## Issue Brief: Social Services

## Introduction

In 2014-15, the high school graduation rate reached a record high of 83 percent (U.S. Department of Education 2016). Despite the gains, over half a million students still drop out of high school each year (U.S. Department of Education 2015). High schools have adopted various strategies designed to keep students who are at risk of not graduating in school and on track for earning the credits required to graduate. "At-risk" students are defined as those failing to achieve basic proficiency in key subjects or exhibiting behaviors that can lead to failure and/or dropping out of school. Dropout prevention strategies are diverse; they vary in type of program, services offered, frequency, intensity, and duration of contact with target students.

The U.S. Department of Education (Department) sponsored the National Survey on High School Strategies Designed to Help At-Risk Students Graduate (HSS), which aimed to provide descriptive information on the prevalence and characteristics of dropout prevention strategies for at-risk students. The survey collected data in the 2014-15 school year from a nationally representative sample of 2,142 public high schools and focused on 13 specific high school improvement strategies ${ }^{1}$ identified by a panel of external experts and senior Department officials. All findings are based on self-reported data from school principals. This brief on social services is the ninth in a series of briefs being released this year with key findings about these high school improvement strategies.

## Definition of Social Services

The HSS defined social services as assistance to high school students in addressing a range of nonacademic issues that can negatively affect their participation and outcomes in school. High schools can deliver social services on campus or refer students and families to outside agencies for assistance. Social services can include health care ${ }^{2}$; mental health care ${ }^{2}$; assistance to address material needs such as transportation, shelter, or clothing; child care for teen parents; new immigrant services; and parent/family education and support. Some high schools may also offer "wraparound services," a comprehensive network of social services that are available for students based on an assessment of their needs and an individualized plan of care.

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## Research on Social Services

Theory suggests that health status should have some bearing on academic achievement and attainment, although empirical evidence from well-designed, rigorous studies remains limited. Still, some research is suggestive of a link between academic outcomes and adolescent health behavior, ${ }^{3}$ physical health, family environment, and psychological well-being:

Participation in school-based health centers. Two studies found the use of school-based health centers (SBHCs), which offer services such as primary care, behavioral health counseling, and other services, was positively associated with increases in grade point average (GPA) and attendance and reductions in high school dropouts. In one study, results indicated a significant increase in attendance for SBHC medical service users compared with nonusers (Walker et al. 2010). GPAs also increased over time for mental health service users compared with nonusers.

Wraparound services. Wraparound services are provided by a team of practitioners who coordinate a wide range of services for children and their families that address the full spectrum of health, education, safety, and welfare. There is some research suggesting "wraparound services" may help a subgroup of students improve their mental health and juvenile justice outcomes. A meta-analysis of seven studies documented the outcomes of youth receiving wraparound services compared with youth who did not receive wraparound services. Studies found that neglected or delinquent youth receiving wraparound services were in a more stable living environment and had slightly better mental health, youth functioning, school functioning, and juvenile justice-related outcomes (Suter and Bruns 2009). The authors noted that the evidence base for wraparound services is still in development.

## Survey Findings on Social Services

This brief describes the prevalence of providing social services as a high school dropout prevention strategy. It does not measure the effectiveness of social services but instead describes the types of social services offered to students, the prevalence of this strategy in high schools, and the agencies that offered these services if students were referred to outside organizations. All findings are based on selfreported data from school principals. This analysis included an examination of four school characteristics: (1) size, (2) poverty, (3) locale, and (4) graduation rate. Only statistically significant differences within school characteristics (at $p<.05$ ) are discussed; non-statistically significant differences are not reported. School characteristics were defined in the following ways:

School size. School size categories consisted of small schools (fewer than 500 students), medium schools (500-1,199 students), and large schools (1,200 or more students) based on 2013-14 Common Core of Data (CCD) student enrollment data.

School poverty. Poverty levels were based on 2013-14 free or reduced-price lunch (FRPL) and total CCD school enrollment data. The poverty categories were low-poverty schools (below 35 percent students with FRPL), medium-poverty schools (35-49 percent students with FRPL), and high-poverty schools ( 50 percent or more students with FRPL).

School locale. School locale included three mutually exclusive locales from the CCD: rural schools, suburban/town schools, and city schools.

[^1]Graduation rate. School classification by graduation rate was based on three categories: low graduation rate ( 67 percent or lower graduation rate), medium graduation rate ( 68 to 89 percent graduation rate), and high graduation rate ( 90 percent or higher graduation rate).

