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The prevalence of evidence-based drug use prevention curricula in U.S. middle schools in 2005

Chris Ringwalt¹, Amy A. Vincus¹, Sean Hanley¹, Susan T. Ennett², J. Michael Bowling², and Louise Ann Rohrbach³

¹ Pacific Institute for Research and Evaluation, 1516 E. Franklin Street, Suite 200; Chapel Hill, NC 27514, USA

² Department of Health Behavior and Health Education, The University of North Carolina at Chapel Hill, Campus Box 7440, Chapel Hill, NC 27599, USA

³ Department of Preventive Medicine, Institute for Prevention Research, University of Southern California, Los Angeles, CA, USA

Abstract

Since the promulgation of its Principles of Effectiveness in 1998, the Office of Safe and Drug-Free Schools of the U.S. Department of Education has promoted the use of evidence-based drug prevention programs in the nation's schools. We report the results of a survey, conducted in 2005, of a nationally representative sample of 1,721 schools with middle school grades. Respondents comprised the staff member in the school identified as most knowledgeable about the school's drug prevention programs. The total response rate was 78%. Respondents answered questions concerning which drug use prevention curricula they used, and, if they used more than one, which one they used the most frequently. Three federally-sponsored registries were used to specify which curricula were considered evidence-based. Findings from 2005 were then compared to earlier estimates based on a similar 1999 survey. We found that 42.6% of the nation's schools with middle school grades were using an evidence-based curriculum, an increase of 8% from our 1999 estimate. The two most prevalent curricula in use, at 19% each, were Life Skills Training and Project ALERT. We note, however, that only 8% of Life Skills Training users and 9% of Project ALERT users reported using those curricula the most, and that only 23% of respondents overall reported that they used an evidence-based curriculum the most. More information is needed as to why over three-quarters of the nation's schools with middle school grades continue to administer curricula that have not been identified as effective.

INTRODUCTION

Since the beginning of the decade, the federal government has initiated and implemented policies pertaining to the use of evidence-based drug prevention curricula in the nation's public schools. The U.S. Department of Education (ED) has promulgated the "Principles of Effectiveness" that require schools accepting Safe and Drug-Free Schools (SDFS) funds to "design and implement [their] activities based on research or evaluation that provides evidence that the strategies used prevent or reduce drug use" (Simons-Rudolph, Ennett, Ringwalt, Rohrbach, & Vincus, 2003; U.S. Department of Education, 1998). The principles were shortly thereafter enshrined in the No Child Left Behind education law ("No Child Left Behind Act of 2001," 2002). Schools now risk losing their SDFS funding if they fail to implement evidence-

based prevention curricula (Gandhi, Murphy-Graham, Petrosino, Chrismer, & Weiss, 2007), which are included on any of several national registries such as the National Registry of Prevention Programs and Practices (NREPP; National Registry of Evidence-based Programs and Practices, 2004), Blueprints for Violence Prevention (Center for the Study and Prevention of Violence, 2006), and ED's Exemplary and Promising Programs (Safe, Disciplined, and Drug-Free Schools Expert Panel, 2001). These registries identify drug use and violence prevention curricula and strategies that have been subjected to methodologically rigorous evaluations and have yielded evidence of their effectiveness.

However, other provisions of the No Child Left Behind Act of 2001 may mitigate the effects on schools' implementation of evidence-based drug prevention curricula. The Act allows state and local educational authorities to apply to transfer up to 50% of their funds to support any of several substantive areas that are unrelated to drug use prevention, such as reading and math achievement, English mastery for students with low proficiency, and the recruitment and training of qualified teachers. Additionally, small and rural districts may transfer *all* of their SDFS funds to meet locally-determined educational needs. Prevention efforts, therefore, may be attenuating in some schools, particularly those that are small and rural in nature (Hallfors, Pankratz, & Sporer, 2001). It is also possible that teachers may seek to implement prevention activities that place fewer demands on their and their students' time, particularly given the pressures that they are now experiencing to focus on "core" academic subjects (Fagan & Mihalic, 2003; Petrosino, 2003) to enhance their students' performance on standardized tests.

