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## Tobacco Policies at Colleges and Universities Housing PreK – 12 Laboratory Schools: An Exploratory Study

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## **INTRODUCTION**

Linked to development of certain types of cancers, cardiovascular disease, pulmonary disease, and reproductive issues, tobacco use is the leading cause of preventable death and disease in the United States (U.S. Department of Health and Human Services [USDHHS], 2010). Exposure to environmental tobacco smoke (ETS) is also significantly associated with death and disease among nonsmokers with 50,000 dying each year from tobacco-related illnesses (Campaign for Tobacco-Free Kids [CTFK], 2013). Despite these risks, 4,000 kids under the age of 18 try cigarettes for the first time each day with 1,000 per day becoming addicted (CTFK, 2012).

The school setting in particular has been recognized as an important social framework that influences the smoking behavior of children and adolescents due to the effects of peer pressure and role modeling of tobacco behaviors by teachers and older students (Don Morris, Vo, Bassin, Savaglio, & Wong, 1993; Dusenbury et al, 1992; Leatherdale, Cameron, Brown, Jolin, & Kroeker, 2006; Leatherdale, & Manske, 2005; Leatherdale, McDonald, Cameron, & Brown, 2005; Stockdale, Dawson-Owens, & Sagrestano, 2005). In the Theory of Triadic Influence (TTI), adolescents' decisions to initiate tobacco use are attributed to the broader social environment of the school community, as well as individual student characteristics and the immediate social environment of friends and family (Flay, Petraitis, & Hu, 1999). As a result of the school environment's influence, public school systems have been the focus of federal and state-level legislation designed to create tobacco-free schools.

### **Rationale for Comprehensive Tobacco-Free School Policies**

While a majority of smokers initiate smoking prior to high school graduation, recent trends indicate that a significant number of adult smokers first use tobacco products during their college years (Choi, Harris, Okuyemi, & Ahluwalia, 2003; Johnston, O'Malley, Bachman, & Schulenberg, 2010; Rigotti, Lee, & Wechsler, 2000; Staten, Rayens, & Ridner, 2007). Recently, Staten et al. (2007) reported in a study of 437 undergraduate students that 13% initiated smoking while in college. In terms of overall tobacco use among college students, Rigotti et al. (2000) reported that approximately 30% of 14,138 college students surveyed used tobacco products on a regular basis and more than 60% had tried a tobacco product. Cigarettes were reported as the most frequently consumed product in this study. A more recent study by Johnston et al. (2010) revealed that smoking rates among college students have actually declined from a peak of 31% in 1999 to 16% in 2010. Despite these reported reductions in smoking prevalence, these statistics are concerning due to the effects of role modeling as noted by Rigotti et al. (2000):

Smoking among college students may diffuse to other segments of the population, especially to children or adolescents, because of the effect of peer modeling. The visibility of tobacco products on campus, even if used intermittently, sends a dangerous message about the social acceptability of tobacco use (pg. 704).

While there is some debate on the effectiveness of smoking bans and restrictions, Hopkins et al. (2010) found that “smoke-free policies provide the best possible protection for nonsmokers from exposure to secondhand tobacco smoke.” Furthermore, several researchers have reported significant associations between smoking bans and reduced smoking behavior by students, faculty, and staff (Barnett et al., 2007; Moore, Roberts, & Tudor-Smith, 2001; Osthus, Pape, & Lund, 2007; Overland, Aaro, & Lindbak, 2010; Piontekl et al., 2008; Sinha, Gupta, Warren, & Asma, 2004), particularly when policies are consistently enforced (Adams, Jason, Pokorny, & Hunt, 2009; Griesbach, Inchley, & Currie, 2002; Lipperman-Kreda, Paschall, & Grube, 2009; Wakefield et al., 2000). In line with these findings, support for smoke-free schools is provided by the Pro-Children Act of 2001 (U.S. Department of Education, n.d.), which bans smoking inside facilities where children’s services are provided with federal funds. Restrictions on tobacco use on school grounds and indoors by faculty, staff, and visitors, however, are relegated to the local or state level. Additional support for tobacco-free schools is provided by recommendations from *Healthy People 2020* (Office of Disease Prevention and Health Promotion, 2009) the Centers for Disease Control and Prevention (CDC, 1994), and the American Cancer Society (2010). As of 2006, 38% of states, 45.5% of school districts, and 63.6% of primary and secondary schools were governed by tobacco-free environment policies (CDC, 2000; CDC, 2006).

