Reduced Disparities in Birth Rates Among Teens Aged 15–19 Years — United States, 2006–2007 and 2013–2014

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Teen childbearing can have negative health, economic, and social consequences for mothers and their children (*1*) and costs the United States approximately $9.4 billion annually (*2*). During 1991–2014, the birth rate among teens aged 15–19 years in the United States declined 61%, from 61.8 to 24.2 births per 1,000, the lowest rate ever recorded (*3*). Nonetheless, in 2014, the teen birth rate remained approximately twice as high for Hispanic and non-Hispanic black (black) teens compared with non-Hispanic white (white) teens (*3*), and geographic and socioeconomic disparities remain (*3,4*), irrespective of race/ethnicity. Social determinants associated with teen childbearing (e.g., low parental educational attainment and limited opportunities for education and employment) are more common in communities with higher proportions of racial and ethnic minorities (*4*), contributing to the challenge of further reducing disparities in teen births. To examine trends in births for teens aged 15–19 years by race/ethnicity and geography, CDC analyzed National Vital Statistics System (NVSS) data at the national (2006–2014), state (2006–2007 and 2013–2014), and county (2013–2014) levels. To describe socioeconomic indicators previously associated with teen births, CDC analyzed data from the American Community Survey (ACS) (2010–2014). Nationally, from 2006 to 2014, the teen birth rate declined 41% overall with the largest decline occurring among Hispanics (51%), followed by blacks (44%), and whites (35%). The birth rate ratio for Hispanic teens and black teens compared with white teens declined from 2.9 to 2.2 and from 2.3 to 2.0, respectively. From 2006–2007 to 2013–2014, significant declines in teen birth rates and birth rate ratios were noted nationally and in many states. At the county level, teen birth rates for 2013–2014 ranged from 3.1 to 119.0 per 1,000 females aged 15–19 years; ACS data indicated unemployment was higher,

and education attainment and family income were lower in counties with higher teen birth rates. State and county data can be used to understand disparities in teen births and implement community-level interventions that address the social and structural conditions associated with high teen birth rates.

NVSS natality files are compiled annually by CDC's National Center for Health Statistics and include demographic information, such as maternal age, race, and Hispanic ethnicity, for births in all 50 states and the District of Columbia (DC) (*3*). CDC calculated teen birth rates (number of births per 1,000 females aged 15–19 years) at the national, state, and county level, and birth rate ratios (the birth rates for black

Continuing Education examination available at http://www.cdc.gov/mmwr/cme/conted_info.html#weekly.

teens and for Hispanic teens compared with white teens), as measures of disparities at the national and state level. This report includes national data for 2006–2014. For state-specific comparisons, 2 years of data were combined for 2006–2007 and 2013–2014 to provide reliable estimates for each race/ethnicity group (numerators ≥20). Changes over time were evaluated using a Z-test (for birth rates based on counts ≥100), or through a comparison of Poisson probability distributions (for birth rates based on counts <100, and for birth rate ratios). County-specific data were reported for 2013–2014 combined, and excluded counties with <20 teen births in total, resulting in a final data set accounting for 76% of all counties and 99% of all teen births in the United States.

The most recent 5-year estimate (2010–2014) from the U.S. Census Bureau's ACS was used to describe key socioeconomic indicators. The ACS is a continual nationwide survey that collects detailed information on demographic, social, economic, and housing characteristics (5). Three markers of economic opportunity and perceived potential for future opportunities, previously used as indicators of social determinants for teen childbearing (6), were selected (i.e., percentage of the population aged ≥16 years unemployed, percentage of the population aged ≥25 years with an associate's degree or higher, and median family income). The value for each indicator was compared between U.S. counties in highest and lowest quintiles of teen birth rates for 2013–2014. T-tests were used to evaluate differences (p<0.05).

Nationally, from 2006 to 2014, the teen birth rate declined 41% overall (from 41.1 per 1,000 to 24.2 per 1,000). The largest decline occurred among Hispanics (51%, from 77.4 to 38.0), followed by blacks (44%, from 61.9 to 34.9), and then whites (35%, from 26.7 to 17.3) (Figure 1). Correspondingly, the birth rate ratio for Hispanic teens and black teens compared with white teens declined from 2.9 to 2.2 and from 2.3 to 2.0, respectively.