Summary of Key Findings

- In 2014-15, almost all high schools (96 percent) offered at least one social service to their students. About 20 percent of high school students nationwide received at least one social service during the school year, according to school principals.
- High-poverty schools were more likely than low-poverty schools to offer students at least one social service; large schools were more likely than small schools to offer students at least one social service; and more city and suburban schools than rural schools offered students at least one social service.
- The most common type of social service offered to students was mental health services (87 percent), followed by health services (70 percent) and assistance to address material needs such as transportation, shelter, or clothing ( 68 percent).
- Among high schools that offered at least one social service, 78 percent of schools offered students at least one social service on campus, while 87 percent of schools referred students to at least one social service outside the school. High schools typically offered more than one social service (averaging two social services on campus and three social services off campus) and could decide whether to offer a social service on and/or off campus. Where a student receives a social service can depend on the resources available at the school, the nature of student needs, and the relationship to outside providers.
- When high schools offered students at least one social service on campus, the most common type offered was mental health services (49 percent), followed by parent/family engagement (47 percent) and assistance to address material needs (42 percent).
- When high schools referred students to a social service outside the school, the most common type offered was mental health services ( 94 percent), followed by health services ( 68 percent), and assistance to address material needs (63 percent). The most common agency for referrals was a social services agency ( 79 percent), followed by a community mental health agency (77 percent) and a public health agency (64 percent).

What is the prevalence of social services in high schools?
In 2014-15, almost all high schools (96 percent) offered at least one social service to their students. About 20 percent of high school students nationwide received at least one social service during the school year, according to school principals. The prevalence of social services varied by school size, school poverty level, and school locale (Exhibit 1). There were no significant differences by graduation rate.

Exhibit 1. Percentage of high schools that offered students at least one social service, by selected school characteristics, 2014-15

| Where social service was provided | All schools that provided social service | Large | Small | High poverty | Low poverty | City | Suburban | Rural | Low graduation rate | High graduation rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Any location | 96\% | 99\%* | 94\% | 97\%* | 94\% | 98\%* | 97\% | 93\% | 96\% | 95\% |
| On campus | 78\% | 88\%* | 73\% | 81\%* | 74\% | 85\%* | 80\% | 70\% | 78\% | 75\% |
| Through an outside agency | 87\% | 94\%* | 84\% | 89\%* | 89\% | 84\%* | 90\% | 82\% | 81\% | 87\% |

Exhibit reads: In 2014-15, 96 percent of high schools offered students at least one social service.

* $p<.05$.

NOTE: An asterisk indicates statistical significance. The asterisk is placed on one case per comparison. Differences across school characteristics with two categories were based on comparisons between the two groups. Differences across school characteristics with three categories were based on goodness-of-fit across all three categories.
On campus or through an outside agency, unweighted $n=1,912$.
On campus, unweighted $n=1,857$.
Through an outside agency, unweighted $n=1,923$.
SOURCE: HSS survey of high school administrators, 2015 (Questions 25 and 31).

Differences by school size. Large schools were more likely than small schools to offer students at least one social service ( 99 percent versus 94 percent).

Differences by school poverty. High-poverty schools were more likely than low-poverty schools to offer students at least one social service ( 97 percent versus 94 percent).

Differences by school locale. More city (98 percent) and suburban (97 percent) schools offered students at least one social service than rural schools ( 93 percent).

## What types of social services did schools offer?

High schools offered students different types of social services (Exhibit 2). The most common type of social service was mental health services ( 87 percent), followed by health services ( 70 percent) and assistance to address material needs such as transportation, shelter, or clothing ( 68 percent).

# Exhibit 2. Percentage of high schools that offered students any social service, by type of service, 2014-15 



Exhibit reads: Among high schools that offered students at least one social service in 2014-15, 87 percent offered mental health services.

NOTE: Full language of item: "Parent/family engagement" is "Engaging parents/families to understand the academic, career, and/or personal needs of the student."
NOTE: Full language of item: "Parent/family support to increase awareness of child's progress in school" is "Providing resources to increase parent/family awareness of best practices in monitoring academic progress."
Unweighted $n=1,677$.
SOURCE: HSS survey of high school administrators, 2015 (Questions 26 and 31).

## What types of social services did high schools offer to students on campus?

Among high schools that offered at least one social service, 78 percent of schools offered students at least one social service on campus. The most common type of social service on campus was mental health services (49 percent), followed by parent/family services to engage them in their child's needs ( 47 percent) and assistance to address material needs ( 42 percent). The social services offered on campus varied by school size, school poverty level, school locale, and graduation rate (Exhibit 3).

