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## National Black HIV/AIDS Awareness Day — February 7, 2016

February 7 is National Black HIV/AIDS Awareness Day, which is intended to raise awareness of human immunodeficiency virus (HIV) infection, which causes acquired immunodeficiency syndrome (AIDS). The observance also encourages action, such as HIV testing, to reduce the disproportionate impact of HIV/AIDS on non-Hispanic blacks/African Americans (blacks) in the United States. From 2010 to 2014, the annual HIV diagnosis rate decreased for blacks (*1*). However, blacks continued to account for nearly half of all HIV diagnoses each year, with most diagnoses occurring among gay and bisexual men (*2*).

In 2014, blacks accounted for 44% of new HIV diagnoses, with men accounting for 73% of these diagnoses (*1*). The annual HIV diagnosis rate for black women (30.0 per 100,000) was 18 times the rate for white women (1.7) and five times the rate for Hispanic/Latino women (6.5). Among blacks living with HIV in 2011, 85% received an HIV diagnosis, 40% were engaged in HIV care, 36% were prescribed antiretroviral therapy, and 28% were virally suppressed (*3*).

Additional information is available online regarding National Black HIV/AIDS Awareness Day (http://www.cdc.gov/features/blackhivaidsawareness) as well as blacks and HIV/AIDS (http://www.cdc.gov/hiv/group/racialethnic/africanamericans/index.html).

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## Disparities in Consistent Retention in HIV Care — 11 States and the District of Columbia, 2011–2013

Sharoda Dasgupta, PhD[1,2]; Alexandra M. Oster, MD[1]; Jianmin Li, DPE[1]; H. Irene Hall, PhD[1]

In 2013, 45% of new human immunodeficiency virus (HIV) infection diagnoses occurred in non-Hispanic blacks/African Americans (blacks) (*1*), who represent 12% of the U.S. population.* Antiretroviral therapy (ART) improves clinical outcomes and reduces transmission of HIV, which causes acquired immunodeficiency syndrome (AIDS) (*2*). Racial/ethnic disparities in HIV care limit access to ART, perpetuating disparities in survival and reduced HIV transmission. National HIV Surveillance System (NHSS) data are used to monitor progress toward reaching the National HIV/AIDS Strategy

* U.S. Census Bureau. Population estimates. http://www.census.gov/popest/data/.

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goals to improve care among persons living with HIV and to reduce HIV-related disparities.[†] CDC used NHSS data to describe retention in HIV care over 3 years and describe differences by race/ethnicity. Among persons with HIV infection diagnosed in 2010 who were alive in December 2013, 38% of blacks with HIV infection were consistently retained in care during 2011–2013, compared with 50% of Hispanics/Latinos (Hispanics) and 49% of non-Hispanic whites (whites). Differences in consistent retention in care by race/ethnicity persisted when groups were stratified by sex or transmission category. Among blacks, 35% of males were consistently retained in care compared with 44% of females. Differences in HIV care retention by race/ethnicity were established during the first year after diagnosis. Efforts to establish early HIV care among blacks are needed to mitigate racial/ethnic disparities in HIV outcomes over time.

All states and U.S. territories report cases of HIV infections and associated demographic and clinical information to NHSS. CDC analyzed data from NHSS reported through July 2015 from 12 jurisdictions with complete laboratory reporting from January 2010–December 2013.[§] These jurisdictions accounted for 25% of HIV diagnoses reported in the United States for 2010. This analysis includes persons aged ≥13 years who received a diagnosis of HIV infection in 2010 and were alive in December 2013. Retention in HIV care, defined as having two or more CD4+ or viral load tests ≥3 months apart during a given calendar year, was assessed annually for 2011, 2012, and 2013. The percentage of persons retained in care for 0, 1, 2, and 3 years during 2011–2013 was determined.

**Summary**

**What is already known on this topic?**

A higher percentage of non-Hispanic blacks/African Americans (blacks) received a diagnosis of human immunodeficiency virus (HIV) infection in 2013 compared with other racial/ethnic groups in the United States. Linkage to and retention in HIV care and treatment are crucial to achieving sustained viral suppression, which can result in reduced transmission to others and improved clinical outcomes for persons living with HIV infection.

**What is added by this report?**

Fewer blacks were consistently retained in HIV care compared with other racial/ethnic groups, regardless of sex or transmission category; in addition, black males were less likely to be consistently retained than were black females. Lower levels of consistent retention in care among blacks were attributed to higher proportions of blacks not being retained in care for any of the 3 years during 2011–2013.

**What are the implications for public health practice?**

Given disparities in retention in HIV care between blacks and other racial/ethnic groups, identifying approaches to promote early linkage to and retention in care among blacks might be beneficial in mitigating racial/ethnic disparities in HIV outcomes.

[†] https://www.aids.gov/federal-resources/national-hiv-aids-strategy/nhas-update.pdf.
[§] District of Columbia, Illinois, Indiana, Iowa, Louisiana, Michigan, Missouri, New Hampshire, New York, North Dakota, South Carolina, and West Virginia.

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Persons retained in care for all 3 years were considered to be consistently retained in HIV care. Differences in consistent retention in care were assessed by race/ethnicity, sex, transmission category, and state of residence at diagnosis. Results were statistically adjusted for missing information on transmission category using multiple imputation (*3*).

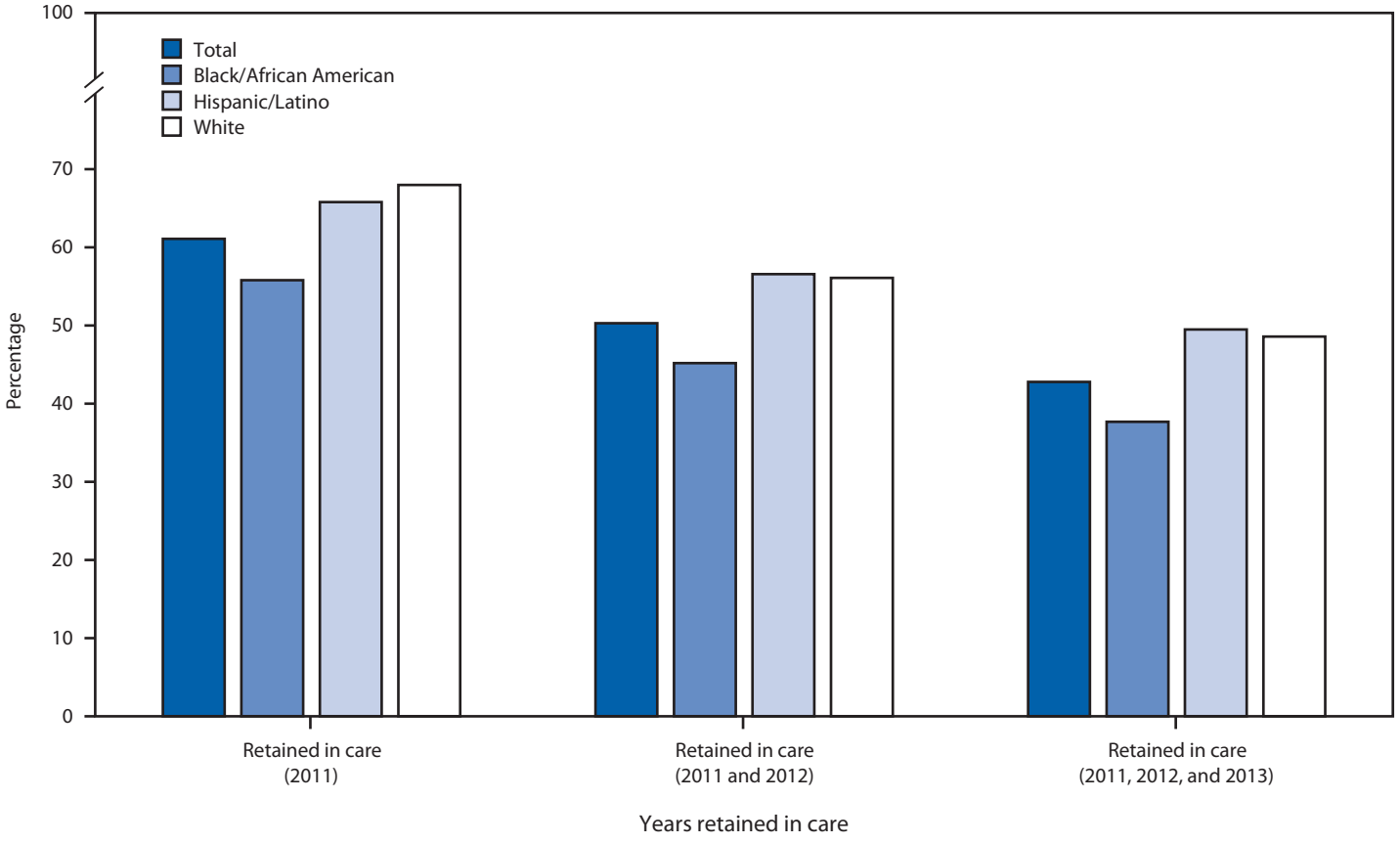
In the 12 jurisdictions, a total of 9,824 adults and adolescents received a diagnosis of HIV infection in 2010 and were alive in December 2013. Of the 9,824, 54% were black, 17% were Hispanic, and 24% were white. Overall, 61% were retained in HIV care in 2011, 50% were retained in both 2011 and 2012, and 43% were retained during 2011–2013 (Figure 1). Among persons retained in care in 2011, 82% were retained in both 2011 and 2012. Among persons retained in care during both 2011 and 2012, 85% were retained during 2011–2013. A lower proportion of blacks were retained during 2011–2013 (38%), compared with Hispanics (50%) and whites (49%).

Differences in consistent retention in care by race/ethnicity persisted when stratified by sex or transmission category, with a lower proportion of blacks retained in HIV care for all 3 years, compared with other groups (Table). Further, retention in care for all 3 years was lower among blacks in seven of the 12 jurisdictions (District of Columbia, Illinois, Iowa, Michigan, Missouri, New Hampshire, and New York).

A smaller percentage of black males, who accounted for more than two thirds of blacks with HIV diagnosed in 2010, were consistently retained in care during 2011–2013 compared with black females (35% versus 44%, respectively) (Table). Among blacks, consistent retention in care was highest for persons with infection attributable to heterosexual contact, and among these persons, consistent retention in care was higher for females (45%) than for males (37%).

Overall, 43% of all persons included in the analysis were retained in HIV care for all 3 years during 2011–2013.