The teen birth rate and racial/ethnic disparities for 2013–2014 ranged widely across states (Table). In some states, these disparities reflected very low rates of birth among white teens. For example, in New Jersey, the teen birth rate among whites (4.8) was well below the national rate for this group (18.0); whereas teen birth rates in this state among blacks (27.4) and Hispanics (31.3) were also lower than the national rates for these groups (blacks: 37.0; Hispanics: 39.8), they were approximately 6–7 fold higher than the rate for whites. In other states, disparities reflected birth rates for black and Hispanic teens that exceeded national rates for these groups. For example, in Nebraska, the birth rate for white teens (16.2) approximated the national rate, whereas rates for black and Hispanic teens (42.6 and 53.9, respectively) far exceeded the national rate for these groups. Finally, other states had smaller disparities, because teen birth rates were relatively high among all racial/ethnic groups. In Arkansas, for example, the teen birth rate was above the national rate for whites (37.7), blacks (54.6) and Hispanics (46.5).

FIGURE 1. Birth rates for females aged 15–19 years — National Vital Statistics System, United States, 2006–2014
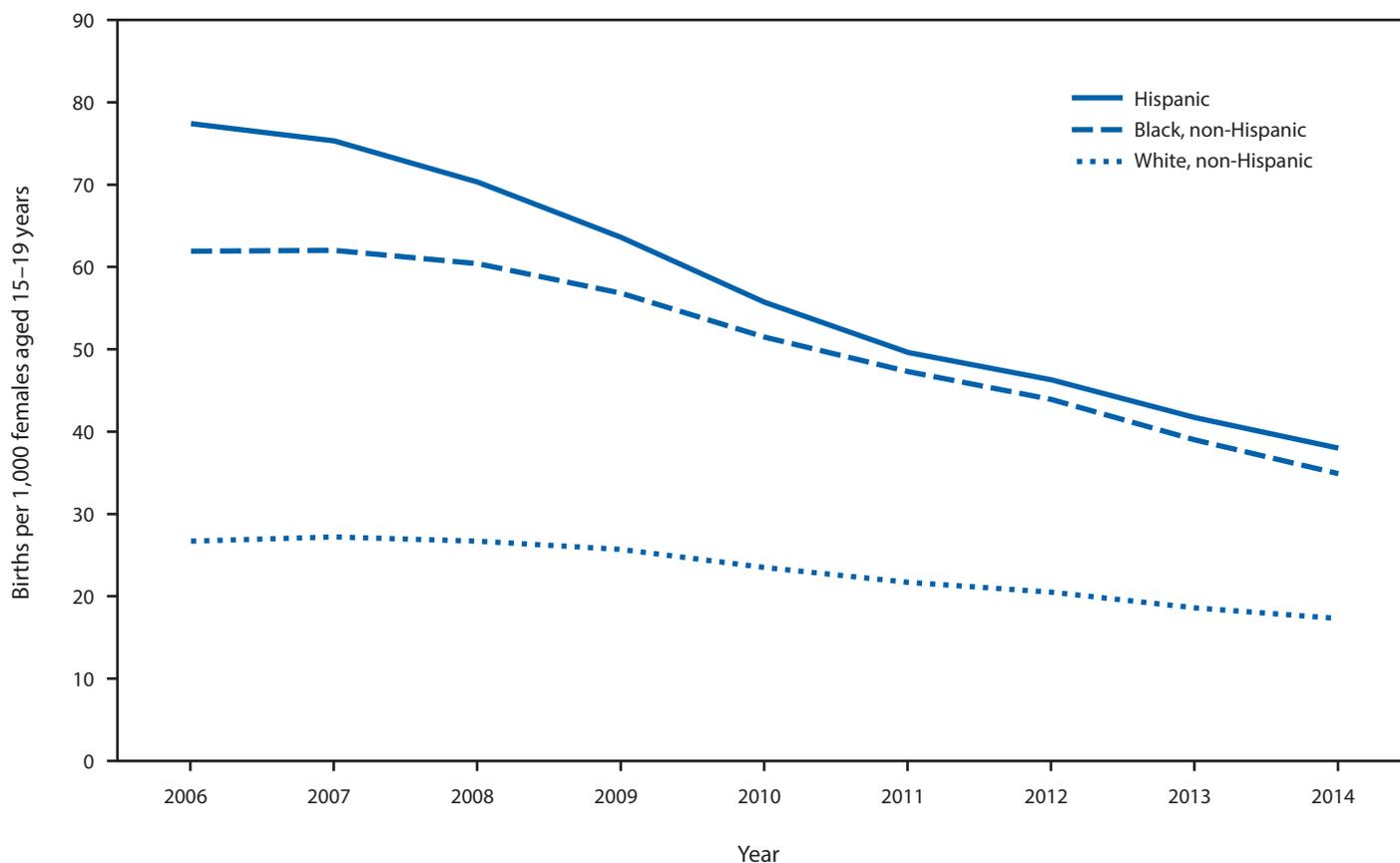
From 2006–2007 to 2013–2014, the overall birth rate for teens declined significantly in every state, with the percentage decline ranging from 13% (North Dakota) to 48% (Arizona). In nearly every state, there was a significant decline for all three racial/ethnic groups assessed (Table). In many states disparities also declined significantly from 2006–2007 to 2013–2014; the birth rate ratio declined significantly for black teens compared with white teens in 28 states and for Hispanic teens compared with white teens in 37 states (p<0.05). However, states with the largest percentage decline in teen births did not necessarily have the largest declines in racial/ethnic disparities (Table).