Increases in school-based drug use prevention are specified as a national priority in Objective 72f of Healthy People 2010 (U.S. Department of Health and Human Services, 2000), and Congress has been asked to appropriate \$275 million in 2008 for this purpose (Office of National Drug Control Policy (ONDCP), 2007). It is thus important to take periodic stock of the progress middle schools are making in regards to administering evidence-based drug prevention curricula. The purpose of this paper is to estimate the prevalence of public schools serving middle school students that administered universal evidence-based drug use prevention curricula as of 2005, and compare the estimates to analogous estimates we made in 1999 (Ringwalt et al., 2002). We expect to find an increase in the total proportion of the nation's middle schools administering evidence-based drug use prevention curricula due to federal policies and what has been called the "technology push" (Schon, 1967); that is, inducements or sanctions used by an organization to disseminate an innovation. We also provide discrete estimates of the proportion of schools with middle school grades using specific evidence-based drug use prevention curricula, as well as the proportion using those curricula the most. We then report the demographic characteristics of these schools and compare them to data presented in our earlier study.

METHODS

Study sample

The sample was drawn in two phases, the first of which employed a 1997–1998 sampling frame from Quality Education Data, Inc. (QED; Quality Education Data Inc, 1998) of all regular schools in the 50 states and the District of Columbia that included middle school grades. Schools eligible for the sample included Grades 7 or 8, or were limited to Grade 6 or to Grades 5 and 6. We excluded schools that enrolled fewer than 20 students or were non-regular. Regular schools, according to our sampling frame consulted, excludes those that are special education, vocational, or other/alternative schools. The sampling frame yielded 2,273 eligible public schools (Ringwalt et al., 2002).

Applying the same criteria to a 2002–2003 sampling frame drawn from the Common Core of Data (CCD; National Center for Education Statistics, 2004) as we did in 1997–1998, we added

210 schools to our sampling frame. Because we conducted the first round of data collection in the 1998–1999 school year, we added the 210 schools to our second round of data collection so that we could account for new schools that had opened between 1999 and 2003. Given that schools vary widely across the country, we stratified our sample, with equal probability within each stratum, to ensure adequate representation of schools along three key characteristics: population density, school size, and poverty level. We chose to stratify our sample to reduce sampling error and therefore increase the precision of our estimates.

Because of the possibility of error on the sampling frame, we contacted sampled schools (2,483) between October 2004 and January 2005 to confirm their eligibility status, a process that yielded 2,204 verified eligible schools with middle schools grades. We, therefore, found that 279 schools were ineligible either because of their grade span, school type, school size, or because the school had closed.. In 2005, we screened all respondents and those who told us that they did not have anyone teaching drug use prevention at their school were not asked any further questions. Less than 2% of our sampled schools were teaching no drug prevention lessons whatsoever. The demographic characteristics of our analysis sample, which comprised all schools with middle school grades, are displayed in Table 1.

Data collection

Data used in these analyses were collected in 1999 and 2005. In 1999, we collected data from February through September exclusively by mailing a survey to the person considered to be the most knowledgeable about drug use prevention in the selected school. We identified that person in advance of data collection via phone calls to the school or its district. We included a prepaid incentive of \$10 in our first mailing and provided a letter of support from the Director of the Safe and Drug-Free Schools Program in our third mailing of the survey. Our data collection efforts yielded an overall response rate of 71.9%, with a slightly higher response rate of 72.9% among the public schools in our sample. More details about our approach in 1999 can be found elsewhere (Ringwalt et al., 2002).

We made three changes to our data collection approach for 2005: we limited our sample to public schools only; expanded the modes of data collection to include Web, paper, and phone; and curtailed data collection in July. In October 2004, we initiated a calling effort in advance of our second round of data collection which occurred during spring 2005). The purpose of our calls was to establish schools' eligibility and to identify the appropriate respondent in each school selected. During our calls, we sought to identify who taught drug use prevention lessons at each school. If more than one person taught drug use prevention lessons at a given school, we asked for the person most knowledgeable about drug use prevention there from among those teaching drug use prevention lessons. We directed our invitations to participate in the study to the person who had been identified. We made no effort to return to our initial school-level respondent; but, instead, we sought to identify the most qualified individual to answer our survey in each participating school, regardless of whether that person had done so in 1999.