**FIGURE 1. Percentage of persons aged ≥13 years with human immunodeficiency virus (HIV) infection diagnosed in 2010 who were alive in December 2013 and who were retained in HIV medical care* during 2011–2013, by race/ethnicity and years retained in care — National HIV Surveillance System, 11 states and the District of Columbia†**




* Retention in HIV care was defined as having two or more CD4+ or viral load tests ≥3 months apart during a given calendar year and was assessed annually for 2011, 2012, and 2013.

† Only jurisdictions with complete laboratory reporting were included in the analysis: District of Columbia, Illinois, Indiana, Iowa, Louisiana, Michigan, Missouri, New Hampshire, New York, North Dakota, South Carolina, and West Virginia.

**TABLE. Consistent retention* in human immunodeficiency virus (HIV) medical care among persons aged ≥13 years with HIV infection diagnosed in 2010 who were alive in December 2013, by race/ethnicity† and selected characteristics — National HIV Surveillance System, 11 states and the District of Columbia**

| | Race/Ethnicity | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Overall | | Black/African American | | Hispanic/Latino | | White | |
| | Total | Consistently retained | Total | Consistently retained | Total | Consistently retained | Total | Consistently retained |
| Characteristic | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) |
| **Total** | **9,824 (100.0)** | **4,201 (42.8)** | **5,286 (100.0)** | **1,993 (37.7)** | **1,682 (100.0)** | **833 (49.5)** | **2,358 (100.0)** | **1,145 (48.6)** |
| **Sex** | | | | | | | | |
| Male | 7,566 (77.0) | 3,173 (41.9) | 3,712 (70.2) | 1,297 (34.9) | 1,356 (80.6) | 673 (49.6) | 2,094 (88.8) | 1,024 (48.9) |
| Female | 2,258 (23.0) | 1,028 (45.5) | 1,574 (29.8) | 696 (44.2) | 326 (19.4) | 160 (49.1) | 264 (11.2) | 121 (45.8) |
| **Transmission category** | | | | | | | | |
| Male-to-male sexual contact | 5,953 (60.6) | 2,530 (42.5) | 2,732 (51.7) | 956 (35.0) | 1,056 (62.8) | 526 (49.8) | 1,844 (78.2) | 903 (49.0) |
| Male-to-male sexual contact and injection drug use | 285 (2.9) | 110 (38.6) | 111 (2.1) | 29 (26.3) | 50 (3.0) | 22 (44.0) | 103 (4.4) | 51 (49.8) |
| Injection drug use, males | 474 (4.8) | 181 (38.2) | 279 (5.3) | 91 (32.6) | 114 (6.8) | 53 (46.5) | 66 (2.8) | 30 (45.5) |
| Injection drug use, females | 332 (3.4) | 146 (44.0) | 210 (4.0) | 85 (40.5) | 43 (2.6) | 24 (55.8) | 67 (2.8) | 28 (41.8) |
| Heterosexual contact, males | 843 (8.6) | 348 (41.3) | 584 (11.0) | 218 (37.3) | 134 (8.0) | 71 (53.0) | 78 (3.3) | 39 (50.0) |
| Heterosexual contact, females | 1,918 (19.5) | 879 (45.8) | 1,359 (25.7) | 610 (44.9) | 282 (16.8) | 135 (47.9) | 197 (8.4) | 92 (46.7) |
| Other | 20 (0.2) | 7 (35) | 12 (0.2) | 4 (33.3) | 3 (0.2) | 2 (66.7) | 3 (0.1) | 1 (33.3) |
| **Jurisdiction** | | | | | | | | |
| District of Columbia | 794 (8.1) | 278 (35.0) | 620 (11.7) | 207 (33.4) | 52 (3.1) | 22 (42.3) | 103 (4.4) | 46 (44.7) |
| Illinois | 1,570 (16.0) | 421 (26.8) | 806 (15.2) | 179 (22.2) | 280 (16.6) | 99 (35.4) | 372 (15.8) | 102 (27.4) |
| Indiana | 444 (4.5) | 184 (41.4) | 200 (3.8) | 76 (38.0) | 40 (2.4) | 14 (35.0) | 185 (7.8) | 87 (47.0) |
| Iowa | 102 (1.0) | 51 (50.0) | 23 (0.4) | 10 (43.5) | 10 (0.6) | 5 (50.0) | 60 (2.5) | 32 (53.3) |
| Louisiana | 1,027 (10.5) | 387 (37.7) | 755 (14.3) | 262 (34.7) | 36 (2.1) | 10 (27.8) | 210 (8.9) | 107 (51.0) |
| Michigan | 723 (7.4) | 292 (40.4) | 438 (8.3) | 152 (34.7) | 43 (2.6) | 19 (44.2) | 216 (9.2) | 109 (50.5) |
| Missouri | 543 (5.5) | 193 (35.5) | 272 (5.1) | 68 (25.0) | 29 (1.7) | 11 (37.9) | 221 (9.4) | 104 (47.1) |
| New Hampshire | 50 (0.5) | 30 (60.0) | 2 (0.0) | 1 (50.0) | 3 (0.2) | 2 (66.7) | 40 (1.7) | 24 (60.0) |
| New York | 3,759 (38.3) | 1,997 (53.1) | 1,613 (30.5) | 788 (48.9) | 1,147 (68.2) | 640 (55.8) | 756 (32.1) | 435 (57.5) |
| North Dakota | 12 (0.1) | 6 (50.0) | 3 (0.1) | 1 (33.3) | 3 (0.2) | 1 (33.3) | 5 (0.2) | 4 (80.0) |
| South Carolina | 725 (7.4) | 343 (47.3) | 542 (10.3) | 245 (45.2) | 33 (2.0) | 10 (30.3) | 136 (5.8) | 80 (58.8) |
| West Virginia | 75 (0.8) | 19 (25.3) | 12 (0.2) | 4 (33.3) | 6 (0.4) | 0 (0.0) | 54 (2.3) | 15 (27.8) |

* Defined as retained in HIV care each year during 2011–2013. Retention in HIV care was defined as having two or more CD4+ or viral load tests ≥3 months apart during a given calendar year.

† Because the estimated totals were calculated independently of the corresponding values for each population group, the individual values might not sum to the totals.

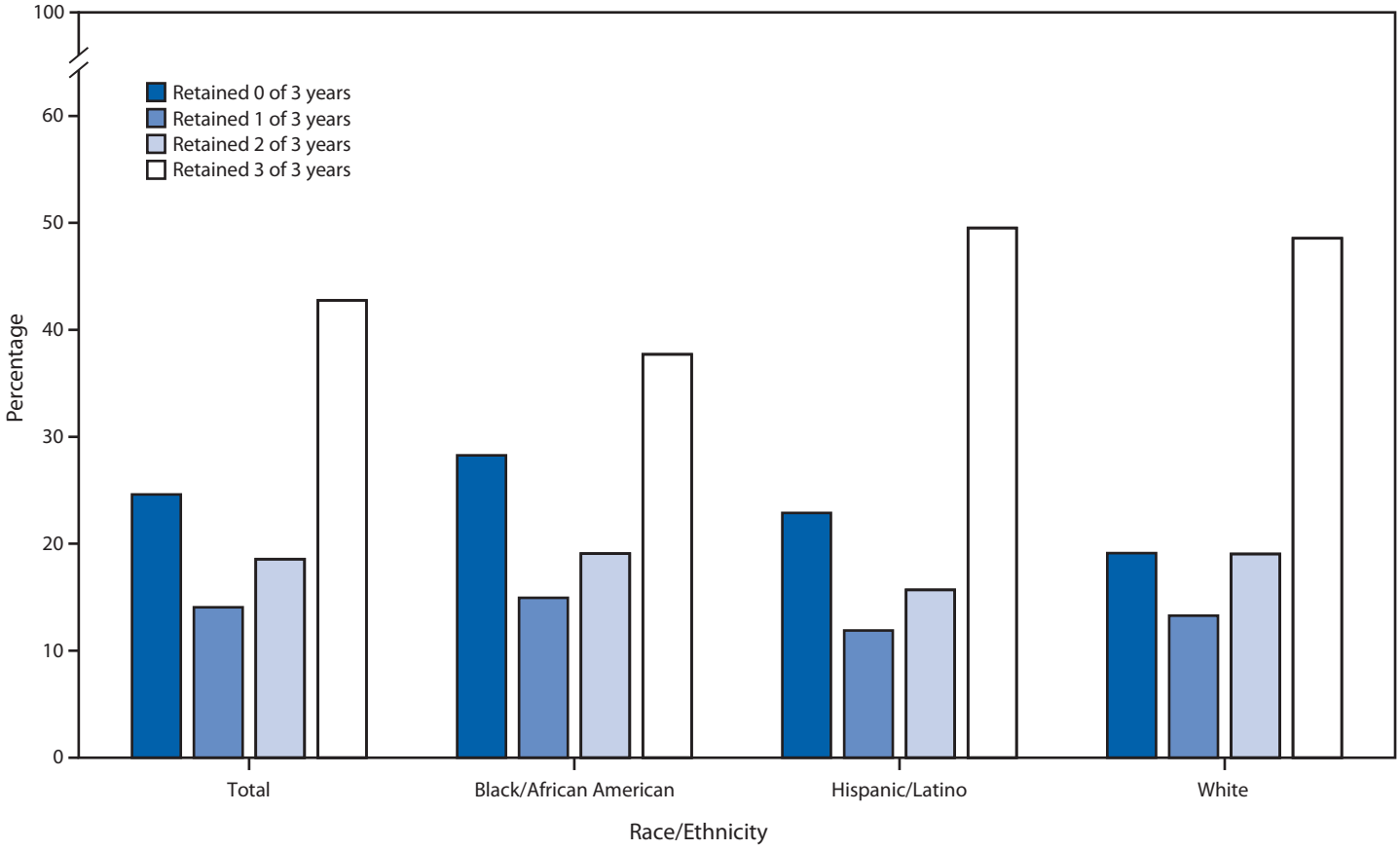
Nineteen percent were retained 2 of the 3 years; 14% were retained 1 of the 3 years, and 25% were not retained in any of the 3 years (Figure 2). A larger proportion of blacks (28%), compared with Hispanics (23%) and whites (19%), were not retained in care during any of the 3 years.

## Discussion

A substantial percentage of persons with HIV infection (39%) were not retained in care in the year after their diagnosis. However, among persons retained during earlier years after diagnosis, the proportion not retained during subsequent years was low (18% in 2012 and 15% in 2013, respectively). Fewer blacks were retained in HIV care compared with other racial/ethnic groups. These findings are consistent with previous reports on racial/ethnic differences in HIV care engagement (*4*) and demonstrate that these disparities remain over multiple years. The racial/ethnic differences in HIV care retention are established during the first year after diagnosis, underscoring the importance of early engagement in care to reduce disparities in sustained retention in care and thus improve the resulting outcomes (e.g., initiation of treatment and viral suppression).