While momentum is gathering in public PreK - 12 schools, the college and university system has been slower to respond with no over-arching federal legislation and limited state legislation to mandate implementation of tobacco-free campus policies. The American College Health Association (ACHA, 2009) does provide guidance on the issue of tobacco use on campus with the following position statement: “In light of these [tobacco] health risks, ACHA has adopted a NO TOBACCO USE policy and encourages colleges and universities to be diligent in their efforts to achieve a 100% indoor and outdoor campus-wide tobacco-free environment” (pg. 1). Despite this recommendation, there are currently only 826 colleges and universities across the nation with 100% smoke-free campuses with no exemptions (American NonSmokers’ Rights Foundation [ANRF], 2012) and 281 colleges and universities with 100% tobacco-free campuses (American Lung Association, 2012).

Considering that most public PreK - 12 schools have some type of tobacco restriction, colleges and universities that house PreK - 12 laboratory schools are

faced with the unique ethical dilemma of determining whether they have a responsibility to protect the health of the high school, middle school, and elementary school students on their campuses through implementation of comprehensive tobacco policies. Laboratory schools are affiliated with a college or university in order to assist in the training and education of teachers and serve as a resource and study population for scholarly research and educational experimentation (International Association of Laboratory Schools, 2010). Considering no research currently exists on this topic, the following research questions guided this study:

1. What is the current status of tobacco campus policies at selected PreK - 12 laboratory schools and their affiliated colleges and universities?
2. What are the perceived barriers to passage of tobacco policies among administrators?
3. What aspects of the school environment are perceived by school administrators to aid in passage of tobacco policies?
4. What are the administrators' perceptions regarding the responsibility of colleges and universities to protect the health of laboratory school students through passage of comprehensive tobacco policies?

## **METHODS**

Data were collected through electronic surveys disseminated to principals of 61 U.S. laboratory schools and multiple executive level administrators at each of the universities housing the selected laboratory schools. To be included in the comparison of affiliated school policies, the principal of the laboratory school and one of the administrators from the affiliated college or university had to complete the survey. Given the absence of research on the topic and as a convenient starting point, the International Association of Laboratory Schools (IALS) was selected as the source for identifying laboratory schools and their affiliated colleges and universities to be included in this study. This exploratory approach was considered adequate to provide information regarding tobacco policies at colleges and universities housing PreK - 12 laboratory schools. The institutional review board approved the study protocol prior to data collection.

### **Survey**

The surveys for both the laboratory school principals and college/university administrators were developed by the researcher and consisted of four questions each. For questions one (barriers to passage) and two (aids to passage), respondents were given a list of predetermined responses from which to choose and rate their answers. A rating scale of one to five was used for questions that asked respondents to 1) identify barriers to passage of their current school policies and indicate the magnitude of each barrier, with "1" being a "minor barrier" and

“5” being a “major barrier”; and 2) identify aspects of the school environment that aided in passage of their current school tobacco policies and indicate the magnitude of each influence, with “1” being a “minor influence” and “5” being a “major influence.” The third question asked respondents to report their perception about whether or not college and universities have the responsibility to protect the health of PreK - 12 students on their campuses by implementing tobacco- or smoke-free school policies, with “1” being “definitely no” and “5” being “definitely yes.” Respondents also had the option to provide open-ended, qualitative feedback on each question through use of the “other” category and “explanation” boxes associated with individual survey items. The fourth and final question requested a Web link to or a copy of the schools’ tobacco policies for analysis by the researcher. Respondents’ school name, state, gender, educational level, and position were also asked to match laboratory schools with their affiliated college/university and for descriptive statistical purposes.

The surveys were reviewed by three faculty members (two from health and one from psychology) prior to being piloted with representatives of the targeted population of the study. The laboratory school version of the survey was piloted by the principal of the laboratory school affiliated with the researcher’s institution, and the college/university administrator version was piloted by two university administrators: the Environmental Health and Safety Officer and the Provost. Review of these pilot surveys revealed inconsistencies in the way respondents interpreted questions and that the length of the survey was too long due to many questions left blank or answered very briefly. As a result of this feedback, both surveys were revised and shortened to enhance the clarity of the questions and quality of responses.