Full data collection began in January 2005 and concluded in July 2005. We utilized three sequential data collection modes to maximize the response rate. All respondents initially were invited by letter to complete a 40–45 minute survey via a secure Website, for which they were provided a prepaid \$10 cash incentive. Respondents who did not complete the Web-based survey after repeated contacts were mailed a paper copy of the survey and a postage-paid return envelope, along with a letter of support from ED's Office of Safe and Drug-Free Schools. Those who failed to complete the mailed survey were contacted for a brief telephone interview. Altogether, 65.2% of the sample responded by Web, 18.9% by paper survey, and 15.9% by phone, which yielded a total response rate of 78.1 % (N=1,721). More detailed information about our data collection approach in 2005 is available elsewhere (Pope, Vincus, & Hanley, 2007).

Instrument

For our 2005 data collection effort, we asked respondents who completed the survey by Web or paper to report whether or not they taught each of a total of 26 curricula to students in *middle school grades* during the 2004–05 school year, and to specify in an open-ended field the names of any curricula we did not specify. We also asked them to report whether they used “a curriculum or set of materials developed locally by your school, school district, or county.” Respondents who completed the survey by telephone were asked to identify which curricula they used. Responses were coded into our list of curricula and those whose responses were ambiguous were prompted with the names of specific curricula. We learned from our analyses of 1999 data that many respondents used more than one curriculum and that a number of curricula were used by very few schools. As a result, we sought information concerning any curricula used as well as the one curriculum used most frequently. In our 1999 survey we asked respondents which curricula they “used,” thus allowing for reports of *multiple* curricula. In the 2005 survey, we repeated this wording for purposes of comparison but also asked, as a follow-up, which *one* curriculum they used “*the most*” with their students.

Our list of curricula included ten that met our criteria as evidence-based. Given our broader interests in understanding all schools’ efforts in terms of drug use prevention lessons, we also included a total of 16 other (non evidence-based) curricula that had been taught by at least 5% of schools in 1999. A copy of the instrument, which is in the public domain, is available from the first author.

Estimates reported in this paper are limited to the evidence-based curricula that we listed as response options in the survey items that assessed curriculum use. For the 2005 survey, eligible curricula were those that were designed to prevent drug use, targeted a universal population of middle school students, were commercially available, and were identified as evidence-based as of 2004 on any of three national registries. Our list of evidence-based curricula included those identified as “model” or “effective” by the Substance Abuse and Mental Health Services Administration (SAMHSA) “National Registry of Effective Programs and Practices” (NREPP, 2004), as “model” or “promising” by “Blueprints for Violence Prevention” (Center for the Study and Prevention of Violence, 2006), or as “exemplary” by the Office of Safe and Drug-Free Schools (Safe, Disciplined, and Drug-Free Schools Expert Panel, 2001). Collectively, these reviews had identified a total of 10 pertinent curricula. To determine which curricula were evidence-based in 2005, we limited our consultations to federal registries and, as a result, excluded the Drug Strategies publication “Making the Grade.” We also excluded recommendations of the Centers of Disease Control and Prevention (CDC) for curricula that addressed tobacco use prevention because their recommendations were no longer available on their Website and because the two pertinent curricula on their list were also specified by other registries we consulted. For the 1999 survey, our list of evidence-based curricula included 11 curricula that had been recommended by the Center for Substance Abuse Prevention (Center for Substance Abuse and Prevention (CSAP), 2001, December 12), National Institute on Drug Abuse (National Institute on Drug Abuse, 2003), or the CDC (2000, May 4), were considered exemplary by the Office of Safe and Drug-Free Schools (Safe, Disciplined, and Drug-Free Schools Expert Panel, 2001), or were awarded an “A” by Drug Strategies (Drug Strategies Inc., 1999). We note, however, that although the *number* of curricula we included on our list was similar between 1999 and 2004, some of the curricula on our list changed over this period. For example, six curricula that were not evidence-based in 1999 became evidence-based in 2005.