U.S. county-level teen birth rates for 2013–2014 ranged from 3.1 to 119.0, with median rates of 14.6 and 57.1 for the counties in the lowest and highest quintiles for teen birth rates, respectively (Figure 2). Many counties with teen birth rates in the highest quintile were clustered in the south and southwest; some states with low overall birth rates also had counties in the highest quintile.

Data from ACS indicated that among counties in the highest quintile for teen birth rates, the mean percentage of the population aged ≥16 years unemployed, mean percentage of the population aged ≥25 years with an associate's degree or higher,

and mean family income were 10.5%, 19.9% and $46,005, respectively. By comparison, values for all three socioeconomic indicators were more favorable among counties in the lowest quintile for teen birth rates, at 7.6%, 40.4% and $73,967, respectively (p<0.001, for all comparisons).

Discussion

Significant declines in racial/ethnic disparities have accompanied the historic decline in the overall teen birth rate in the United States since 2006. Nationally, and in many states, the largest decline occurred among Hispanic teens followed by black and then white teens. Nonetheless, racial/ethnic and geographic disparities remain, both within and across states, and even where large declines in teen birth rates have occurred. The variation in county-level data reinforces the need to use local data to focus teen pregnancy prevention efforts on communities with the greatest need.

To address persistent disparities in teen births, the U.S. Department of Health and Human Services (HHS) Office of Adolescent Health partnered with CDC during 2010–2015 to fund community-wide initiatives in nine communities with some of the highest teen birth rates in the United States (7,8).

TABLE. Birth rates* among females aged 15–19 years, by state and by race/ethnicity,[†] and birth rate ratios for non-Hispanic blacks (blacks)[§] and Hispanics[¶] compared with non-Hispanic whites (whites) — National Vital Statistics System, United States, 2006–2007 and 2013–2014