### **Setting and Participants**

The subject pool for this study was principals of 61 U.S. based laboratory schools listed as national members of the International Association of Laboratory Schools (IALS) and the President, Provost, Vice President of Student Affairs, and the Environmental Health and Safety Officer of their affiliated colleges or universities. Multiple executive level administrators at the colleges and universities were invited to participate in the study in order to increase the odds of getting at least one response from an administrator knowledgeable about his or her respective campus tobacco policy so that a comparison of affiliated school policies could be made. As noted earlier, to be included in the comparison of affiliated school policies, the principal of the laboratory school and at least one of the four administrators from the affiliated college or university had to complete the survey. The target schools included eight (13%) from the West, eight (13%) from the Southwest, 20 (32%) from the Southeast, seven (12%) from the Midwest, and 18 (30%) from the Northeast.

Forty-seven administrators completed the online survey. Sixteen of the respondents were laboratory school administrators and 31 were college/university administrators. The respondents represented 41 schools (10 paired schools) across 19 U.S. states.

### **Data Collection**

Data were collected through electronic surveys emailed to all potential participants. Respondents were given two weeks to complete the surveys. After the two-week window expired, all targeted individuals who had not responded to the survey received follow up phone calls and/or emails reminding them about the survey and requesting their participation. A chance to win a \$50 Amazon gift card was offered as an incentive to complete the survey. All individuals who completed the survey were entered into the drawing with the winner selected at random. Names of participants entered into the drawing were not attached to survey data.

### **Data Analysis**

Campus tobacco policy inconsistencies among affiliated schools and the state board of education guidelines were determined by an analysis of the school tobacco policies submitted by the laboratory school principals and at least one of the four administrators from the affiliated colleges or universities as part of the electronic survey. Each school was given the designation as a partial smoke-free, comprehensive smoke-free, partial tobacco-free, or comprehensive tobacco-free school policy based on the language in the school policy.

The criterion for a comprehensive smoke-free policy designation included language prohibiting use of cigarettes, pipes, and cigars by students, faculty, staff, and visitors inside school facilities, on school grounds, on school buses, and at school-sponsored events on and off campus. Any smoking related school policy that did not meet this criterion was considered a partial smoke-free policy. To be considered a comprehensive tobacco-free policy, the policy language had to prohibit use of cigarettes, cigars, and pipes, as well as smokeless tobacco products, by students, faculty, staff, and visitors inside school facilities, on school grounds, on school buses, and at school-sponsored events on and off campus. Any tobacco related school policy that did not meet this criterion was considered a partial tobacco-free policy. An analysis of state board of education guidelines was also conducted using these same criteria to determine if inconsistencies existed with college/university tobacco policies. Information on state tobacco policies was obtained from the National Association of State Board of Education's (n.d.) State School Healthy Policy Database on tobacco use.

## RESULTS

Ten paired schools participated, meaning the principal of the laboratory school and at least one administrator from the affiliated college or university completed the survey, representing a paired school response rate of 16.4%. Data submitted by administrators of these paired schools were used to address the first research question regarding the status of affiliated school policies. Data from all survey respondents, including paired and unpaired schools, were used to address the remaining three research questions involving perceptions of barriers to passage of school tobacco policies, aspects of the school environment that aid in passage of such policies, and colleges' responsibility to protect the health of laboratory school students through comprehensive tobacco policies.

Of the 41 responding schools, 16 were laboratory school administrators representing 16 unique schools, which equated to a school response rate of approximately 26%. Respondents were primarily female (73%) school principals (62%) with doctoral degrees (69%). They represented laboratory schools in 12 U.S. states with two schools from the Northeast, four from the Midwest, nine from the South, and one from the West.

The 31 college/university administrators represented the remaining 25 unique schools, which equated to a school response rate of approximately 41%. The majority of respondents served as Vice Presidents of Student Affairs (32%), University Presidents (19%), Environmental Health and Safety Officers (16%), and Provosts (3%). They were predominately male (55%) with doctoral degrees (65%) and represented colleges and universities in 16 U.S. states with five schools from the Northeast, three from the Midwest, 10 from the South, and seven from the West.