We secured information on school size from the CCD data file, which also provided us with a designation of the population density of the area in which the school was located. For descriptive purposes, we also secured from the CCD file information about the region of the country in which our participating schools were located, as well as the proportions both of their minority (i.e., non-white) student population and of students eligible for free or reduced-price

lunch as part of a federal assistance program. We used this latter measure as a proxy for the poverty level of students served.

Analysis

We provide prevalence estimates and 95% confidence intervals (CI) using weighted data. School sample weights were constructed from original selection probabilities computed on the 1997–1998 sample, in conjunction with probabilities of selecting new schools for the 2002–2003 sample. A comparison of the proportions of school size, school poverty, and region of the country of the sample in 2002–2003 to those of the 2004–2005 CCD suggested that sample did not require any post stratification adjustments. Our findings may thus be generalized to all public schools in the U.S. that contain middle school grades. We conducted all analyses using SAS 9.1.3 (SAS [computer program], 2003).

RESULTS

In this study, we found that the proportion of schools with middle school grades reporting the use of any evidence-based drug use prevention curriculum rose from 34.4% (CI=32.1%-36.7%) in 1999 (Ringwalt et al., 2002) to 42.6% (CI=39.7%-45.5%) in 2005, a statistically significant increase. However, a considerably smaller proportion of these schools, 22.7% (CI=20.5%-24.9%), reported using an evidence-based curriculum the most among the drug use prevention curricula they used. We also note that 40.2% (CI=37.5%-42.8%) of respondents reported using a locally-developed curriculum, while 17.6% (CI=15.5%-19.8%) reported using it most frequently.

Table 2 displays prevalence estimates and associated 95% confidence intervals of the proportion of schools using each of the evidence-based curricula in our 2005 or 1999 surveys, as well as those that reported using one of these curricula *the most*. As of 2005, about 19% of the nation's schools with middle schools grades reported using Life Skills Training and Project ALERT, and about 8% reported using one of the two curricula *the most*. The proportion of schools reporting any use of both Life Skills Training and Project TNT increased considerably over the six year period that separated the surveys, while reports of any use of Project ALERT remained static. Among curricula specified as evidence-based in 2005, but not in 1999, there was a substantial decrease in Lion's Quest Skills for Adolescence but a considerable increase in use of Too Good for Drugs. We should note, however, that our 1999 estimate of the prevalence of the latter curriculum was based exclusively on open-ended data, and thus may be an underestimate because some schools may have failed to report the curriculum.

As reported in Table 3, none of the estimates of the prevalence of *any* use of evidence-based curricula differed between 1999 and 2005, when disaggregated by region, population density, poverty, size, and race/ethnicity.

DISCUSSION

In this study we found that the proportion of the nation's schools with middle school grades that reported *any* use of an evidence-based drug use prevention curriculum increased significantly over the six year period from 1999 to 2005, from 34.4% to 42.6%. This must surely be interpreted as good news, for which credit should be given to the U.S. Department of Education for promoting the use of evidence-based curricula as well as to the districts and schools that have adopted them. Credit should also be given to the ready availability of registries of effective school-based drug use prevention curricula, and to the success of dissemination efforts supported by the U.S. Department of Education and the various State's offices for Safe and Drug-Free Schools and Communities.

We embarked on this study with concerns about a number of countervailing influences on schools that may have mitigated the likelihood of the expansion of evidence-based practice. We have no evidence to support the strength of one such influence, which concerns the pressures that schools face to perform well on end-of-year tests in academic subjects. These pressures may well encroach on class time that was previously made available for topics like drug prevention. But we can comment on the potential of the No Child Left Behind Act of 2001 to drain Safe and Drug-Free Schools funds by allowing up to 50% of these to be transferred to meet other needs. An examination of change over time in our sample's rural and small schools, which are allowed under the provisions of NCLB to transfer *all* their SDFS funds to meet locally-determined needs, suggests that this may not be the case. The proportion of small and rural schools reporting any evidence-based practice actually rose over the study's six year span, although the change was not statistically significant.