Retention in care facilitates ART adherence and early detection of comorbidities, which can result in improved survival and reduced transmission of infection to others (*2*,*5*). Barriers to retention in care, such as lack of health insurance, limited access to health services, and stigma, are particularly prevalent among blacks (*6*). Continuing to identify barriers to HIV care engagement, including those leading to prolonged lack of retention in care, can inform development of effective interventions to improve HIV care engagement among blacks (*7*).

**FIGURE 2. Percentage of persons aged ≥13 years with human immunodeficiency virus (HIV) infection diagnosed in 2010 who were alive in December 2013 and who were retained in HIV medical care* for 0, 1, 2, or 3 out of 3 years, by race/ethnicity — National HIV Surveillance System, 11 states and the District of Columbia†**




* Retention in HIV care was defined as having two or more CD4+ or viral load tests ≥3 months apart during a given calendar year and was assessed annually for 2011, 2012, and 2013.

† Only jurisdictions with complete laboratory reporting were included in the analysis: District of Columbia, Illinois, Indiana, Iowa, Louisiana, Michigan, Missouri, New Hampshire, New York, North Dakota, South Carolina, and West Virginia.

Developing such interventions might narrow racial/ethnic disparities in clinical outcomes.

The findings in this report are subject to at least four limitations. First, HIV surveillance data do not include markers of socioeconomic status (e.g., health insurance status, annual household income, or education), which could help explain observed disparities in HIV care engagement by racial/ethnic groups. Second, analyses were restricted to 12 jurisdictions with complete laboratory reporting during the entire analysis period; these 12 jurisdictions might not be representative of all persons living with diagnosed HIV infection. Third, this analysis was limited to persons with HIV infection diagnosed during a 1-year period; for this reason, estimates are different from those previously published (*4*). Finally, these multiyear estimates of retention in HIV care might be artificially lower if persons moved to a jurisdiction with incomplete laboratory reporting after receiving an HIV diagnosis; however, a previous analysis of HIV surveillance data concluded that interstate migration is relatively uncommon.¶

Focusing HIV prevention and care efforts on early diagnosis of HIV infection and early establishment of HIV care among blacks might be beneficial in reducing racial/ethnic disparities in HIV outcomes. Through partnerships with federal, state, and local health agencies, CDC is pursuing high-impact prevention strategies to address the principal goals of the National HIV/AIDS Strategy to increase access to care and reduce disparities in HIV outcomes.** CDC supports projects that aim to reduce the proportion of undiagnosed infections in the United States, improve linkage to and retention in care, and reduce HIV-related morbidity and mortality across all racial/

¶ Espinoza L, Hall HI, Surendera-Babu A, Tang T, Chen M. Migration after HIV diagnosis, United States. Presented at the Conference on Retroviruses and Opportunistic Infections, March 3–6, 2014, Boston, Massachusetts.

** http://www.cdc.gov/hiv/policies/hip.html.

ethnic groups (*8*). CDC also supports using surveillance data to 1) identify persons who are not currently in care, 2) improve HIV care engagement, and 3) increase viral suppression (*9*). Continued collaboration among health care providers, community-based organizations, and state and local health departments can strengthen programs that support both early linkage to care after HIV diagnosis across all racial/ethnic groups and expansion of proven methods for improving retention in care (e.g., HIV case management, patient navigation systems, and co-location of medical services) (*7*,*10*).

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# HIV Testing and Service Delivery Among Black Females — 61 Health Department Jurisdictions, United States, 2012–2014

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A primary goal of the national human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) Strategy is to reduce HIV-related health disparities (*1*). Among all HIV diagnoses among women in the United States in 2014, non-Hispanic black or African American (black) women accounted for an estimated 62% of diagnoses, despite constituting only 13% of the female population (*2*,*3*). Although HIV diagnoses continue to occur disproportionately among black women, HIV surveillance data indicate a 13.5% decrease in diagnoses from 2012 to 2014 (*2*,*4*). However, widespread HIV testing and early linkage to care are critical for persons with HIV to achieve viral suppression and improved health outcomes, and to reduce transmission of HIV to others (*5*). Analysis of CDC-funded program data on HIV testing services provided to black females and submitted by 61 state and local health departments during 2012–2014 revealed that the number of new HIV diagnoses among black females decreased 17% from 2,177 in 2012 to 1,806 in 2014. Among black females with newly diagnosed HIV infection, the percentage who were linked to HIV medical care within 90 days of diagnosis increased 48.2%, from 33.8% in 2012 to 50.1% in 2014. However, in 2010 the National HIV/AIDS Strategy established a goal to link 85% of persons with newly diagnosed HIV infection to HIV medical care (*1*). Enhanced efforts to diagnose HIV infection among black females and link them to HIV medical care are critical to address HIV infections in the United States.

During 2012–2014, CDC funded 61 state and local health departments and 151 community-based organizations* to conduct HIV testing and provide linkage to HIV medical care, partner services, and behavioral risk reduction services in the United States. National HIV Prevention Program Monitoring and Evaluation (NHM&E) data on HIV testing events† and related services are collected and submitted without personal identifiers through a secure, online, CDC-supported system. Data are used by CDC to monitor and evaluate HIV testing activities at the national level. Any person who tested positive for HIV and did not report a previous HIV-positive test result is considered to have a newly diagnosed infection. The HIV positivity rate was calculated by dividing the number of newly diagnosed HIV infections by the total number of testing events. HIV testing services analyzed for this report include linkage to HIV medical care within 90 days of diagnosis§ and interview for partner services (*6*).¶ CDC analyzed NHM&E HIV testing data for 2012–2014 submitted as of March 19, 2015, by 61 CDC-funded state and local health departments in the United States, Puerto Rico, and the U.S. Virgin Islands.** Analyses were restricted to persons who reported their sex as female, their ethnicity as non-Hispanic, and their race as black; data were stratified by age group and U.S. Census region.

During 2012, a total of 764,296 CDC-funded testing events occurred among black females; this number increased 3.9% to 793,894 in 2013, and decreased to 702,328 in 2014, representing an 11.5% decrease compared with 2013, and an 8.1% decrease compared with 2012. Women aged 20–29 years accounted for an average of 44.7% of all testing events conducted among black females during 2012–2014, the largest proportion of any age group. (Table).

The number of newly diagnosed HIV infections in black females during the 3-year analysis period was 2,177 in 2012, 2,196 in 2013, and 1,806 in 2014, representing a 17% decline

* CDC-funded partners include health departments in the 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and eight directly funded city/county health departments (Baltimore, Maryland; Chicago, Illinois; Fulton County, Georgia; Houston, Texas; Los Angeles County, California; New York City, New York; Philadelphia, Pennsylvania; and San Francisco, California) and 151 community-based organizations. Community-based organizations report their National HIV Prevention Program Monitoring and Evaluation HIV testing data to their jurisdiction's health department who then submit them to CDC.

† An HIV testing event is the performance of one or more HIV tests to determine a person's HIV infection status. During one testing event, a person might be tested once (e.g., one rapid test or one conventional test) or multiple times (e.g., one rapid test followed by one conventional test to confirm a preliminary HIV-positive test result). Valid testing events were defined as tests for which either a test technology (conventional, rapid, nucleic acid amplification, or other testing) or test result (positive, negative, indeterminate, or invalid) was reported.

§ Linkage to HIV medical care within 90 days of diagnosis means confirmation that the person attended her first HIV medical care appointment within 90 days of the HIV test date.

¶ Interview for partner services elicits information from the HIV-positive person about her sex and drug-injecting partners, who can then be confidentially notified of their possible exposure and potential risk and offered services that can protect the health of partners and prevent HIV transmission to others.

** Data were submitted by 59 health departments in 2012 (all except Michigan and Oregon), 61 health departments in 2013, and 60 health departments in 2014 (all except Arkansas).

**TABLE. HIV testing events, newly diagnosed HIV infections, and HIV service delivery among non-Hispanic black or African American females with newly diagnosed HIV infections, by age group and U.S. census region — United States, Puerto Rico, and U.S. Virgin Islands, 2012–2014***

| | HIV testing events | | | Newly diagnosed HIV infections† | | | Women with newly diagnosed HIV infection, linked to care within 90 days of diagnosis | | | Interviewed for HIV partner services | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2012 | 2013 | 2014 | 2012 | 2013 | 2014 | 2012 | 2013 | 2014 |
| Characteristic | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) | No. (%) |
| **Age group (yrs)** | | | | | | | | | | | | |
| 13–19 | 93,497 (12.2) | 87,543 (11.0) | 72,811 (10.4) | 98 (0.10) | 71 (0.08) | 57 (0.08) | 32 (32.7) | 33 (46.5) | 33 (57.9) | 32 (32.7) | 40 (56.3) | 41 (71.9) |
| 20–29 | 341,656 (44.7) | 355,459 (44.8) | 312,949 (44.6) | 544 (0.16) | 530 (0.15) | 487 (0.16) | 164 (30.1) | 243 (45.8) | 230 (47.2) | 170 (31.3) | 251 (47.4) | 256 (52.6) |
| 30–39 | 150,618 (19.7) | 162,261 (20.4) | 147,764 (21.0) | 515 (0.34) | 544 (0.34) | 458 (0.31) | 174 (33.8) | 246 (45.2) | 244 (53.3) | 173 (33.6) | 254 (46.7) | 240 (52.4) |
| 40–49 | 94,541 (12.4) | 95,652 (12.0) | 82,102 (11.7) | 557 (0.59) | 517 (0.54) | 400 (0.49) | 180 (32.3) | 226 (43.7) | 202 (50.5) | 185 (33.2) | 228 (44.1) | 196 (49.0) |
| ≥50 | 80,390 (10.5) | 89,461 (11.3) | 82,778 (11.8) | 445 (0.55) | 483 (0.54) | 396 (0.48) | 183 (41.1) | 228 (47.2) | 193 (48.7) | 149 (33.5) | 239 (49.5) | 199 (50.3) |
| **U.S. census region** | | | | | | | | | | | | |
| Northeast | 118,204 (15.5) | 110,125 (13.9) | 97,091 (13.8) | 338 (0.29) | 310 (0.28) | 303 (0.31) | 147 (43.5) | 195 (62.9) | 197 (65.0) | 47 (13.9) | 180 (58.1) | 159 (52.5) |
| Midwest | 73,935 (9.7) | 97,977 (12.3) | 90,771 (12.9) | 146 (0.20) | 166 (0.17) | 162 (0.18) | 50 (34.2) | 58 (34.9) | 70 (43.2) | 49 (33.6) | 65 (39.2) | 52 (32.1) |
| South | 546,847 (71.5) | 553,489 (69.7) | 482,578 (68.7) | 1,616 (0.30) | 1,640 (0.30) | 1,247 (0.26) | 512 (31.7) | 705 (43.0) | 601 (48.2) | 600 (37.1) | 761 (46.4) | 664 (53.2) |
| West | 23,430 (3.1) | 29,379 (3.7) | 29,293 (4.2) | 77 (0.33) | 78 (0.27) | 91 (0.31) | 27 (35.1) | 42 (53.8) | 36 (39.6) | 18 (23.4) | 42 (53.8) | 59 (64.8) |
| **Total** | **764,296 (100.0)** | **793,894 (100.0)** | **702,328 (100.0)** | **2,177 (0.28)** | **2,196 (0.28)** | **1,806 (0.26)** | **736 (33.8)** | **1,001 (45.6)** | **904 (50.1)** | **714 (32.8)** | **1,049 (47.8)** | **934 (51.7)** |