State	Birth rate* 2013–2014				Birth rate ratio 2013–2014		% change in birth rate 2006–2007 to 2013–2014**				% change in birth rate ratio 2006–2007 to 2013–2014**	
	Overall	White	Black	Hispanic	Black:white[§]	Hispanic:white[¶]	Overall	White	Black	Hispanic	Black:white[§]	Hispanic:white[¶]
United States	**25.4**	**18.0**	**37.0**	**39.8**	**2.1**	**2.2**	**-38.5**	**-33.3**	**-40.3**	**-47.8**	**-8.7**	**-21.4**
Alabama	33.2	29.4	39.3	49.7	1.3	1.7	-36.2	-27.9	-40.1	-66.4	-18.8	-52.8
Alaska	29.1	20.5	30.0	27.5	1.5	1.3	-31.2	-25.2	-43.3	-53.5	-21.1[††]	-40.9
Arizona	31.5	17.9	35.5	43.9	2.0	2.5	-47.8	-41.7	-37.3	-55.7	11.1[††]	-21.9
Arkansas	41.5	37.7	54.6	46.5	1.4	1.2	-31.4	-25.6	-35.1	-55.9	-17.6	-42.9
California	22.4	10.0	28.0	33.3	2.8	3.3	-43.6	-39.8	-36.8	-48.8	3.7[††]	-15.4
Colorado	21.9	13.5	24.2	41.2	1.8	3.1	-47.5	-39.5	-55.2	-56.8	-25.0	-27.9
Connecticut	12.2	5.1	20.4	34.3	4.0	6.7	-47.6	-49.5	-53.6	-49.5	-9.1[††]	0.0[††]
Delaware	22.7	15.4	32.9	40.7	2.1	2.6	-43.1	-36.1	-45.9	-60.3	-16.0	-38.1
District of Columbia	30.3	1.8	44.2	49.1	24.6	27.3	-38.5	-45.5[††]	-30.7	-55.7	27.5[††]	-18.8[††]
Florida	23.6	18.8	35.9	24.4	1.9	1.3	-45.1	-37.3	-42.6	-57.0	-9.5	-31.6
Georgia	29.5	23.3	36.0	43.8	1.5	1.9	-45.0	-40.4	-43.5	-63.8	-6.3	-38.7
Hawaii	24.1	18.6	19.2	42.7	1.0	2.3	-37.9	-41.0	-44.8	-49.5	-9.1[††]	-14.8[††]
Idaho	24.5	20.5	17.6	43.8	0.9	2.1	-37.2	-34.1	-35.5[††]	-52.7	0.0[††]	-30.0
Illinois	23.7	13.7	46.1	35.4	3.4	2.6	-40.8	-34.1	-39.6	-51.6	-8.1	-25.7
Indiana	29.1	26.0	44.1	41.3	1.7	1.6	-31.4	-27.0	-41.3	-50.5	-19.0	-30.4
Iowa	21.0	17.1	46.6	46.3	2.7	2.7	-35.8	-38.0	-38.8	-49.3	-3.6[††]	-18.2
Kansas	28.6	22.6	43.0	53.3	1.9	2.4	-31.4	-29.6	-41.3	-43.4	-17.4	-17.2
Kentucky	37.4	37.0	41.5	44.7	1.1	1.2	-28.6	-24.6	-40.0	-61.5	-21.4	-50.0
Louisiana	37.5	30.3	47.5	48.1	1.6	1.6	-31.1	-24.1	-36.9	-26.0	-15.8	0.0[††]
Maine	16.9	16.7	25.8	17.0	1.5	1.0	-33.7	-33.5	-30.8[††]	-43.1[††]	0.0[††]	-16.7[††]
Maryland	18.6	10.5	27.3	39.6	2.6	3.8	-45.3	-47.8	-45.5	-49.2	4.0[††]	-2.6[††]
Massachusetts	11.3	6.0	17.1	38.4	2.9	6.4	-46.2	-54.9	-52.2	-38.2	7.4[††]	36.2[††]
Michigan	22.3	16.4	45.3	32.5	2.8	2.0	-33.2	-31.4	-29.2	-53.6	3.7[††]	-31.0