Exhibit 3. Types of social services that high schools offered on campus, by school size, school locale, school poverty rate, and graduation rate, 2014-15

| Type of social service | All schools offering service | Large | Small | High poverty | Low poverty | City | Suburban | Rural | Low graduation rate | $\qquad$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mental health services | 49\% | 57\%* | 43\% | 51\% | 48\% | 56\%* | 53\% | 40\% | 48\% | 47\% |
| Parent/family engagement | 47\% | 57\%* | 42\% | 49\% | 45\% | 56\%* | 50\% | 37\% | 48\% | 45\% |
| Assistance to address material needs | 42\% | 49\%* | 38\% | 46\%* | 36\% | 48\%* | 43\% | 36\% | 46\%* | 37\% |
| Parent/family support to monitor academic progress | 39\% | 53\%* | 32\% | 41\% | 37\% | 46\%* | 42\% | 32\% | 33\% | 38\% |
| Health services | 37\% | 45\%* | 33\% | 37\% | 34\% | 41\% | 37\% | 34\% | 34\% | 35\% |
| Immigrant/ new arrivals services | 10\% | 18\%* | 6\% | 11\%* | 7\% | 13\%* | 11\% | 8\% | 6\% | 9\% |
| Child care for teen parents | 7\% | 9\% | 6\% | 9\%* | 4\% | 11\%* | 8\% | 3\% | 15\%* | 2\% |
| Other | 2\% | 2\% | 2\% | 2\% | 2\% | 3\% | 1\% | 1\% | 2\% | 1\% |

Exhibit reads: Among high schools that offered students at least one social service on campus in 2014-15, 49 percent reported offering mental health services.

* $p<.05$.

NOTE: An asterisk indicates statistical significance. The asterisk is placed on one case per comparison. Differences across school characteristics with two categories were based on comparisons between the two groups. Differences across school characteristics with three categories were based on goodness-of-fit across all three categories.
NOTE: Full language of item: "Parent/family engagement" is "Engaging parents/families to understand the academic, career, and/or personal needs of the student."
NOTE: Full language of item: "Parent/family support to monitor academic progress" is "Providing resources to increase parent/family awareness of best practices in monitoring academic progress."
Unweighted $n=1,857$.
SOURCE: HSS survey of high school administrators, 2015 (Question 31).

Differences by school size. Large schools were more likely than small schools to offer students some social services on campus, including mental health services ( 57 percent versus 43 percent), parent/family services to engage them in their child's needs ( 57 percent versus 42 percent), addressing material needs ( 49 percent versus 38 percent), parent/family support to increase awareness of their child's progress in school (53 percent versus 32 percent), health services ( 45 percent versus 33 percent), and immigrant/new arrivals services ( 18 percent versus 6 percent).

Differences by school poverty. High-poverty schools were more likely than low-poverty schools to offer students some social services on campus, including assistance to address material needs (46 percent versus 36 percent), immigrant/new arrivals services (11 percent versus 7 percent), and child care for teen parents ( 9 percent versus 4 percent).

Differences by school locale. More city schools offered students some social services on campus than suburban or rural schools, including mental health services ( 56 percent of city schools versus 53 percent of suburban and 40 percent of rural schools), parent/family services to engage them in their child's needs ( 56 percent of city schools versus 50 percent of suburban and 37 percent of rural schools), and parent/family support to increase awareness of their child's progress in school ( 46 percent of city schools versus 42 percent of suburban and 32 percent of rural schools), among other services.

Differences by graduation rate. Low-graduation-rate schools were more likely than high-graduation-rate schools to offer students with some social services on campus, including assistance to address material needs ( 46 percent versus 37 percent) and child care for teen parents (15 percent versus 2 percent).

What types of social services did high schools refer students to outside the school?
Among high schools that offered at least one social service, 87 percent of schools referred students to a social service outside the school. The most common type of social service offered outside the school was mental health services ( 94 percent), followed by health services ( 68 percent) and assistance to address material needs ( 63 percent). Referrals to outside services varied by school size, school poverty level, school locale, and graduation rate (Exhibit 4).

Differences by school size. Large schools were more likely than small schools to refer students to some social services outside the school, including mental health services ( 97 percent versus 93 percent), health services ( 72 percent versus 65 percent), assistance to address material needs ( 71 percent versus 59 percent), parent/family services to engage them in their child's needs ( 43 percent versus 33 percent), child care for teen parents ( 37 percent versus 24 percent), parent/family support to increase awareness of their child's progress in school (33 percent versus 20 percent), and immigrant/new arrival services ( 27 percent versus 12 percent).