**Abbreviation:** HD = health department; HIV = human immunodeficiency virus.
**Source:** National HIV Prevention Program Monitoring and Evaluation system.
* HIV testing events were defined as tests for which either a test technology (conventional, rapid, nucleic acid amplification testing, or other) or test result (positive, negative, indeterminate, or invalid) was reported. Persons who tested HIV-positive but did not report a previous positive test result were categorized as newly diagnosed HIV-positive persons. Data were submitted by 59 HDs in 2012 (all except Michigan and Oregon), 61 HDs in 2013, and 60 HDs in 2014 (all except Arkansas). The percentage of missing data was 57.9%, 46.7%, and 38.4% for linkage to HIV medical care in 2012, 2013, and 2014, respectively. The percentage of missing data was 43.5%, 35.8%, and 23.4% for interview for partner services 2012, 2013, and 2014, respectively.
† HIV positivity rate was calculated by dividing the number of newly diagnosed HIV infections by the total number of testing events.

from 2012 to 2014. The percentage of newly diagnosed HIV infections among all testing events was similar in all 3 years, ranging from 0.26% in 2014 to 0.28% in 2012 and 2013. Although black females aged 40–49 years and ≥50 years accounted for an average of only 12.1% and 11.1% of testing events, respectively, the highest rates of newly diagnosed HIV infections during all 3 years were observed in these age groups (mean = 0.54% [40–49 years] and 0.52% [≥50 years]) (Table).

Among U.S. Census regions, an average of 70% of all testing events conducted among black females occurred in the South census region during 2012–2014; 14.4% occurred in the Northeast, 11.6% in the Midwest, and 3.6% in the West. Mean HIV positivity rates were similar in the Northeast (0.29%), South (0.29%), and West (0.30%), and lower in the Midwest (0.18%) (Table).

Among black females with newly diagnosed HIV infection, the percentage who were linked to HIV medical care within 90 days of diagnosis increased overall from 33.8% in 2012 to 50.1% in 2014, and among all age groups and U.S. Census regions. The largest increase occurred among females aged 13–19 years, from 32.7% in 2012 to 57.9% in 2014. The Northeast census region linked the highest percentage of black females with newly diagnosed HIV-infection to care (average = 56.7%), followed by the West (42.7%), the South (40.4%) and the Midwest (37.6%) (Table).

During 2012–2014, interviews for partner services among black females with newly diagnosed HIV infection increased overall from 32.8% to 51.7%, and for all age groups and in all U.S. Census regions except the Midwest. The largest increases occurred among females aged 13–19 years (from 32.7% to 71.9%), and in the Northeast (from 13.9% to 52.5%) and West (from 23.4% to 64.8%) census regions. During 2012–2014, the percentage of black females with newly diagnosed HIV infection who were interviewed for partner services ranged from an average of 41.3% for persons aged 40–49 years to 50% for persons aged 13–19 years (Table).

## Discussion

The National HIV/AIDS Strategy goal to reduce disparities in the rate of new HIV diagnoses among black females in the United States by at least 15% compared with diagnoses in the overall population from 2010 to 2020 was met 8 years early, in 2012. However, a decrease in the rate of new diagnoses is just one indicator of progress. To reduce HIV-related disparities for black females, it is also important to reach National HIV/AIDS Strategy goals that aim to increase the percentage of HIV-positive black females living with HIV who know their status and who are linked to HIV medical care (*1*). Although increasing these proportions among black females won't alone reduce all HIV-related disparities, it is critical to the larger public health effort to prevent HIV infections and strengthen care.

Persons who are aware of their HIV-positive status are more likely to take steps to prevent HIV transmission to others (*7*) and to get linked to HIV medical care. HIV testing and partner services are two important strategies for increasing the number of persons living with HIV who know their status. Although CDC funding for HIV testing programs remained relatively stable during 2012–2014, the findings in this report

**Summary**

What is already known on this topic?

Although a recent decline in the number of new human immunodeficiency virus (HIV) diagnoses has been seen among non-Hispanic black or African American (black) women, this population is still disproportionately affected by HIV. HIV testing, early linkage to HIV medical care, and partner services are critical for ensuring that HIV-positive black women are aware of their status and receive the care they need to achieve viral suppression and improved health outcomes.

What is added by this report?

Analysis of National HIV Prevention Program Monitoring and Evaluation data on CDC-funded HIV testing events and HIV prevention services from 61 state and local health departments and 151 community-based organizations indicated that the number of HIV testing events among black females declined slightly from 2012 to 2014, and the HIV positivity rate remained relatively stable. Linkage to HIV medical care within 90 days of diagnosis for black females with newly diagnosed HIV infection increased from 33.8% to 50.1% from 2012 to 2014; however, this is below the goal set by the National HIV/AIDS Strategy to link 85% of HIV-positive persons to HIV medical care.

What are the implications for public health practice?

Enhanced efforts to diagnose new HIV infections among black females, and link those with HIV infection to HIV medical care will help to eliminate health disparities among this group through improved health outcomes and viral suppression.

show that the number of CDC-funded testing events provided to black females declined slightly during this period and the HIV positivity rate remained relatively stable. Although the number of black females with newly diagnosed HIV infection interviewed for partner services increased during this period, only slightly more than half (51.7%) were interviewed in 2014.

Increasing evidence supports the benefits of early linkage to HIV medical care. A recent study determined that 91.5% of new HIV infections are attributable to persons with HIV who are not in HIV medical care and underscores the importance of early diagnosis and ongoing care and treatment (*8*). Early linkage to care is critical because it leads to improved health outcomes and survival for the person living with HIV (*5*). The findings in this report indicate that the percentage of black females with newly diagnosed HIV infection who were linked to HIV medical care within 90 days of diagnosis increased from 33.8% to 50.1% from 2012 to 2014. Although this represents improvement, 50.1% is still well below the National HIV/AIDS Strategy target of 85% (*1*).

The findings in this report are subject to at least three limitations. First, these findings describe CDC-funded HIV testing events only, and therefore, are not representative of all HIV testing among all black females in the United States. Second, for this report, the percentage with linkage to HIV medical care represents the minimum percentage achieved because all persons with newly diagnosed HIV infection are included in the denominator, even if data for linkage are missing or invalid. Finally, because self-report of current HIV status is used, the number of new positive results and HIV positivity are likely overestimates. Although NHM&E data completeness and accuracy have steadily improved from 2012 to 2014, continued training and technical assistance for CDC-funded partners are needed to effectively monitor and evaluate HIV prevention program efforts.

To continue to reduce HIV-related health disparities for black females in the United States, increasing HIV testing efforts among this group is needed to increase the percentage of black females living with HIV who are aware of their status, and to ensure that every black female with HIV infection is linked to HIV medical care soon after her diagnosis, is retained in care, and achieves viral suppression.

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# Advisory Committee on Immunization Practices Recommended Immunization Schedules for Persons Aged 0 Through 18 Years — United States, 2016

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Each year, the Advisory Committee on Immunization Practices (ACIP)* reviews the recommended immunization schedules for persons aged 0 through 18 years to ensure that the schedules reflect current recommendations for Food and Drug Administration-licensed vaccines. In October 2015, ACIP approved the recommended immunization schedules for persons aged 0 through 18 years for 2016; the 2016 schedules include several changes from the 2015 immunization schedules. For 2016, the figures, footnotes, and tables will be published on the CDC immunization schedule website (http://www.cdc.gov/vaccines/schedules/index.html). This provides readers electronic access to the most current version of the schedules and footnotes on the CDC website. Health care providers are advised to use figures, tables, and the combined footnotes together. Printable versions of the 2016 immunization schedules for persons aged 0 through 18 years in several formats (e.g., portrait, landscape, and pocket-sized versions) and ordering instructions for laminated versions and "parent-friendly" schedules are available at the immunization schedule website.

* http://www.cdc.gov/vaccines/acip/committee/members-archive.html.

*Recommendations for routine use of vaccines in children, adolescents, and adults are developed by the Advisory Committee on Immunization Practices (ACIP). ACIP is chartered as a federal advisory committee to provide expert external advice and guidance to the Director of the Centers for Disease Control and Prevention (CDC) on use of vaccines and related agents for the control of vaccine-preventable diseases in the civilian population of the United States. Recommendations for routine use of vaccines in children and adolescents are harmonized to the greatest extent possible with recommendations made by the American Academy of Pediatrics (AAP), the American Academy of Family Physicians (AAFP), and the American College of Obstetricians and Gynecologists (ACOG). Recommendations for routine use of vaccines in adults are harmonized with recommendations of AAFP, ACOG, the American College of Physicians (ACP), and the American College of Nurse-Midwives (ACNM). ACIP recommendations adopted by the CDC Director become agency guidelines on the date published in the* Morbidity and Mortality Weekly Report *(*MMWR*). Additional information regarding ACIP is available at http://www.cdc.gov/vaccines/acip.*

For further guidance on the use of each vaccine included in the schedules, including contraindications and precautions, health care providers are referred to the respective ACIP vaccine recommendations (http://www.cdc.gov/vaccines/hcp/acip-recs). Providers should be aware that changes in recommendations for specific vaccines can occur between annual updates to the childhood/adolescent immunization schedules.

These immunization schedules are approved by ACIP (http://www.cdc.gov/vaccines/acip/index.html), the American Academy of Pediatrics (https://www.aap.org), the American Academy of Family Physicians (http://www.aafp.org), and the American College of Obstetricians and Gynecologists (http://www.acog.org).

