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## **School Tobacco Program, 2004-2005**

### **Assessment Program Brief**

#### **April, 2006**

#### **Major findings:**

- In 2004, school tobacco program funding was provided to 25 projects covering 113 school buildings in 28 districts in Wisconsin. The purpose was to continue to support enhanced implementation of school tobacco programs which followed the Centers for Disease Control and Prevention's Guidelines for School Health Programs to Prevent Tobacco Use and Addictions.
- From 2001 to 2003, approximately two million dollars were spent on school tobacco programs in more than 300 school buildings in the state of Wisconsin. In school year 2004-05, a new run of funding, \$332, 617 in total, was distributed to a group of newly selected school districts. Most of the schools had been funded previously and subsequently evaluated in 2002, 2003, and/or 2004. Only a handful of them had not been funded prior to 2004-05.
- School districts reported approximately 18,608 students received classroom instruction, about 12,318 received peer-to-peer services from trained peers, and over 2,094 were served by or referred to new tobacco programs during the 2004-05 funding year.
- Significant improvement in most areas addressed in the CDC Guidelines was reported between the baseline—spring of 2004—and the follow-up in spring of 2005. Schools reported increased consistency with CDC Guidelines in the areas of policy, curriculum, staff training, family and community involvement, cessation services, and evaluation. Except in the area of instruction, the average scores in all areas improved significantly. An overall score also showed significant progress over the baseline year.
- The improvements have continued over the four years of this program. The averaged scores across all reporting schools, based on a scale from 0 to 2, increased as follows: from 1.54 to 1.67 for policy, from 1.19 to 1.67 for curriculum, from 0.99 to 1.57 for instruction, from 0.60 to 1.35 for training, from 0.68 to 1.29 for family and community involvement, from 0.42 to 1.13 for cessation, and from 0.45 to 1.28 for evaluation. The overall score increased from 1.08 to 1.55 over the four years of data collection. Evidence from prior research in other states suggests that enhanced implementation of the CDC school tobacco program guidelines is associated with significant reduction in student tobacco use. These results are expected in Wisconsin, as well as a result of improved school tobacco policies and programs.

## **Background**

The Department of Public Instruction (DPI), in cooperation with the Department of Health and Family Services' Wisconsin Tobacco Prevention and Control Program, administers and oversees the School Tobacco Program Grants. This program allows public school districts and consortia to apply for funds to create or expand upon strategies, identified as effective by the Centers for Disease Control and Prevention (CDC), in reducing or eliminating youth tobacco use. There is evidence that implementation of the CDC Guidelines in California schools was significantly related to reduced smoking prevalence, increased quit attempts and increased negative expectations and attitudes regarding tobacco among students (Rohrbach et al., 2002). Another study in Oregon found that schools with high or medium levels of implementation of the Guidelines, when compared to low implementation schools, had greater decline in 8<sup>th</sup> graders' 30-day smoking prevalence (Rohde et al., 2001). Thus the DPI used the CDC Guidelines as the cornerstone of this grant program.

In order to be considered for grant receipt, districts and consortia were required to submit policy and program assessments (Tobacco Assessment Tool; TAT hereafter) for each school building in which they intended to expend grant funds. In school year 2001-02, one hundred and nine school districts and consortia throughout the state applied for grant funding on behalf of the 313 school buildings they serve. Forty-three percent of applicant school districts and 36 percent of consortia received first year grant funding, with a total award amount of about \$1.1million. (See Anderson, Moberg and White, 2002, for a detailed report on the baseline data). In school year 2002-03, the same projects were awarded a reduced second year funding total of approximately \$625,000. By school year 2003-04, funding was greatly reduced and 11 projects received a total of \$225,000. In 2004, twenty-five school districts and consortia were newly selected to receive \$332,617. This funding covered 28 school districts, or more than 100 school buildings in total.

In addition to providing grant dollars to local school districts, targeted training and technical assistance was provided to schools and communities through ongoing collaboration between the Department of Public Instruction, American Lung Association of Wisconsin, Cooperative Educational Service Agencies (CESAs) and local tobacco free coalitions. Statewide training and technical assistance efforts targeted cessation, youth education programs (including curriculum, instruction, family and community involvement), and staff development as well as policy communication and enforcement.

## **Methods**

As part of the grant application process, all applicant school districts submitted self assessments (TAT) of their school tobacco prevention programs for each school for which they intended to expend grant funds. These assessments serve as the baseline for evaluation. In order to evaluate change, schools where programs were actually funded were required to fill out and submit the same assessment tool (TAT) at the end of each year of funding. For the school year 2004-05, 132 schools submitted year-end assessments. Of these, 86 schools turned in the baseline assessment; 27 schools did not have baseline assessments; and 19 school buildings, whose

districts were previously funded, but not in 2004-05, turned in the end of year assessment.<sup>1</sup> The number of schools for analysis was further reduced because some schools/buildings or districts did not complete all questions in the assessment tool. Of 132 schools which turned in the end of year assessment, only 119 schools completed all questions. Among these schools, seventy-six schools were funded and completed both baseline and year-end assessments; twenty-six schools were funded and completed year-end assessments only; seventeen schools were not funded, but completed the assessment. Table 1 shows the complexity of the total sample.