Differences by school poverty. High-poverty schools were more likely than low-poverty schools to refer students to some social services outside the school, including assistance to address the material needs of students (66 percent versus 57 percent), parent/family services to engage them in their child's needs ( 38 percent versus 32 percent), child care for teen parents (35 percent versus 19 percent), parent/family support to increase awareness of their child's progress in school (27 percent versus 21 percent), and supports for immigrant/new arrivals ( 21 percent versus 11 percent).

Differences by school locale. More city schools referred students to social services outside the school than suburban or rural schools, including assistance to address the material needs of students ( 73 percent of city schools versus 65 percent of suburban and 54 percent of rural schools) and health services ( 72 percent of city schools versus 69 percent of suburban and 62 percent of rural schools), among other services.

Differences by graduation rate. Low-graduation-rate schools were more likely than high-graduation-rate schools to refer students to some social services outside the school, including assistance to address their material needs ( 71 percent versus 58 percent), child care for teen parents ( 40 percent versus 20 percent), parent/family support to increase awareness of their child's progress in school ( 26 percent versus 20 percent), and immigrant/new arrivals services (18 percent versus 13 percent).

Exhibit 4. Types of social services that high schools referred students to outside the school, by school size, school locale, school poverty level, and graduation rate, 2014-15

| Type of social services | All schools offering service | Large | Small | High poverty | Low poverty | City | Suburban | Rural | Low graduation rate | High graduation rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mental health services | 94\% | 97\%* | 93\% | 93\% | 95\% | 94\% | 95\% | 94\% | 91\% | 93\% |
| Health services | 68\% | 73\%* | 65\% | 69\% | 65\% | 72\%* | 69\% | 62\% | 70\% | 66\% |
| Assistance to address material needs | 63\% | 71\%* | 59\% | 66\%* | 57\% | 73\%* | 65\% | 54\% | 71\%* | 58\% |
| Parent/family engagement | 36\% | 43\%* | 33\% | 38\%* | 32\% | 42\%* | 40\% | 26\% | 40\% | 33\% |
| Child care for teen parents | 29\% | 37\%* | 24\% | 35\%* | 19\% | 37\%* | 33\% | 19\% | 40\%* | 20\% |
| Parent/family support to monitor academic progress | 24\% | 33\%* | 20\% | 27\%* | 21\% | 30\%* | 26\% | 17\% | 26\%* | 20\% |
| Immigrant/ new arrivals services | 17\% | 27\%* | 12\% | 21\%* | 11\% | 25\%* | 17\% | 10\% | 18\%* | 13\% |
| Other | 4\% | 3\% | 5\% | 4\% | 4\% | 4\% | 4\% | 3\% | 5\% | 3\% |

Exhibit reads: Among high schools that referred students to a social service outside the school in 2014-15, 94 percent reported they referred students for mental health services.

* $p<.05$.

NOTE: An asterisk indicates statistical significance. The asterisk is placed on one case per comparison. Differences across school characteristics with two categories were based on comparisons between the two groups. Differences across school characteristics with three categories were based on goodness-of-fit across all three categories.

NOTE: Full language of item "Parent/family engagement" is "Engaging parents/families to understand the academic, career, and/or personal needs of the student.

NOTE: Full language of item: "Parent/family support to monitor academic progress" is "Providing resources to increase parent/gamily awareness of best practices in monitoring academic progress."

Unweighted $n=1,669$.
SOURCE: HSS survey of high school administrators, 2015 (Question 26).

What types of outside agencies did high schools refer students to for social services?
High schools referred students to different types agencies outside the school depending on the service needed. The most common type of organization was a social services agency ( 79 percent), followed by a community mental health agency ( 77 percent) and a public health agency ( 64 percent) (Exhibit 5). The types of agencies that high schools referred students to varied by school size, school poverty level, school locale, and graduation rate.

Exhibit 5. Types of outside agencies high schools referred students to for social services, 2014-15


Exhibit reads: Among high schools that referred students to a social service outside the school in 2014-15, 79 percent referred students to a social services agency.
Unweighted $n=1,677$.
SOURCE: HSS survey of high school administrators, 2015 (Question 27).

Differences by school size. Large schools were more likely than small schools to refer students to a community mental health agency ( 87 percent versus 73 percent), a public health agency ( 69 percent versus 61 percent), a nonprofit community-based organization ( 68 percent versus 48 percent), a juvenile justice agency ( 49 percent versus 42 percent), and a religious/church organization ( 33 percent versus 26 percent).