The most current immunization schedules can be found on the Vaccines and Immunizations pages of CDC's website (http://www.cdc.gov/vaccines/schedules). If errors or omissions are discovered, CDC posts revised versions on these web pages.

CDC encourages organizations that previously have relied on copying the schedules on their websites to instead use syndication, as a more reliable method for displaying the most current and accurate immunization schedules on an organization's website. Use of content syndication requires a one-time step that ensures an organization's website displays current schedules as soon as they are published or revised; instructions for the syndication code are available on CDC's website (http://www.cdc.gov/vaccines/schedules/syndicate.html). CDC also offers technical assistance for implementing this form of content syndication (e-mail request to ncirdwebteam@cdc.gov).

Changes to the 2016 figures from the previous schedules† are as follows:

- In Figure 1, "Recommended Immunization Schedule for Persons Aged 0 through 18 Years," the order of the vaccines was changed to group vaccines by the recommended age of administration. The order was also changed within the footnotes.
- A purple bar was added for *Haemophilus influenzae* type b (Hib) vaccine for children aged 5–18 years, denoting the recommendation to vaccinate certain children at high risk in this age group who are unimmunized.
- A purple bar was added for human papillomavirus (HPV) vaccine for children aged 9–10 years, denoting the recommendation to vaccinate children at high risk in this age group, including children with a history of sexual abuse.

† http://www.cdc.gov/vaccines/schedules/past.html.

- A new row was added for Meningococcal B vaccine. This row contains a purple bar denoting the recommendation to vaccinate certain persons at high risk aged 10 years and older. This row also contains a blue bar denoting the recommendation for administration to groups not at high risk (subject to individual clinical decision making) for persons aged 16 through 23 years (the preferred age range is 16–18 years).
- In Figure 2, "Catch-up immunization schedule for persons aged 4 months through 18 years who start late or who are more than 1 month behind," Tdap/Td was added to the list of possible previous vaccines in the Tdap line for children aged 7 years and older, dose 2 to dose 3 column.

Changes to the 2016 footnotes from the previous schedules are as follows:

- The Hepatitis B (HepB) vaccine footnote was revised to 1) more clearly present the timing for post-vaccination serologic testing for infants born to mothers whose test results were positive for hepatitis B surface antigen (HBsAg); and 2) present the new CDC-recommended interval for post-vaccination serologic testing in this population.
- The diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine footnote was revised to more clearly present recommendations following an inadvertently early administered 4th dose of DTaP vaccine.
- The inactivated polio vaccine (IPV) footnote was updated to provide guidance for vaccination of persons who received only oral poliovirus vaccine (OPV) and received all doses before age 4 years.
- The meningococcal vaccines footnote was updated to include recommendations for the administration of the meningococcal B vaccine. A "clinical discretion" category was added for the recommendation for vaccination of persons not at high risk aged 16 through 23 years, subject to individual clinical decision making. Meningococcal B vaccines have been added to the section recommending vaccination of persons with high-risk conditions and other persons at increased risk for disease. A definition of persistent complement deficiency has been added.
- The human papillomavirus (HPV) vaccine footnote was updated to reflect the new HPV vaccine nomenclature. Guidance was added for vaccination beginning at age 9 years for children with a history of sexual abuse.

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# Advisory Committee on Immunization Practices Recommended Immunization Schedule for Adults Aged 19 Years or Older — United States, 2016

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In October 2015, the Advisory Committee on Immunization Practices (ACIP)* approved the Recommended Immunization Schedule for Adults Aged 19 Years or Older, United States, 2016. This schedule provides a summary of ACIP recommendations for the use of vaccines routinely recommended for adults aged 19 years or older in two figures, footnotes for each vaccine, and a table that describes primary contraindications and precautions for commonly used vaccines for adults. Although the figures in the adult immunization schedule illustrate recommended vaccinations that begin at age 19 years, the footnotes contain information on vaccines that are recommended for adults that may begin at age younger than age 19 years. The footnotes also contain vaccine dosing, intervals between doses, and other important information and should be read with the figures.

* http://www.cdc.gov/vaccines/acip/committee/members-archive.html.

*Recommendations for routine use of vaccines in children, adolescents, and adults are developed by the Advisory Committee on Immunization Practices (ACIP). ACIP is chartered as a federal advisory committee to provide expert external advice and guidance to the Director of the Centers for Disease Control and Prevention (CDC) on use of vaccines and related agents for the control of vaccine-preventable diseases in the civilian population of the United States. Recommendations for routine use of vaccines in children and adolescents are harmonized to the greatest extent possible with recommendations made by the American Academy of Pediatrics (AAP), the American Academy of Family Physicians (AAFP), and the American College of Obstetricians and Gynecologists (ACOG). Recommendations for routine use of vaccines in adults are harmonized with recommendations of AAFP, ACOG, the American College of Physicians (ACP), and the American College of Nurse-Midwives (ACNM). ACIP recommendations adopted by the CDC Director become agency guidelines on the date published in the* Morbidity and Mortality Weekly Report (MMWR). *Additional information regarding ACIP is available at http://www.cdc.gov/vaccines/acip.*

Changes in the 2016 adult immunization schedule from the 2015 schedule included the following new ACIP recommendations:

- Interval change for 13-valent pneumococcal conjugate vaccine (PCV13) followed by 23-valent pneumococcal polysaccharide vaccine (PPSV23) from "6 to 12 months" to "at least 1 year" for adults aged ≥65 years who do not have immunocompromising conditions, anatomical or functional asplenia, cerebrospinal fluid leaks, or cochlear implants (*1*). The interval for adults aged ≥19 years with any of these conditions is at least 8 weeks (*2*).
- Serogroup B meningococcal (MenB) vaccine series should be administered to certain groups of persons aged ≥10 years who are at increased risk for serogroup B meningococcal disease (*3*).
- MenB vaccine series may be administered to adolescents and young adults aged 16 through 23 years (preferred age is 16 through 18 years) to provide short-term protection against most strains of serogroup B meningococcal disease (*4*).
- Nine-valent human papillomavirus (HPV) vaccine (9vHPV) has been added to the schedule and can be used for routine vaccination of females and males against HPV (*5*).

These recommendations were also reviewed and approved by the American College of Physicians, the American Academy of Family Physicians, the American College of Obstetricians and Gynecologists, and the American College of Nurse-Midwives.

The 2016 adult immunization schedule contains the following changes from the 2015 schedule:

- In Figures 1 ("Recommended adult immunization schedule, by vaccine and age group") and 2 ("Vaccines that might be indicated for adults based on medical and other indications"), the row for "Meningococcal" was retitled "Meningococcal 4-valent conjugate (MenACWY) or polysaccharide (MPSV4)" and a new row for "Meningococcal B (MenB)" was added; additional text was added in indication bars to describe reasons for alternate dosing schedules for vaccines where such designations were appropriate. For example, the measles, mumps, and rubella (MMR) indication bar that stated "1 or 2 doses" in the 2015 schedule was revised to "1 or 2 doses depending on indication" in the 2016 schedule.
- In Figure 2, the text in the PPSV23 indication bar was revised from "1 or 2 doses" to "1, 2, or 3 doses depending on indication" to account for the recommendation that

adults aged ≥19 years with immunocompromising conditions or anatomical or functional asplenia can receive up to 3 doses of PPSV23. The text in the *Haemophilus influenzae* type b (Hib) indication bar was revised from "1 or 3 doses" to "3 doses, post-HSCT recipients only" because adults who have received hematopoietic stem cell transplants are the only group for which a 3-dose series of Hib vaccination is recommended; for the other groups of adults for which Hib vaccination is recommended, the text in the indication bar has been revised to "1 dose."

- In Footnotes, the sections on influenza, pneumococcal, meningococcal, and HPV vaccination were changed as follows:
  - The language on vaccinating persons with egg allergies was clarified to state: "Persons aged ≥18 years with egg allergy of any severity may receive the recombinant influenza vaccine (RIV) because it does not contain any egg protein. Persons with hives-only allergy to eggs may receive the inactivated influenza vaccine (IIV) with additional safety measures." (*6*).
  - Two errata in the 2015 footnotes on pneumococcal vaccination were corrected: 1) "Adults aged ≥19 years" replaced "adults aged 19 through 64 years" as the age at which adults with immunocompromising conditions, anatomical or functional asplenia, cerebrospinal fluid leaks, or cochlear implants should receive PCV13 followed by PPSV23 at least 8 weeks later (*7*); and 2) "Adults aged 19 through 64 years who are residents of nursing homes and other long-term care facilities" was removed from the list of persons for whom PPSV23 is recommended. These adults should be assessed for pneumococcal vaccination status and vaccinated as appropriate on the basis of age or medical indications (*7*).
  - Recommendations for the use of MenB vaccine for persons aged ≥10 years with certain conditions were included (*3*). Information was also included to indicate that persons aged 16 through 23 years (preferred age range is 16 through 18 years) may be vaccinated with either a 2-dose series of MenB-4C or a 3-dose series of MenB-FHbp vaccine to provide short-term protection against most strains of serogroup B meningococcal disease (*4*).
  - The use of 9vHPV vaccine for HPV vaccination of young adult females and males was added (*4*). For females, 2vHPV, 4vHPV, or 9vHPV may be used; for males, 4vHPV or 9vHPV may be used as indicated.
- In the table of contraindications and precautions to commonly used vaccines in adults, rows for MenACWY/MPSV4 and MenB vaccines replaced the single row for meningococcal vaccine in the 2016 table.

Details on these updates and information on other vaccines recommended for adults are available online under Adult Immunization Schedule, United States, 2016 (www.cdc.gov/vaccines/schedules/hcp/adult.html) and in the Annals of Internal Medicine (*8*). The full ACIP recommendations for each vaccine are also available online (www.cdc.gov/vaccines/hcp/acip-recs/index.html).

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# Vital Signs: Alcohol-Exposed Pregnancies — United States, 2011–2013

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## Abstract

**Background:** Alcohol is a teratogen.* Prenatal alcohol exposure is associated with a range of adverse reproductive outcomes and can cause fetal alcohol spectrum disorders (FASDs) characterized by lifelong physical, behavioral, and intellectual disabilities. FASDs are completely preventable if a woman does not drink alcohol while pregnant.