Enthusiasm for the progress made between 1999 and 2005 is mitigated by our finding that less than half the middle schools used any evidence-based curricula, and only 23% of all schools reported that they used one of them *the most frequently*. The finding that less than half of schools were not using an evidence-based curricula is not surprising given reports from Join Together (Anderson, Aromaa, & Rosenbloom, 2007) highlighting the fact that teachers indicate a lack of support for drug use prevention in their schools. We are left to wonder, however, why schools that had adopted an evidence-based curriculum were not using it most often. Perhaps we have evidence here of what Glasziou & Haynes (2005) call a "broken pipeline," which refers to innovations that fail to proceed from one level of the adoption hierarchy to the next—in this case, from adoption to adherence, or what Rogers (2003) conceptualized as the transition from implementation to confirmation. The diffusion literature (Nutley, Walter, & Davies, 2007) offers a variety of factors that can serve to derail an innovation that has been initially adopted, some of which relate to the innovation itself and some to the context of the adopting organization. It is also possible that schools and districts have adopted a curriculum and are now in the process of determining its suitability for their students, or what (Rogers, 2003) calls "trialability." However, more research needs to be conducted into the processes by which evidence-based curricula are adopted as innovations in the drug use prevention field.

We note that while the *proportion* of schools with middle school grades using evidence-based curricula has increased considerably between 1999 and 2005, the *distribution* of these changes when disaggregated by region, population density, and school poverty and size, did not differ across time. This finding suggests that efforts to increase the use of these curricula are having a fairly consistent effect on all schools across the country. Data presented concerning the distribution of schools using any of the curricula, and using them the most, can be used as benchmarks for future comparisons. The next iteration of these comparisons, however, will become more challenging, because NREPP, the primary registry that is consulted by state-level SDFS directors (Hallfors, Pankratz, & Hartman, 2007), has changed the format by which it reports evidence-based practice. No longer is it a repository that categorizes curricula and programs simply as "model" or "effective." Instead, the registry has become a "decision support system" that rates all developers' submissions on a set of six criteria that concern the methodological rigor with which evaluations of these curricula or programs were conducted, and invites readers to draw their own conclusions. Thus there is no longer, at least as far as this registry is concerned, any "list" as such.

The consequences of this shift in policy for drug use prevention coordinators and practitioners in school settings are likely to be substantial. School decision makers will now be required to make sophisticated distinctions between competing curricula based on their interpretation of the relative importance of NREPP's six ratings (e.g., the reliability and validity of measures, appropriateness of analyses conducted), a task that they may well find daunting. Concerns have been expressed that decision-makers may consider *any* curriculum posted on the NREPP

website to be evidence-based, irrespective of the supporting evidence, and that ED has relinquished its responsibility to provide guidance in this regard (Hallfors et al., 2007). Thus the burden on ED to develop, disseminate, and implement training related to standards for differentially assessing the strength of the evidence pertaining to drug prevention curricula has become significantly greater.

There are a number of issues related to the methodology by which we drew our sample and collected data that may have had a modest effect on our estimates. First, we are aware of no standard definition of middle school grades, and thus developed our own for the purpose of this paper. We used the same definition in 1999 and 2005, allowing for meaningful comparisons of the extent to which sampled schools were implementing evidence-based curricula, but a case could be made for other potentially more restrictive definitions. Second, we excluded schools from our sample that reported that they did not teach any drug use prevention lessons. In 1999, virtually all of the schools that we had sampled provided some drug use prevention lessons. In 2005, our reports indicate that less than 2% of our sampled schools offered no drug use prevention lessons whatsoever. Similarly, Crosse and his colleagues (Crosse, Burr, Cantor, Hagen, & Hantman, 2001) found that approximately 2% of U.S. school districts were not funded by SDFS, indicating that very few do not offer at least some sort of prevention-related activities. To the extent that we excluded these schools, our estimates may be slightly inflated. Again, however, this exclusion criterion – like those relating to small (fewer than 20) and non-regular schools—remained constant across waves of data collection, so the validity of our results would have been unaffected. Third, the hierarchy of the methodology by which we collected data—Web, then paper, followed by a survey administered by telephone—may have introduced a mode response bias of an unknown magnitude, particularly when we compared findings of our 2005 survey with the one we conducted in 1999, when we used paper exclusively. In our more recent survey, we found mode differences for our two curriculum questions. Respondents answering via the Web were more likely to have reported using an E-BPC than those who completed by paper or telephone. We cannot disentangle any mode effects, however, from the possibility that respondents completing the survey by paper or telephone may simply have been different from those respondents who completed the Web version of the instrument. The late responders may well have been late adopters (Rogers, 2003), particularly if they were uncomfortable with Web-based technology and thus less likely to consult registries of evidence-based practice, many of which are online. Fourth, we were concerned that respondents' reports of the curricula their schools used in 1999 could have been administered to students in elementary or high school grades (if their schools included these additional grades), which may have modestly inflated our estimates. We thus changed the language of the question we asked in 2005 to ensure that respondents restricted their reports to curricula targeting students in middle school grades.

