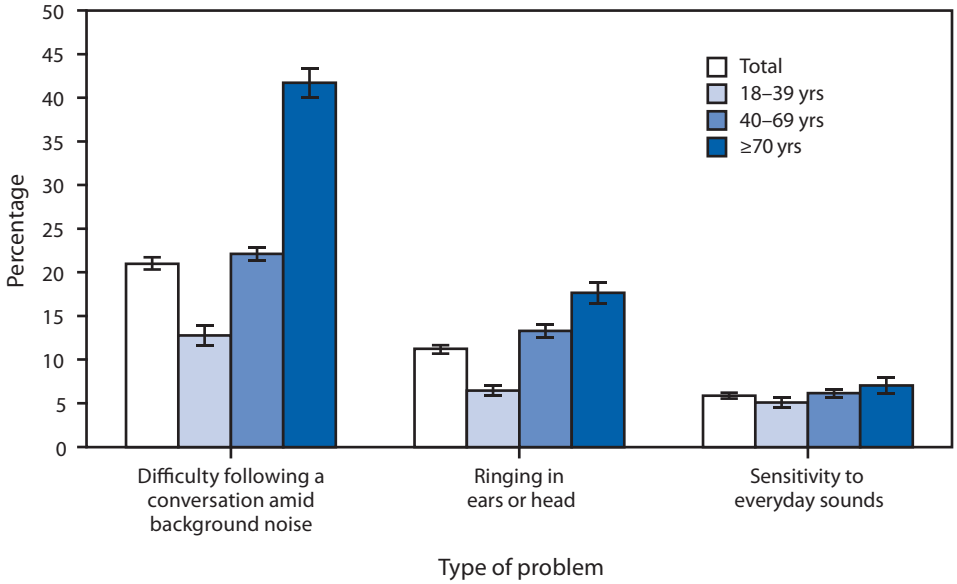
QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Adults with Selected Hearing Problems,* by Type of Problem and Age Group — National Health Interview Survey,† United States, 2014



* Percentages shown with 95% confidence intervals. Based on responses of "Always," "Usually," or "About half the time" to the question, "How often do you find it difficult to follow a conversation if there is background noise, for example, when other people are talking, TV or radio is on, or children are playing close by?" and positive responses to questions, "During the past 12 months, have you been bothered by ringing, roaring, or buzzing in your ears or head that lasts for 5 minutes or more?" and "Some people are bothered by everyday sounds or noises that don't bother most people. Do everyday sounds, such as from a hair dryer, vacuum cleaner, lawnmower, or siren, seem too loud or annoying to you?" These questions refer to symptoms of high-frequency hearing loss, tinnitus, and hyperacusis, respectively.

† Estimates are based on household interviews of a sample of the noninstitutionalized U.S. civilian population aged ≥18 years and are derived from the National Health Interview Survey sample adult component.

In 2014, an estimated 21.0% of adults aged ≥18 years had difficulty following a conversation amid background noise, 11.2% had ringing in the ears, and 5.9% had sensitivity to everyday sounds. Adults aged ≥70 years were more than three times as likely to have difficulty following conversation amid background noise, and more than twice as likely to have ringing in the ears, but only slightly more likely to have sensitivity to everyday sounds, compared with adults aged 18–39 years.

Source: National Health Interview Survey, 2014 data. Available at http://www.cdc.gov/nchs/nhis.htm.

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ISSN: 0149-2195