Minnesota	16.1	10.8	35.5	39.8	3.3	3.7	-41.7	-40.0	-47.2	-57.8	-10.8	-28.8
Mississippi	40.3	33.2	48.6	41.9	1.5	1.3	-41.3	-35.9	-43.6	-61.4	-11.8	-38.1
Missouri	28.6	25.2	44.5	41.5	1.8	1.6	-35.0	-31.3	-39.5	-52.0	-10.0	-33.3
Montana	27.1	21.4	—[§§]	34.5	NA	1.6	-25.5	-25.2	—[§§]	-28.3	NA	-5.9[††]
Nebraska	23.6	16.2	42.6	53.9	2.6	3.3	-30.8	-27.4	-51.1	-46.6	-33.3	-26.7
Nevada	29.4	20.0	41.5	39.5	2.1	2.0	-44.0	-37.3	-35.6	-54.2	5.0[††]	-25.9
New Hampshire	11.8	11.4	14.0	22.5	1.2	2.0	-36.9	-36.3	-40.9[††]	-48.9	-7.7[††]	-20.0[††]
New Jersey	14.0	4.8	27.4	31.3	5.7	6.5	-43.8	-44.8	-43.4	-47.7	1.8[††]	-5.8[††]
New Mexico	40.5	22.8	27.3	48.2	1.2	2.1	-36.0	-33.5	-47.8	-40.3	-20.0[††]	-12.5
New York	16.9	10.2	24.2	31.7	2.4	3.1	-35.0	-29.7	-38.3	-39.8	-11.1	-13.9
North Carolina	27.2	19.7	35.4	48.5	1.8	2.5	-43.3	-40.3	-42.4	-61.5	-5.3[††]	-34.2
North Dakota	24.0	18.2	36.8	52.0	2.0	2.9	-13.4	-5.7[††]	-5.6[††]	-33.2[††]	0.0[††]	-27.5
Ohio	26.1	21.5	46.9	41.5	2.2	1.9	-33.8	-32.0	-37.0	-45.3	-8.3	-20.8
Oklahoma	40.7	35.8	46.9	58.0	1.3	1.6	-29.3	-25.6	-33.6	-39.5	-13.3	-20.0
Oregon	20.8	16.5	29.5	39.1	1.8	2.4	-39.7	-36.8	-35.9	-54.1	0.0[††]	-27.3
Pennsylvania	20.1	13.8	38.9	48.7	2.8	3.5	-34.1	-31.0	-41.1	-42.9	-15.2	-18.6
Rhode Island	16.7	10.0	24.8	40.9	2.5	4.1	-41.2	-38.7	-53.7	-44.6	-24.2	-8.9[††]
South Carolina	30.0	24.9	37.3	45.5	1.5	1.8	-42.2	-34.6	-44.2	-64.9	-16.7	-47.1
South Dakota	27.6	17.2	28.6	47.3	1.7	2.8	-31.0	-33.8	-40.4[††]	-47.0	-5.6[††]	-17.6[††]
Tennessee	33.8	29.6	45.2	50.8	1.5	1.7	-35.9	-31.0	-37.1	-64.8	-11.8	-50.0
Texas	39.4	23.4	39.3	54.7	1.7	2.3	-36.1	-31.4	-38.9	-40.5	-10.5	-14.8
Utah	20.0	14.5	24.5	46.5	1.7	3.2	-41.7	-41.1	-55.9	-52.0	-26.1	-17.9
Vermont	14.4	14.8	19.7	—[§§]	1.3	NA	-29.4	-29.2	—[§§]	—[§§]	NA	NA
Virginia	19.3	15.0	28.5	32.6	1.9	2.2	-43.6	-37.5	-45.9	-56.6	-13.6	-29.0
Washington	19.8	14.9	22.3	41.4	1.5	2.8	-39.6	-38.2	-49.5	-50.4	-16.7	-20.0
West Virginia	38.3	39.2	33.8	26.8	0.9	0.7	-14.9	-13.3	-35.1	-28.3[††]	-25.0	-12.5[††]
Wisconsin	18.8	11.8	53.8	41.3	4.6	3.5	-38.4	-38.5	-38.2	-50.3	2.2[††]	-18.6
Wyoming	29.9	27.7	19.8	40.1	0.7	1.4	-37.7	-31.6	-72.3	-56.0	-61.1	-39.1