In summary, we found that the proportion of the nation's schools with middle school grades using any evidence-based drug use prevention curriculum rose from 34.4% to 42.6% from 1999 to 2005, which demonstrates that efforts to promote the use of such curricula have met with some success. Further, we found no evidence to suggest that provisions of NCLB legislation allowing schools to utilize SDFS funds for other purposes (especially in poor and rural schools) have had an adverse effect on the dissemination of evidence-based curricula. However, we estimate that only 23% of the nation's schools with middle school grades reported using an evidence-based curriculum the most. More information is clearly needed as to why the remaining 77% of schools are exposing their students primarily to curricula that are not evidence-based. We also recommend that future surveys of school-based practices be conducted periodically to track key trends in the adoption of evidence-based prevention curricula.

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Table 1

School Sample Characteristics (N=1,710)

Characteristic	Percent	95% Confidence Interval
Region ¹		
Northeast	15.7	13.4, 17.9
Midwest	31.2	28.8, 33.6
South	35.5	32.8, 38.2
West	17.6	15.6, 19.6
Population density of geographic area served ²		
Urban	21.6	20.4, 22.7
Suburban	30.9	29.6, 32.2
Rural	47.6	46.0, 49.2
School poverty (% of students eligible for free or reduced-price lunch) ²		
Low (0–14%)	22.7	20.3, 25.2
Medium (15–39%)	28.4	26.5, 30.4
High (> 39%)	48.8	46.2, 51.4
School size (number of students in grades 5–8) ²		
Small (20–199)	31.6	29.4, 33.7
Medium (200–599)	39.2	36.8, 41.6
Large (600+)	29.3	27.4, 31.1
Race/ethnicity composition ²		
Majority white	75.6	73.2, 78.1
Majority African American	10.0	8.0, 12.0
Majority Hispanic	7.2	6.0, 8.4
Other majority	1.9	1.1, 2.6
No majority	5.3	4.2, 6.4

Note. N is unweighted and proportions calculated using weighted data.

¹ Defined by U.S. Census regions.

² Defined based on school data available from the 2004–2005 Common Core of Data school file.

Table 2

Universal evidence-based drug use prevention curricula (E-BPC) used by respondents in schools with middle school grades in either 1999 or 2005