**Methods:** CDC analyzed data from the 2011–2013 National Survey of Family Growth to generate U.S. prevalence estimates of risk for an alcohol-exposed pregnancy for 4,303 nonpregnant, nonsterile women aged 15–44 years, by selected demographic and behavioral factors. A woman was considered at risk for an alcohol-exposed pregnancy during the past month if she had sex with a male, drank any alcohol, and did not (and her partner did not with her) use contraception in the past month; was not sterile; and had a partner (or partners) not known to be sterile.

**Results:** The weighted prevalence of alcohol-exposed pregnancy risk among U.S. women aged 15–44 years was 7.3%. During a 1-month period, approximately 3.3 million women in the United States were at risk for an alcohol-exposed pregnancy.

**Conclusions and Implications for Public Health Practice:** Alcohol use in pregnancy is associated with low birthweight, preterm birth, birth defects, and developmental disabilities. Women of reproductive age should be informed of the risks of alcohol use during pregnancy, and contraception should be recommended, as appropriate, for women who do not want to become pregnant. Women wanting a pregnancy should be advised to stop drinking at the same time contraception is discontinued. Health care providers should advise women not to drink at all if they are pregnant or there is any chance they might be pregnant. Alcohol misuse screening and behavioral counseling (also known as alcohol screening and brief intervention) is recommended for all adults in primary care, including reproductive-aged and pregnant women, as an evidenced-based approach to reducing alcohol consumption among persons who consume alcohol in excess of the recommended guidelines.

## Introduction

Alcohol use during pregnancy is associated with a range of complications and poor reproductive outcomes and can cause fetal alcohol spectrum disorders (FASDs), which are characterized by lifelong physical, behavioral, and intellectual disabilities (*1*–*3*). The estimated prevalence of FASDs, based on a community study of first grade students in the United States, ranges from 2% to 5% (*4*). FASDs are completely preventable if a woman does not drink alcohol at any time while she is pregnant.

In 2010, the cost of excessive alcohol use in the United States was $249 billion, including $5.5 billion in costs related to drinking while pregnant (*5*). Pregnancy-related costs include increased health care needs and lost productivity, as well as subsequent costs, such as special education for children with an FASD (*5*). Lifetime cost for an infant with fetal alcohol syndrome (FAS), a single disorder within the FASD continuum, has been estimated to be $2 million (*6*).

The 2015–2020 Dietary Guidelines for Americans recommend that adults who choose to drink should do so in moderation: up to one drink per day for women and up to two drinks per day for men (*7*). However, these guidelines also recommend that some populations not consume any alcohol, including pregnant women and women who might be pregnant, as well as persons younger than the legal drinking age of 21 years (*7*).† In 2005, the U.S. Surgeon General released an updated advisory to women to raise awareness about FASDs (*8*). The advisory called for pregnant women and women considering pregnancy to abstain from drinking alcohol to reduce their risk for an alcohol-exposed pregnancy. Despite these known risks and warnings, a recent CDC study of alcohol use among reproductive-aged women found that 10.2% of pregnant women reported drinking any amount of alcohol during the past month and 3.1% reported that they binge drank (consumed four or more drinks on one occasion) (*9*).

*An agent that causes developmental disabilities.

† This is the legal drinking age in 50 U.S. states (https://alcoholpolicy.niaaa.nih.gov/the_1984_national_minimum_drinking_age_act_2.html).

Approximately half of all pregnancies in the United States are unplanned (*10*), and alcohol-related fetal harm can occur in early pregnancy, before a woman recognizes that she is pregnant. Therefore, the best time to assess alcohol consumption and inform women about health consequences to them and their child is before pregnancy. Multiple organizations and groups advise women not to drink if they are or might be pregnant (*8*,*11*–*15*). The American College of Obstetricians and Gynecologists (ACOG) and the U.S. Preventive Services Task Force both recommend routine alcohol screening and brief counseling (intervention) in primary care settings (*11*,*12*). ACOG also recommends annual alcohol-use screening for all women seeking obstetric or gynecologic care and for women within the first trimester of pregnancy, as well as provision of information about risks of drinking during pregnancy (*11*). CDC analyzed data on female participants in the 2011–2013 National Survey of Family Growth (NSFG) to estimate the national prevalence of alcohol-exposed pregnancy risk among nonpregnant women in the United States and to identify characteristics of women at risk for an alcohol-exposed pregnancy.

## Methods

NSFG uses a multistage probability-based, nationally representative sample of the household population of males and females, aged 15–44 years. Data collected from women during September 2011–September 2013 were analyzed for this report. The response rate for females included in the 2011–2013 NSFG was 73.4%. Statistical design, interviewing, and data processing of the 2011–2013 NSFG were conducted by the University of Michigan's Institute for Social Research, under a contract with the National Center for Health Statistics, in collaboration with the center's NSFG team.[§] Since NSFG data were obtained using a complex multistage probability cluster sample design, CDC used 2011–2013 NSFG data weighted to reflect the female household population of the United States in July 2012, the midpoint of data collection.

Prevalence estimates of risk for an alcohol-exposed pregnancy and associated 95% confidence intervals (CIs) were calculated for 4,303 nonpregnant, nonsterile women aged 15–44 years, stratified by age, race/ethnicity, marital status, education, number of live births, and smoking status. A woman was considered to be at risk for an alcohol-exposed pregnancy if she 1) had vaginal sex with a male during the past 4 weeks, 2) drank alcohol in any amount during the past 30 days, 3) did not (and her partner did not with her) use contraception during the month before the interview, and 4) was not sterile and she did not have a partner (or partners) known to be sterile (Figure 1). An additional, weighted analysis was conducted to determine whether alcohol consumption differed on the basis of pregnancy desire, sexual activity, and contraception status. A woman was considered to desire pregnancy if she was having sex without using contraception in the month of the interview, and she reported that the reason for not using contraception was that either she or her partner wanted to become pregnant as soon as possible.[¶] The prevalence of any alcohol consumption during the past 30 days and 95% CIs were estimated for four groups: 1) women wanting to become pregnant as soon as possible who had sex with a man without using contraception, 2) women not wanting to become pregnant as soon as possible who had sex with a man without using contraception, 3) women who had sex using contraception or had a sterile partner, and 4) women who did not have sex with a man.

## Results

Among nonpregnant, nonsterile U.S. women aged 15–44 years, the weighted alcohol-exposed pregnancy risk prevalence was 7.3% during a 1-month period (Table). The risk for alcohol-exposed pregnancy differed significantly by age, and was highest among women aged 25–29 years (10.4%) and lowest among women aged 15–20 years (2.2%). The risk for alcohol-exposed pregnancy was also higher among women who were married (11.7%) or cohabiting (13.6%), compared with single women (2.3%); among women who had one live birth (13.6%), compared with women with no live births (5.8%) or with two or more live births (6.0%); and among women who were current smokers (10.7%), compared with nonsmokers (6.0%). The prevalence of alcohol-exposed pregnancy risk was positively associated with level of education, but did not differ by race/ethnicity.

The prevalence of alcohol use was similar among the three subgroups of sexually active women, ranging from 65.9% to 74.3%, and did not differ by pregnancy desire (Figure 2). Women who reported not having sex with a male during the preceding 4 weeks had the lowest prevalence of alcohol use (50.7%, CI = 45.6–55.8).

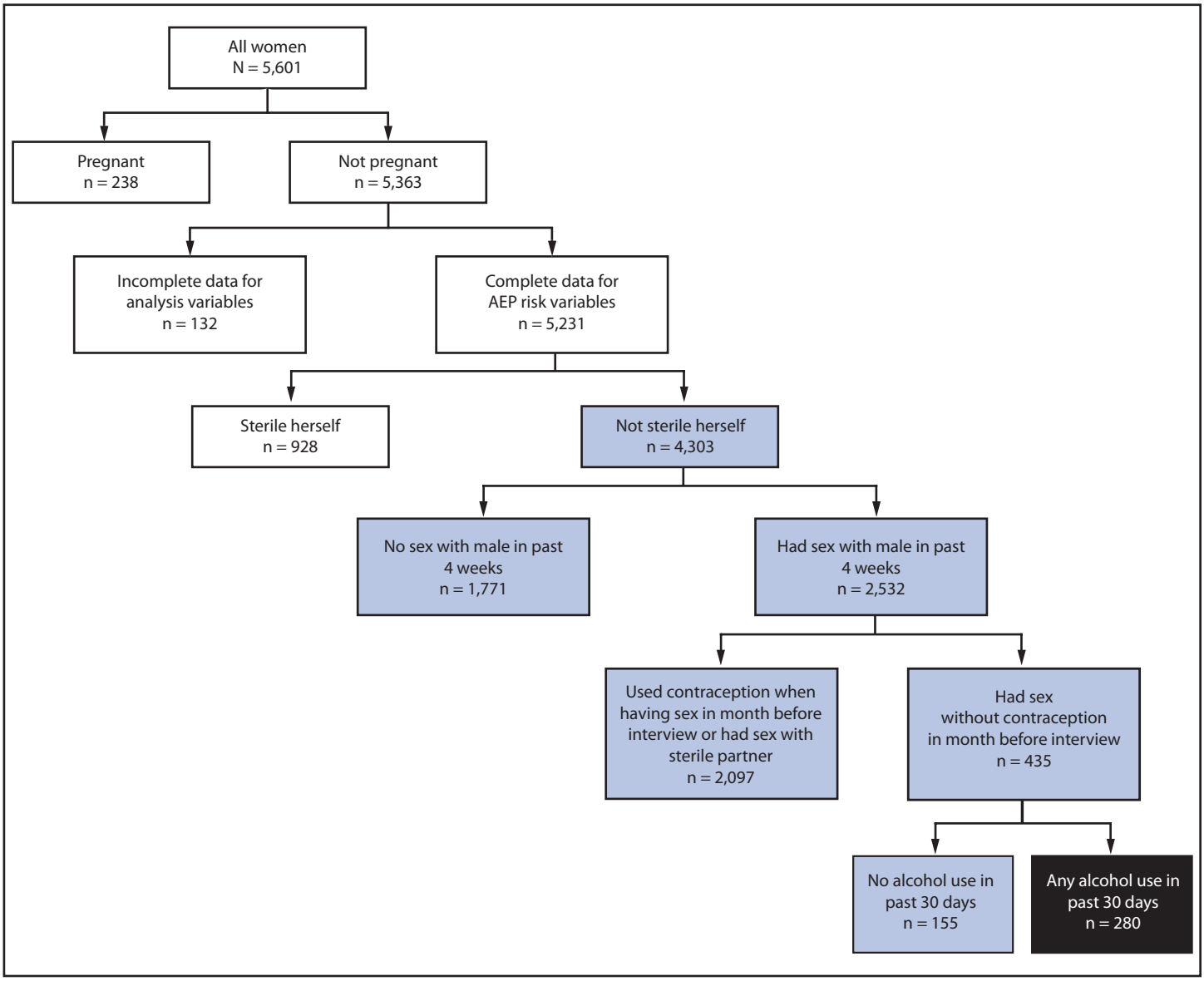
## Conclusions and Comments

Alcohol is a known teratogen that can cause adverse reproductive outcomes for women, and serious, lifelong problems for a person exposed to it prenatally. These risks occur throughout pregnancy, including the period before a woman knows that

[§] http://www.cdc.gov/nchs/data/nsfg/NSFG_2011-2013_UserGuide_MainText.pdf.