Differences by school poverty. High-poverty schools were more likely than low-poverty schools to refer students to a nonprofit community-based organization (59 percent versus 47 percent) and a religious/church organization ( 29 percent versus 22 percent).

Differences by school locale. More city schools than suburban or rural schools referred students to a nonprofit community-based organization (74 percent of city schools versus 54 percent of suburban and 39 percent of rural schools), a public health agency ( 71 percent of city schools versus 63 percent of suburban and 59 percent of rural schools), and a local business or other for-profit organization ( 22 percent of city schools versus 19 percent of suburban and 15 percent of rural schools). More suburban schools than city or rural schools referred students to a mental health agency ( 80 percent of suburban schools versus 79 percent of city and 71 percent of rural
schools) and a juvenile justice agency (54 percent of suburban schools versus 40 percent of city schools and 41 percent of rural schools).

Differences by graduation rate. Low-graduation-rate schools were more likely than high-graduation-rate schools to refer students to a social service agency ( 84 percent versus 76 percent), a public health agency ( 68 percent versus 60 percent), and a nonprofit communitybased organization (66 percent versus 50 percent).

## Methodology

The National Survey of High School Strategies Designed to Help At-Risk Student Graduate was a survey of 13 high school strategies designed to improve graduation rates among students at risk of dropping out and was administered in the 2014-15 school year. The 13 strategies are: (1) academic support classes, (2) academic tutoring, (3) career-themed curriculum, (4) case management services, (5) collegelevel coursework; (6) competency-based advancement, (7) credit recovery, (8) early warning systems, (9) high school transition activities, (10) mentoring, (11) personalized learning plans, (12) social services, and (13) student support teams.

The purpose of the survey was to inform education practitioners and policymakers about the students served by and prevalence and characteristics of these strategies in U.S. public high schools. The descriptive study did not measure the effectiveness of particular strategies but instead examined implementation factors in high schools across the country, based on responses from school principals. The study team identified the 13 strategies and designed survey items for each strategy with input from a panel of external experts in the field and senior Department officials. All findings are based on selfreported data from school principals.

The researchers selected a nationally representative sample of high schools ${ }^{4}$ using a random sampling approach, stratifying high schools based on graduation rate (from EDFacts) ${ }^{5}$ and locale code (from NCES 2013-14 Common Core of Data). The survey collected data from high school principals (or designees knowledgeable about programs and strategies) at sampled schools. The survey response rate was 90 percent. The survey responses were analyzed in SAS and Stata using descriptive techniques that apply the appropriate statistical population weights to account for stratification by graduation rate and locale.

[^2]Results reported in this brief reflect the full survey sample unless otherwise noted and are representative of U.S. public high schools nationwide. References in the text to differences between subgroups based on sample data refer only to differences that are statistically significant using a significance level of 0.05 .

## References

Suter, J. C., and E. J. Bruns. 2009. "Effectiveness of the Wraparound Process for Children with Emotional and Behavioral Disorders: A Meta-Analysis." Clinical Child and Family Psychology Review 12(4): 336-351.
U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. 2016. "Table 1. Public High School 4-Year Adjusted Cohort Graduation Rate (ACGR)." https://nces.ed.gov/ccd/tables/ACGR RE and characteristics 2014-15.asp
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Walker, S. C., S. E. U. Kerns, A. R. Lyon, E. J. Bruns, and T. Cosgrove. 2010. "The Impact of School-Based Health Center Use on Academic Outcomes." Journal of Adolescent Health 46 (3): 251.

## Appendix: Social Services (Survey Excerpt) <br> National Survey on High School Strategies Designed to Help At-Risk Students Graduate

This section asks about Access to Social Services. For the purposes of this survey, access to social services is access to health, mental health, child care, and other social services. These services may be provided by the school, or schools may refer students and families to outside agencies.
25. In the 2014-15 school year, did your school make formal referrals for any of your students to outside agencies to address individual student needs?
(Please select only one)
\{Only allow one selection\} Yes No

If user responds "Yes" to Q25, ask Q26 through Q30. Otherwise, skip to Q0.
26. To what type of social services does your school most often refer students?
(Check all that apply)

Health services
Mental health care (e.g., anger management, communication, fostering healthy relationships, individual and/or family counseling)

Child care for teen parents
Engaging parents/families to understand the academic, career, and/or personal needs of the student

Resources to increase parent/family awareness of best practices in monitoring academic progress