Abbreviation: NA = not applicable.

* Number of births per 1,000 females aged 15–19 years.
[†] Teens categorized as black or white were non-Hispanic. Teens categorized as Hispanic might be of any race. Other racial ethnic populations were too small for meaningful analysis.
[§] Birth rate for non-Hispanic black teens divided by the birth rate for non-Hispanic white teens.
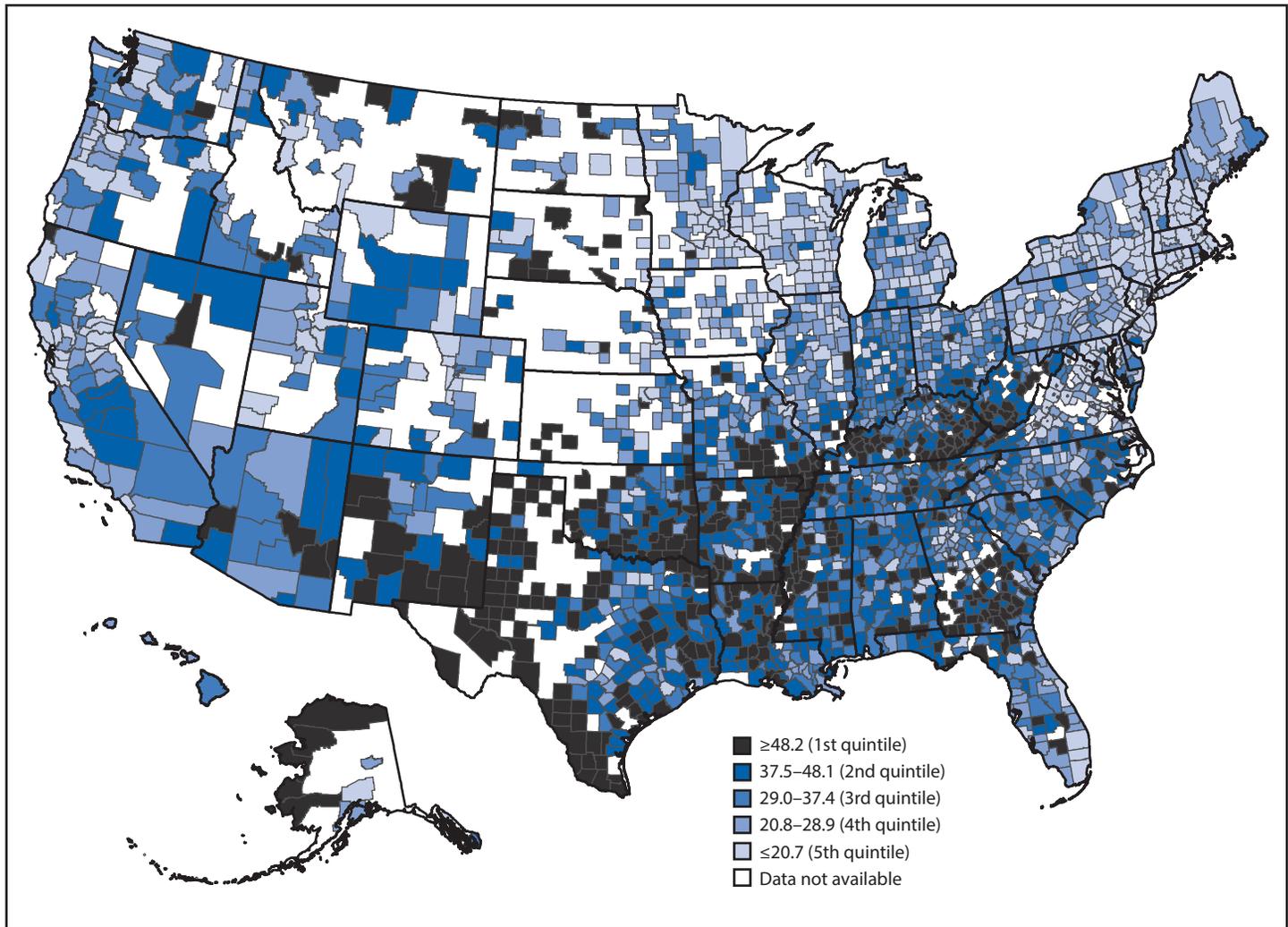[¶] Birth rate for Hispanic teens divided by the birth rate for non-Hispanic white teens.
** Overall for the United States, and unless otherwise indicated for individual states, the decline from 2006–2007 to 2013–2014 was significant (p<0.05).
[††] The decrease from 2006–2007 to 2013–2014 was not statistically significantly (p>0.05).
[§§] Figure does not meet standards of reliability or precision; based on >20 births in the numerator.