[¶] Pregnancy desire was assessed by the following questions: "Is the reason you are not using a method of birth control now because you, yourself, want to become pregnant as soon as possible?" (Response options: Yes, No, Refused, and Don't Know); and "Your partner, does he want you to become pregnant as soon as possible?" (Response options: Inapplicable, Yes, No, Refused, Don't Know, and No Current Partner [if volunteered]). A woman was desiring pregnancy if she reported that either she or her partner wanted to become pregnant as soon as possible.

**FIGURE 1. Identification of women aged 15–44 years at risk for an alcohol-exposed pregnancy (AEP) — National Survey of Family Growth, United States, 2011–2013*,†**




* Numbers are unweighted.
† Shaded boxes indicate women included in this study; the black box indicates women at risk for an alcohol-exposed pregnancy.

she is pregnant (*16*). All types of alcohol are harmful. To help prevent adverse consequences of alcohol consumption during pregnancy, health care providers should discuss and recommend, as appropriate, available contraception methods,** including condoms to protect against sexually transmitted diseases, to women who are sexually active and drink alcohol.

Reasons for some of the associations found in this study are unknown. One possible reason why married or cohabiting women were more likely than single women to be at risk for an alcohol-exposed pregnancy is that they might be less likely to use contraception. The risk for an alcohol-exposed pregnancy was most likely lowest among women with less than a high school diploma because most of them were aged <21 years, a population less likely to drink. The higher risk for an alcohol-exposed pregnancy among smokers might be associated, in part, with smokers being more likely to drink alcohol. Health risk behaviors including excessive alcohol use and cigarette smoking can co-occur (*17*).

** http://www.cdc.gov/reproductivehealth/unintendedpregnancy/contraception.htm.

**TABLE. Prevalence estimates of risk for alcohol-exposed pregnancy among nonpregnant, nonsterile women of childbearing age, by selected characteristics — National Survey of Family Growth, United States, 2011–2013**

| Characteristic | Numerator, unweighted | Denominator, unweighted | Prevalence, weighted % (95% CI) | Chi-square p-value |
|---|---|---|---|---|
| **Overall** | 280 | 4,303 | 7.3 (6.2–8.6)* | |
| **Age group (yrs)** | | | | |
| 15–20 | 25 | 1,148 | 2.2 (1.2–3.9) | <0.001 |
| 21–24 | 51 | 688 | 7.9 (5.5–11.1) | |
| 25–29 | 69 | 871 | 10.4 (7.2–14.6) | |
| 30–34 | 62 | 681 | 9.2 (6.4–13.0) | |
| 35–39 | 38 | 507 | 9.1 (5.8–14.0) | |
| 40–44 | 35 | 408 | 7.7 (5.0–11.5) | |
| **Race/Ethnicity** | | | | |
| White only, non-Hispanic | 138 | 1,963 | 8.2 (6.4–10.4) | 0.352 |
| Black only, non-Hispanic | 63 | 856 | 6.5 (4.8–8.7) | |
| Hispanic | 65 | 1,105 | 6.4 (4.3–9.5) | |
| Other, non-Hispanic | 14 | 379 | 4.8 (2.8–8.2) | |
| **Marital status** | | | | |
| Married | 118 | 1,164 | 11.7 (9.1–14.8) | <0.001 |
| Cohabiting | 67 | 551 | 13.6 (9.2–19.8) | |
| Single | 75 | 2,241 | 2.3 (1.7–3.3) | |
| Divorced/ Separated/ Widowed | 20 | 347 | 5.2 (3.0–9.1) | |
| **Education: highest degree received** | | | | |
| Less than high school | 32 | 991 | 3.4 (2.0–5.6) | 0.002 |
| High school diploma | 78 | 1,054 | 8.6 (6.0–12.1) | |
| Some college/ Associate's | 109 | 1,290 | 7.7 (5.8–10.1) | |
| Bachelor's or greater | 61 | 968 | 8.7 (6.0–12.3) | |
| **Number of live births** | | | | |
| None | 109 | 2,232 | 5.8 (4.2–8.1) | 0.003 |
| One | 90 | 862 | 13.6 (10.1–18.0) | |
| Two or more | 81 | 1,209 | 6.0 (4.3–8.1) | |
| **Smoking status past 12 months** | | | | |
| Nonsmoker | 162 | 3,113 | 6.0 (4.7–7.7) | 0.028 |
| Former smoker | 34 | 350 | 9.3 (6.4–13.5) | |
| Current smoker | 84 | 840 | 10.7 (7.6–14.8) | |

**Abbreviations:** CI = confidence interval; SE = standard error.
* Weighted numerator = 3,361,445.

The current study found that approximately 3.3 million women aged 15–44 years reported drinking alcohol in the past month even though they had sex and did not use contraception, and thus were at risk for an alcohol-exposed pregnancy. Raising awareness about the dangers of alcohol use among reproductive-aged women is important, especially if contraception is not being used. This study also reinforces the importance of routinely screening women of reproductive age for alcohol use, and providing intervention before pregnancy. Health care professionals need to advise women who want to become pregnant and have discontinued contraception to stop drinking alcohol. These efforts might facilitate progress toward the Healthy People 2020 objective to increase alcohol abstinence among pregnant women from 89.4% to 98.3% (*14*).

The U.S. Preventive Services Task Force recommends alcohol misuse screening and behavioral counseling (also known as alcohol screening and brief intervention [alcohol SBI]) for all adults in primary care, including pregnant women (*12*). Alcohol SBI involves screening for alcohol misuse using a recommended and valid instrument or screening question, and then conducting a brief (typically 6–15-minute) intervention or counseling session if a person screens positive. The brief intervention ascertains whether the person wants to reduce their drinking and places their behavior in the context of their overall health. Finally, a small percentage of persons with indications of alcohol dependence are referred for more specialized treatment (*12*).

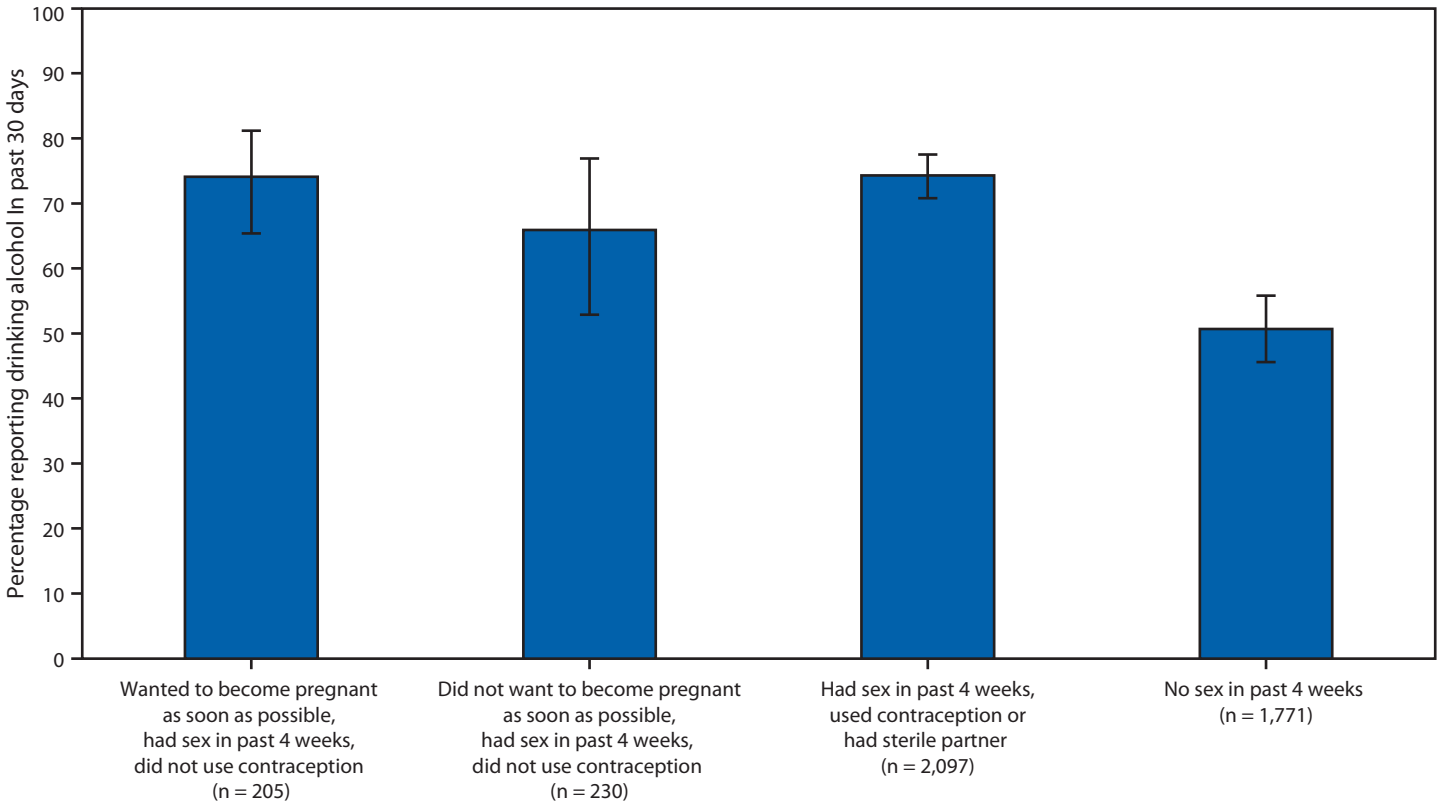
Systematic reviews and a meta-analysis have shown that alcohol SBI is effective in reducing alcohol consumption among women of childbearing age who were included in studies of both men and women (*18*–*20*), and in studies limited to women of childbearing age (*21*,*22*). Among women of childbearing age specifically, a subanalysis of a Trial for Early Alcohol Treatment (Project TrEAT)†† conducted at follow-up 48 months later found reductions in mean alcohol intake of 48% (from 14 to 7.5 drinks per week), and reductions in the prevalence of binge drinking (from 93% to 68%) and number of binge drinking episodes during the previous 30 days (from five to three) in the treatment group (n = 103), compared with baseline, and a 68% reduction in the number of women who drank more than 13 drinks per week, which was more of a reduction than in the control group (n = 102) (*21*). Alcohol SBI was found to be significantly associated with maintaining abstinence in a sample of 143 pregnant women at high risk; 86% of women in the intervention group reported continued abstinence, compared with 72% in the control group (*23*).