Immigrant/new arrivals services
Resources to address material needs (e.g., transportation, shelter, clothing)
Other
(Please specify: $\qquad$ _)

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27. To whom do you refer students for social services?
    (Check all that apply)
    Nonprofit community-based organizations (CBOs)
    Religious/church organization (e.g., Catholic Charities)
    Community mental health agency
    Public health agency
    Juvenile justice agency
    Social services agency
    Local business or other for-profit organization
    Other
    (Please specify
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$\qquad$
28. On average, approximately what percentage of high school students in your school has been referred to outside agencies for social services in the 2014-15 school year?
29. Are you informed about whether referrals result in action taken for the student at the outside agency?
(Please select only one)
\{Only allow one selection\}

Yes,
Yes, always sometimes No $\square$

If user responds "No" to Q29, ask Q30. Otherwise, skip to Q31.
30. From your perspective, do referrals typically result in action taken by an outside agency?
(Please select only one)

|  | Yes, <br> Yes, always <br> sometimes | No |
| :---: | :---: | :---: |
| $\square$ | $\square$ | $\square$ |

31. Does your school offer any of the following services on-site?
(Check all that apply)
Does not apply, services not provided on site
Health services
Mental health care (e.g., anger management, communication, fostering healthy relationships, family counseling)

Child care for teen parents
Engaging parents/families to understand the academic, career, and/or personal needs of the student

Providing resources to increase parent/family awareness of best practices in monitoring academic progress

Immigrant/new arrivals services
Addressing material needs (e.g., transportation, shelter, clothing)
Other
(Please Specify: $\qquad$

If user responds "Does not apply" to Q31, skip to Q33
32. On average, approximately what percentage of high school \{Slide bar for 0\% to 100\%\} students in your school receives social services on site in the 2014-15 school year?

The full survey is available at: https://www2.ed.gov/about/offices/list/opepd/ppss/reports-highschool.html


[^0]:    1 The survey examined 13 strategies designed to improve high school outcomes for at-risk students. These strategies are:
    (1) academic support classes, (2) academic tutoring, (3) career-themed curriculum, (4) case management services,
    (5) college-level coursework, (6) competency-based advancement, (7) credit recovery, (8) early warning systems, (9) high school transition activities, (10) mentoring, (11) personalized learning plans, (12) social services, and (13) student support teams. See http://www2.ed.gov/about/offices/list/opepd/ppss/reports-high-school.html for the series of briefs.
    2 "Health care" refers to primary medical care services such as immunizations, physicals, and chronic illness management; "mental health care" refers to mental health screenings, individual and/or family counseling, anger management, and fostering healthy relationships. The provision of mental health services is governed by state laws, which vary.

[^1]:    ${ }^{3}$ Adolescent health behavior refers to habits and actions that affect an adolescent's health and well-being, including refraining from drug and alcohol use, eating a nutritious diet, being active, and getting a good night's sleep.

[^2]:    ${ }^{4}$ All U.S. public high schools providing instruction to 12 th grade students in the fall of 2010 were included in the sampling frame unless (1) the lowest offered grade was 11th grade or higher, (2) there were fewer than five students in grades 9 through 12, (3) the percentage of students enrolled in grades 9 through 12 was under 20 percent of the total school enrollment and the total number of students in grades 9 through 12 was fewer than 20, or (4) the school name contained one of nine keywords indicating juvenile detention center or hospital. Of the 103,813 total schools listed in the 2010-11 CCD, 22,447 high schools met the criteria to be included in the sampling frame.
    5 There were 3,302 schools without graduation rate information in the 2010-11 EDFacts public use data set. The researchers used an imputation approach to assign these schools to either the high- or low-graduation-rate stratum. The imputation process began by examining the distribution of the high/low graduation rate classification for 19,145 schools by sampling locale. The percentage of schools classified as high graduation rate was calculated separately for each locale sampling stratum; 68.4 percent of rural schools were classified as high graduation rate, 63.0 percent of suburban schools were classified as high graduation rate, and 41.0 percent of city schools were classified as high graduation rate. The research team randomly assigned each of the 3,302 schools with unknown graduation rates to the high graduation rate stratum with probability 68.4 if the school was classified as rural, with probability 63.0 if the school was classified as suburban, and with probability 41.0 if the school was classified as urban. The sample size was adjusted upwards to account for potential misclassification due to this method. In analysis, the researchers used the restricted-use 2013-14 EDFacts data and graduation rates published on school and district websites to fill in this missing data.