FIGURE 2. Births per 1,000 females aged 15–19 years, by county of residence — National Vital Statistics System, United States, 2013–2014

Legend:
- ≥48.2 (1st quintile)
- 37.5–48.1 (2nd quintile)
- 29.0–37.4 (3rd quintile)
- 20.8–28.9 (4th quintile)
- ≤20.7 (5th quintile)
- Data not available

This effort focused on black and Hispanic teens and integrated activities that addressed social determinants of health at the community level (*8*). Participating communities examined local data to develop their activities. Examples of activities included presenting community-specific teen birth data to civic leaders; encouraging health care providers to offer evening and weekend hours and low-cost services to increase access; having teen-focused, culturally appropriate materials available during health care visits; and implementing evidence-based teen pregnancy prevention programs to reach teens of both sexes both inside and outside of schools (e.g., through Job Corps, alternative schools, churches, and community colleges) (*8*). Preliminary data (*9*) indicate that each community increased the number of teens who received reproductive health services and evidence-based interventions, as well as the proportion of teens who received moderately or highly effective contraceptive methods. Many aspects of the community-wide initiatives have been incorporated in Teen Pregnancy Prevention Replication

grants awarded in 2015 by the Office of Adolescent Health to communities with the greatest need (*10*).

The findings in this report are subject to at least three limitations. First, teen birth rate estimates for some racial/ethnic groups (i.e., American Indian/Alaskan Natives and Asian Pacific Islanders in all states; blacks in Montana; Hispanics in Vermont; and all racial/ethnic groups by county) were not available at the state and county level because of small population sizes. Second, while this report examined each major race/ethnicity group overall, there are differences in teen birth rates among subgroups within these populations, such as Mexican, Puerto Rican, and Cuban persons of Hispanic ethnicity (*3*). Finally, information on economic data, unemployment, and educational attainment provides useful information about community context for preventing teen pregnancy, but does not provide a direct link with individual-level factors.

Despite substantial declines in teen births in the United States, disparities by race/ethnicity and geography persist,

Summary

What is already known about this topic?

Despite record declines in the rate of births among teens, racial/ethnic and geographic disparities persist.

What is added by this report?

From 2006 to 2014, the birth rate for teens aged 15–19 years declined 41% overall (from 41.1 to 24.2 per 1,000 females). The greatest decline was for Hispanics (51%), followed by non-Hispanic blacks (blacks) (44%), and non-Hispanic whites (whites) (35%). From 2006–2007 to 2013–2014, the overall birth rate for teens declined significantly in every state, with declines ranging from 13% in North Dakota to 48% in Arizona; the birth rate ratio also declined for black teens compared with white teens in 28 states and for Hispanic teens compared with white teens in 37 states. County-level teen birth rates for 2013–2014 ranged from 3.1 to 119.0 per 1,000 females aged 15–19 years; unemployment was higher, and education attainment and family income were lower in counties with higher teen birth rates.

What are the implications for public health practices?

Community-level interventions that address the social conditions associated with high teen birth rates might further reduce racial/ethnic and geographic teen birth disparities in the United States. State and county-level data can be used to identify populations with the greatest need.

highlighting the continuing need for teen pregnancy prevention efforts. Understanding disparities in teen birth rates and the multiple causes at the local level can help target effective interventions for populations with the greatest need (4). Ongoing efforts to integrate social determinants of health into teen pregnancy prevention program play a critical role in addressing racial/ethnic and geographical disparities observed in teen births in the United States.

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