Although alcohol SBI is routinely recommended in primary care and is effective in reducing excessive alcohol use, a previous CDC study reported that only one in six U.S. adults reported ever talking to a health professional about alcohol (*24*). This is particularly concerning for women of childbearing age, given the serious consequences associated with drinking alcohol while pregnant.

Behavior change is complex and must occur across multiple domains, from the individual to broader systems, to be effective. Thus, primary care interventions are necessary, but not adequate to change population health (*25*). CDC has developed a guide

†† Project TrEAT included a large sample of women aged 18–40 years, and was conducted in the offices of 64 community-based primary care physicians from 10 Wisconsin counties. The intervention involved two visits with a primary care provider, follow-up phone calls, feedback about health behaviors, and other information.

**FIGURE 2. Estimated prevalence* of any alcohol consumption in the past 30 days among nonpregnant, nonsterile women aged 15–44 years, by pregnancy desire, sexual activity, and contraception use† status — National Survey of Family Growth, United States, 2011–2013**




* With 95% confidence intervals indicated with error bars.
† In month before interview month.

to help clinical practices systematically implement alcohol SBI (*26*). The Affordable Care Act requires coverage of the U.S. Preventive Services Task Force B-level recommended clinical preventive services such as alcohol SBI, without copayment.§§ Coupling alcohol SBI with population-based strategies recommended by the Community Preventive Services Task Force to reduce excessive alcohol use might have greater impact. These recommended population-based strategies include electronic SBI (e.g., use of computers, telephones, or mobile devices to deliver components of alcohol SBI¶¶) that can occur within clinical or other environments, as well as enhanced enforcement of laws prohibiting sale of alcohol to minors.***

§§ The Patient Protection and Affordable Care Act of 2010 requires that nongrandfathered private health plans provide coverage without cost-sharing for services that have in effect an "A" or "B" recommendation from the U.S. Preventive Services Task Force (USPSTF). Because USPSTF issued a "B" recommendation for alcohol SBI in adults aged ≥18 years, this must be covered by such plans, Section 1001 of the Patient Protection and Affordable Care Act, Public Law 111-148, 2010 (http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/html/PLAW-111publ148.htm).

¶¶ http://www.thecommunityguide.org/alcohol/eSBI.html.

*** http://www.thecommunityguide.org/alcohol/lawsprohibitingsales.html.

The findings in this report are subject to at least three limitations. First, NSFG data are based on self-reporting and are subject to respondent recall bias. Second, social desirability bias might have resulted in an underestimation of risk for alcohol-exposed pregnancy; however, questions on alcohol consumption were asked as part of the audio, computer-assisted self-interview, a data collection method that can reduce this bias. Finally, the timeframes of variables used to define risk for alcohol-exposed pregnancy in this study did not completely align. Specifically, contraception use was measured in the calendar month before the interview but the other variables were measured in the 4 weeks or 30 days before the interview. Fewer than 6% of nonpregnant, nonsterile women changed their contraceptive practices between the month of interview and the calendar month before the interview, suggesting that the contraception measure used in this study is a reasonable approximation of current contraceptive practices, despite the slight misalignment in timeframes.

Alcohol SBI by a health care provider, combined with assessment of a woman's contraceptive needs, can help reduce a woman's risk for an alcohol-exposed pregnancy. Some women might benefit from extended counseling or an increased

### Key Points

- Alcohol use during pregnancy is associated with a range of adverse reproductive outcomes and can cause fetal alcohol spectrum disorders, characterized by lifelong physical, behavioral, and intellectual disabilities.
- Approximately 3.3 million U.S. women aged 15–44 years who were not pregnant and not sterile were at risk for an alcohol-exposed pregnancy during 2011–2013.
- Three in four women who wanted to get pregnant as soon as possible reported drinking alcohol, putting them at risk for an alcohol-exposed pregnancy. Any sexually active woman of reproductive age who is drinking alcohol and not using birth control is at risk for an alcohol-exposed pregnancy.
- A developing baby can be exposed to alcohol before a woman knows she is pregnant. Approximately half of all pregnancies in the United States are unplanned. Even if a pregnancy is planned, a woman probably will not know she is pregnant until she is 4–6 weeks into the pregnancy.
- Alcohol screening and brief intervention is recommended for all adults, including pregnant women. This clinical service is effective, inexpensive, and can be accomplished in 6–15 minutes, although follow-up sessions might be needed. Health care providers should advise women not to drink at all if they are pregnant or might be pregnant.
- To help prevent adverse consequences of alcohol consumption during pregnancy, health care providers should discuss and recommend, as appropriate, available contraception methods to women who are sexually active and drink alcohol. They should also screen them for excessive alcohol use and counsel or refer them as needed regarding their overall health.
- Additional information is available at http://www.cdc.gov/vitalsigns.

number of counseling sessions, and additional evidence-based interventions (*27*) might be needed to help them modify their drinking or contraception behaviors, or both. A comprehensive approach that greatly increases alcohol SBI, extended counseling when needed, and population-based strategies should reduce the risk for alcohol-exposed pregnancy and the concomitant negative health outcomes over time.

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[1]Division of Birth Defects and Developmental Disabilities, National Center on Birth Defects and Developmental Disabilities, CDC.

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# Announcement

## Congenital Heart Defect Awareness Week — February 7–14, 2016

Congenital Heart Defect Awareness Week, held February 7–14, is an annual observance to promote awareness and education about congenital heart defects (CHDs). Heart defects are costly and critical conditions that persons live with throughout their lives. CHDs affect nearly 1 in 100 births every year in the United States and are the most common type of birth defect (*1,2*). Some heart defects can be diagnosed prenatally using ultrasound, some might be identified during newborn screening using pulse oximetry, and others might be discovered by clinical exam or when the person becomes symptomatic. An estimated 2 million children and adults in the United States are living with a CHD today (*3*). CDC's Stories: Living with Heart Defects website includes personal stories written by persons affected by CHDs (http://www.cdc.gov/ncbddd/birthdefects/stories/heartdefects.html).

CDC works to track and research CHDs through many different efforts, including 1) working with state tracking programs to evaluate newborn screening for critical congenital heart defects;* 2) funding state programs to track birth defects,† including CHDs; 3) funding several research centers§ across the nation to help understand the causes of birth defects, including CHDs; and 4) launching projects focused on tracking persons with CHDs across the lifespan.

* http://www.cdc.gov/ncbddd/heartdefects/cchd-facts.html.
† http://www.cdc.gov/ncbddd/birthdefects/states/index.html.
§ http://www.cdc.gov/ncbddd/birthdefects/cbdrp.html.

CDC-funded research recently reported risks for certain CHDs in babies of mothers who were exposed to pesticides at work (*4*) and a reduction in CHD risk for mothers with better diet quality (*5*). CDC research also determined that children with CHDs receive special education more often than children who do not have birth defects (*6*). CDC's congenital heart defects website has additional information regarding congenital heart defects (http://www.cdc.gov/ncbddd/heartdefects).

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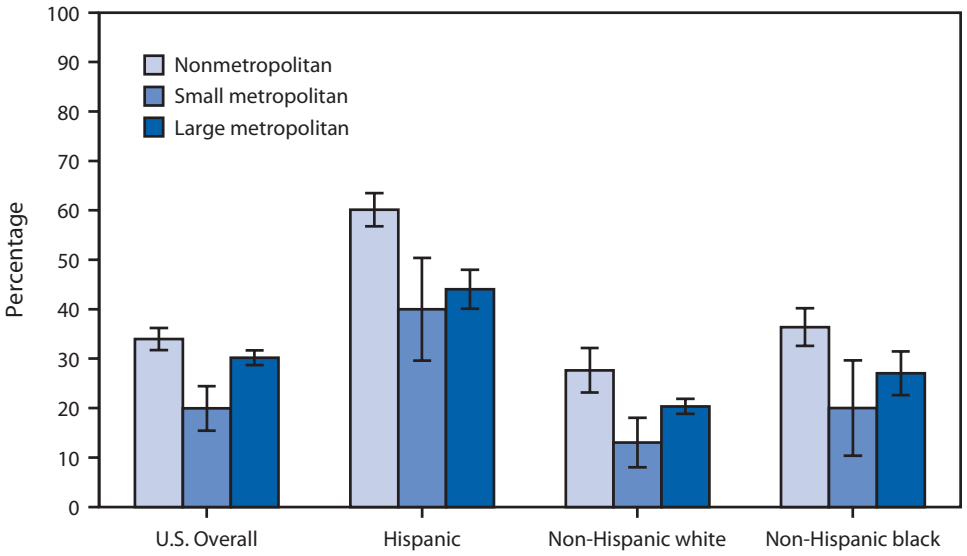
# QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

## Percentage* of Children and Adolescents Aged ≤17 Years Whose Usual Place of Sick Care is a Clinic or Health Center,† by Race/Ethnicity§ and Metropolitan Status of Residence¶ — National Health Interview Survey, United States, 2014**




* Percentage with 95% confidence intervals indicated with error bars.
† Usual place of sick care at a clinic or health center was based on the answer "yes" to the question, "Is there a place that the child goes when he or she is sick or you need advice about his or her health?" and the answer "clinic or health center" to the question, "What kind of place (does your child go to most often): a clinic, doctor's office, emergency room, or some other place?" Children without a usual place of sick care were excluded from the analysis.
§ Persons of Hispanic ethnicity may be of any race or combination of races.
¶ Based on the household residence location. Large metropolitan is a large metropolitan statistical area (MSA) of ≥1 million persons, small metropolitan is a small MSA of <1 million persons, and nonmetropolitan is not in an MSA.
** Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. population and are derived from the National Health Interview Survey sample child component.

In 2014, children living in nonmetropolitan areas were most likely (34%) to have a clinic or health center as their usual place of sick care, followed by children in large metropolitan areas (30%) and children in small metropolitan areas (20%). This general pattern held for all three race and ethnicity groups. Hispanic children were more likely than non-Hispanic white and non-Hispanic black children to have a clinic or health center as their usual place of sick care in all household residence locations.

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

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