	2005 Any E-BPC used the most frequently (N=1,710) % (95% CI)	2005 Any E-BPC Used (N=1,710) % (95% CI)	1999 Any E-BPC Used (N=1,656) % (95% CI)
E-BPC in both 1999 and 2005			
Life Skills Training	8.2 (6.7, 9.7)	19.7 (17.2, 22.1)	11.4 (9.9, 13.0)
Project ALERT	8.9 (7.5, 10.3)	19.1 (17.1, 21.1)	19.4 (17.5, 21.3)
Project Northland	0.5 (0.2, 0.9)	1.1 (0.6, 1.6)	0.4 (0.1, 0.7)
Project TNT	0.3 (0.1, 0.6)	4.2 (3.1, 5.3)	0.4 (0.1, 0.7) ^a
E-BPC in 2005, but not in 1999			
Too Good for Drugs	2.2 (1.3, 3.1)	5.0 (3.7, 6.4)	0.4 (0.1, 0.7) ^a
Lion's Quest Skills for Adolescence	1.6 (1.0, 2.2)	5.7 (4.5, 6.8)	16.5 (14.7, 18.3)
All Stars	0.6 (0.4, 0.9)	1.9 (1.2, 2.7)	1.1 (0.6, 1.6)
Positive Action	0.4 (0.1, 0.7)	1.8 (1.1, 2.5)	1.8 (1.2, 2.5)
keepin' it REAL	* <i>b</i>	1.8 (1.2, 2.5)	* <i>c</i>
Social Competence Promotion Program for Young Adolescents	* <i>b</i>	0.2 (0.0, 0.4)	* <i>c</i>

^a Estimate derived from open-ended data only.

^b No one reported using this curriculum the most in 2005.

^c Curriculum not included on questionnaire list, nor did any respondents report using it in the open-ended data field.

Table 3

Characteristics of schools with evidence-based prevention curricula (E-BPC) in 2005 compared to 1999

Selected characteristics of schools with E-BPC	2005 Any E-BPC used <i>the most frequently</i> (N=1,710) % (95% CI)	2005 Any E-BPC used (N=1,710) % (95% CI)	1999 Any E-BPC used (N=1,656) % (95% CI)
Region ¹			
Northeast	25.3 (19.2, 31.3)	46.2 (38.5, 53.9)	46.2 (40.2, 52.2)
Midwest	21.2 (17.5, 24.9)	39.4 (34.9, 43.8)	42.5 (38.2, 46.8)
South	21.0 (17.0, 25.1)	42.4 (37.2, 47.7)	37.1 (33.1, 41.2)
West	26.4 (21.2, 31.7)	45.4 (39.1, 51.7)	38.7 (33.2, 44.2)
Population density of geographic area served ²			
Urban	23.5 (19.8, 27.2)	41.2 (36.4, 46.1)	42.0 (37.4, 46.6)
Suburban	22.2 (19.1, 25.3)	48.3 (42.9, 53.8)	43.1 (39.3, 46.9)
Rural	22.6 (18.8, 26.4)	39.5 (35.0, 44.0)	36.8 (32.8, 40.8)
School poverty (% of students eligible for free or reduced-price lunch) ²			
Low (0–14%)	22.3 (17.6, 26.9)	42.0 (36.0, 48.0)	43.2 (39.0, 47.5)
Middle (15–39%)	24.8 (20.9, 28.7)	43.7 (39.4, 48.1)	41.1 (37.5, 44.7)
High (> 39%)	21.7 (18.2, 25.1)	42.2 (37.7, 46.6)	36.2 (31.3, 41.1)
School size (number of students in grades 5–8) ²			
Small (20–199)	21.3 (17.4, 25.1)	38.8 (32.6, 44.9)	33.5 (29.3, 37.7)
Medium (200–599)	20.4 (16.8, 24.0)	40.4 (36.0, 44.8)	39.5 (35.6, 43.4)
Large (600+)	27.3 (23.2, 31.5)	49.7 (44.8, 54.6)	49.7 (45.4, 54.0)
Race/ethnicity composition ²			
Majority white	22.6 (19.9, 25.4)	43.8 (40.5, 47.1)	40.7 (38.1, 43.5)
Majority African American	14.0 (8.5, 19.5)	33.5 (22.1, 44.9)	43.2 (35.0, 51.4)
Majority Hispanic	31.5 (23.3, 39.7)	42.2 (33.4, 51.1)	34.1 (23.9, 44.2)
Other majority	29.5 (10.8, 48.2)	39.6 (19.3, 59.8)	39.5 (23.3, 55.7)
No majority	28.3 (19.3, 37.3)	56.3 (46.1, 66.6)	39.6 (30.2, 49.1)

Note. N is unweighted and proportions calculated using weighted data.

¹ Defined by U.S. Census regions.

² Defined based on data available from the 2003–2004 Common Core of Data school file.