**Table 1. Number of Schools Submitting 2005 End of Year Questionnaires, by 2004-05 Funding, Availability of Baseline Assessment, and Completion of All Questions**

		Completed Q	Incomplete Q	Total
Funded	Baseline	76	10	86
	No Baseline	26	1	27
Unfunded	No Baseline	17	2	19
Total		119	13	132

*(Note that only 76 of the funded schools had both baseline and end of year assessments. In subsequent analysis, this sample was compared to the other samples.)* The 76 funded school buildings, which completed both baseline and year-end assessments, consisted of: 41% elementary schools, 30% middle schools or junior highs, 23% high schools, and 6% K-8 buildings.

The questions in the TAT were developed from the CDC's Guidelines for School Health Programs to Prevent Tobacco Use and Addiction (1994). Following the CDC's recommendations for ensuring quality school programs that prevent, reduce or eliminate tobacco use, seven areas are assessed: policy, instruction, curriculum, training, family & community involvement, tobacco cessation, and evaluation. Fifty-eight assessment questions measured the level to which respondents reported that the school building had elements of quality tobacco education programs and policies in place.<sup>2</sup> Questions were scored according to whether a given characteristic existed completely ('yes'), existed only to some degree ('somewhat'), or not at all ('no'). Responses were scored two, one, or zero points, respectively, to each question, and averaged within each area of the guidelines. The higher the score, the more anti-tobacco programs consistent with CDC guidelines were in place.

## Results

### School Building Assessment (Tobacco Assessment Tool)

Table 2 presents the average scores of all assessment dimensions in the TAT. The scores were averaged across the items and schools in each dimension. The scores can range from 0 to 2. A

<sup>1</sup> The funded districts may give the funding to different schools/buildings than were expected at the time of application. The newly added schools will have the year-end assessments only.

<sup>2</sup> Due to a computer program error, only 57 questions were available this year. The omitted question is regarding whether the school ever invited guest speakers. Fortunately, confirmatory factor analysis showed that the omitted question was the poorest indicator in the assessment of instruction.

score of “0” would indicate that none of the elements of an area were in place, while a “2” would indicate all elements in that area were in place. A score of “1” would indicate that the elements of a specific area were in place “to some degree”.

The pre-test and posttest comparisons in Table 2 are based on the seventy-six schools which were funded in 2004 and completed both the 2004 baseline and the year 2005 assessment questionnaires. The baseline self assessments showed that school policies were most consistent with the CDC Guidelines (80% of possible score), followed by curriculum (76%) and instruction (75%). Less consistent with guidelines were the areas of family/community involvement (60%), staff training (51%), evaluation (53%) and cessation programming (45%). Thus, there was a great deal of room for improvement in many of the guideline areas. Results from self assessments at the end of the 2004-05 school year showed that the funded schools had increased significantly from baseline in all areas of the CDC guidelines except instruction and family/community involvement. In general, the greatest strengths of the school grant program have been in the areas of school district policy, youth curriculum, and instruction. Investments to school district policy and curriculum continued to grow. Programs related to cessation services and staff training improved significantly from year 2004 to year 2005. Though some improvements were seen in family/community involvement and instruction, they were not statistically significant. The participant schools also increased their self-evaluation of the program effectiveness over the funded year.

**Table 2: Mean Change from Baseline to Year-End Assessment, 2004-05  
(76 funded buildings that completed baseline and year-end assessment)**

	Baseline	End-Year	p-value (2-tailed t-test)
Policy (17 items)	1.61	1.67	.012
Curriculum (17 items)	1.53	1.67	.000
Instruction (5 items)	1.51	1.57	.344
Training (4 items)	1.02	1.35	.000
Family/Community Involvement (7 items)	1.20	1.29	.094
Cessation (3 items)	0.90	1.14	.002
Evaluation (4 items)	1.05	1.28	.002
Overall (57 items)	1.42	1.55	.000

End of year data from two groups of funded schools were briefly compared. The no-baseline schools were superior in all areas ( $p < 0.05$ ), except school policy and curriculum ( $p > 0.1$ ). Some characteristics of the no-baseline schools may contribute to their differences in assessment. For example, none of the no-baseline schools were previously funded, while most of the schools with baselines had been previously funded. Secondly, the no-baseline group has a higher proportion of elementary schools than the baseline group, 60% vs. 41%. The socioeconomic characteristics of all school districts were also compared. According to 2000 Census, communities of no-baseline school districts have higher median family and household incomes, higher average educational level for adults age 25 years or older, higher median value of single-family owner-occupied homes, and lower proportions of families or individuals below poverty level than those of baseline school districts. These findings suggest that differences in the

socioeconomic profiles of the districts may explain the variations in year-end assessments between baseline and no-baseline schools.

For a more in-depth evaluation, it would be ideal to have baseline and year-end assessments from unfunded schools to compare to those of funded schools. In the database, there are a handful of unfunded schools (N=17). See table 1. These schools only have the year-end assessment for school year 2004-5, and their prior assessments were spread over school years 2001-02, 2002-03, and 2003-04. Because the number of schools is small, comparison of the observed changes of the funded schools to those of the unfunded schools is limited. Nevertheless, from the limited information on the unfunded schools, the year-end assessments of unfunded schools significantly fell behind those of the funded schools in areas of cessation and evaluation ( $p < 0.05$ ).<sup>3</sup> In addition, the unfunded schools did not perform as well as the funded schools in the areas of curriculum and instruction ( $0.1 > p > 0.05$ ). There were no significant differences between these two groups of schools in the areas of policy, training, and family/community involvement ( $p > 0.1$ ). The differences in reports prior to 2005 between funded and unfunded schools were all non-significant ( $p > 0.1$ ), further suggesting a positive effect of funding.

### Limitations of Tobacco Assessment Tool

The Tobacco Assessment Tool was developed primarily as a planning and needs assessment device for schools. As such, validity and reliability of responses were not initially issues in the development of the tool. Since the tool was completed as a self-report from individuals or teams in each school or district, the answers could be influenced by institutional interests. For example, the districts or schools might tend to stress the needs at baseline, and stress the progress at year-end. In addition, because baseline assessments and year-end assessments may have been completed by different individuals/teams, different response biases would be inherent in the process. Moreover, given the wide range of areas assessed by the tool, individuals who completed the tool might not have full knowledge in all areas.

### General Assessment from School Districts/CESA

In addition to building assessments (Tobacco Assessment Tool), 25 school districts and CESAs provided summary online reports on the reach of their projects in 2004-05. Combined, these districts reported that a total of 18,608 students received instruction using “curriculum developed, enhanced or purchased through the grant”, and 2,094 students were referred/served by “new tobacco programs or services”. Additionally, 1,185 students were trained to provide peer to peer tobacco program mediation and 12,318 students received programs/services from trained peers.

## **Comment**

Despite data limitations, the current analyses indicate significant self-reported improvement in tobacco programming in Wisconsin schools related to receipt of the 2004-05 Tobacco Program grants. The improvements have continued over the four years of this program. For example, on average, the score for policy increased from 1.54 to 1.67, for curriculum from 1.19 to 1.67, for instruction from 0.99 to 1.57, for training from 0.60 to 1.35, for family and community

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<sup>3</sup> The statistics are not presented here.

involvement from 0.68 to 1.29, for cessation from 0.42 to 1.13, and for evaluation from 0.45 to 1.28. The overall score increased from 1.08 to 1.55. In addition to Tobacco Program grants, training and technical assistance provided by DPI under the grant program may have also affected both funded and unfunded schools.

Generalizing from other research linking student outcomes to high levels of implementation of the CDC Guidelines, it is anticipated that student tobacco use will be significantly reduced by this grant program; though, this outcome has not been directly measured. To strengthen the evidence and expand our knowledge on the effectiveness of the program, linkage between schools and large sample student survey data would be needed. Alternative analyses may also be helpful. First, all school buildings over the life of this funding can be pooled to compare the changes from baseline to year-end between funded and unfunded schools. Further, the influences of socioeconomic profiles of the community and available funding per student, or per school, could be analyzed.

## References

Moberg DP, Greller S, White DR. School Tobacco Program: Second Year Assessment Program Brief. Surveillance and Evaluation Program, Madison, WI: UW Medical School, March 2004.

Anderson AE, Moberg DP, White DR. School Tobacco Program Assessment Report. Monitoring and Evaluation Program Technical Report, Madison, WI: UW Medical School, March 2002.

Centers for Disease Control and Prevention. Guidelines for School Health Programs to Prevent Tobacco Use and Addiction. Morbidity and Mortality Weekly Review, 1994; 43 (N. RR-2):1-20.

Rohde K, Pizacani B, Stark M, et al. Effectiveness of School-based Programs as a Component of a Statewide Tobacco Control Initiative—Oregon, 1999-2000. Morbidity and Mortality Weekly Review 2001; 50(31): 663-6.

Rohrbach L, DeCalice S, Unger J. Implementation of evidence based practices for tobacco prevention in schools: Effects on outcomes. Paper presented at the meeting of the Society for Prevention Research, Seattle, WA. June, 2002.

U.S. Census Bureau, Census 2000 Summary File 3, Matrices P30, P32, P33, P43, P46, P49, P50, P51, P52, P53, P58, P62, P63, P64, P65, P67, P71, P72, P73, P74, P76, P77, P82, P87, P90, PCT47, PCT52, and PCT53.

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