### Status of Tobacco Policies on Campus

The first research question explored the current status of tobacco policies at select laboratory schools and their affiliated colleges and universities. Of the 10 paired schools, two of the laboratory schools indicated they were governed by state board of education guidelines, and the remaining eight laboratory schools indicated they were governed by the tobacco policies of their affiliated colleges or universities. Upon review of all the policies, it was determined that inconsistencies between affiliated college/university policies and state board of education guidelines existed for 9 of the 10 paired schools. Based on governance of policy, laboratory schools represented five partial smoke-free policies, one comprehensive smoke-free policy, two partial tobacco-free policies, and two comprehensive tobacco-free policies. Table 1 provides a breakdown of the policy comparison.

**Table 1** Status of Paired College/University and Laboratory School Tobacco Policies Versus State Board of Education Guidelines (*N* = 10)

<b>Laboratory School Governance</b>	<b>Affiliated College/University Policy Designation</b>	<b>State Board of Education Guidelines (Policy Designation)</b>	<b>Discrepancy</b>
State board of education guidelines	<b>Partial smoke-free</b> - Provides designated smoking areas and allows outdoor smoking	<b>Partial tobacco-free</b> – Bans tobacco use for students. Does not address use by faculty, staff or visitors	Yes
State board of education guidelines	<b>Partial smoke-free</b> - Allows exceptions and outside of 20 foot radius on school grounds	<b>Partial smoke-free</b> - Allows faculty and staff to smoke outside of 50 foot radius on school grounds	Yes
Affiliated school policy	<b>Comprehensive tobacco-free</b>	<b>Comprehensive smoke-free</b> - Allows smokeless tobacco use	Yes
Affiliated school policy	<b>Comprehensive tobacco-free</b>	<b>Partial smoke-free</b> - Allows smoking on school grounds	Yes
Affiliated school policy	<b>Comprehensive smoke-free</b> – Allows smokeless tobacco use	<b>Partial tobacco-free</b> – Prohibits the use of tobacco in any indoor area of a public elementary or secondary school building or on buses used to transport students to or from school	Yes



**Table 1 continued**

<b>Laboratory School Governance</b>	<b>Affiliated College/University Policy Designation</b>	<b>State Board of Education Guidelines (Policy Designation)</b>	<b>Discrepancy</b>
Affiliated school policy	<b>Partial tobacco-free</b> Allows smoking and use of smokeless tobacco products on school grounds and in school vehicles	<b>Comprehensive smoke-free</b> - Allows smokeless tobacco use	Yes
Affiliated school policy	<b>Partial smoke-free</b> – Allows designated smoking areas and smoking further than 20 feet away from campus buildings	<b>Partial tobacco-free</b> - Prohibits use of any tobacco product, e-cigarette, or liquid nicotine in any public educational facility or on the grounds of any public educational facility	Yes
Affiliated school policy	<b>Partial smoke-free</b> – Smoking is permitted in designated smoking areas in buildings and on school grounds	<b>Partial smoke-free</b> - Allows smoking on school grounds	Yes
Affiliated school policy	<b>Partial smoke-free</b> – Allows designated smoking areas and smokeless tobacco use	<b>Partial smoke-free</b> - Only provides smoking restrictions for persons under age 18	Yes

**Table 1 continued**

<b>Laboratory School Governance</b>	<b>Affiliated College/University Policy Designation</b>	<b>State Board of Education Guidelines (Policy Designation)</b>	<b>Discrepancy</b>
Affiliated school policy	<b>Partial smoke-free</b> – Allows smoking on school grounds and in university vehicles or buildings leased to other individuals, organizations, or corporations	<b>Partial smoke-free</b> – Allows smoking on school grounds	No

### **Perceived Barriers to Passage of Tobacco Campus Policies**

The second research question explored the perceived barriers to passage of tobacco campus policies among school administrators. As illustrated in Table 2, the means of the responses for the six main categories of barriers in the laboratory school sample were less than “2” indicating minor barriers. The highest ranked category of barriers in the laboratory sample was faculty/staff issues ( $M = 1.30$ ) followed by social issues ( $M = 1.22$ ) and internal policy implementation challenges ( $M = 1.15$ ). The highest ranked individual barriers were the issue of personal rights ( $M = 1.55$ ), problems developing specific monitoring and enforcement strategies ( $M = 1.54$ ), and faculty/staff tobacco use ( $M = 1.33$ ).

As illustrated in Table 3, the means of the responses for the six main categories of barriers in the college/university school sample were less than “3,” indicating minor to moderate barriers. The highest ranked category of barriers in the college/university sample was internal policy implementation challenges ( $M = 1.98$ ) followed by social issues ( $M = 1.75$ ) and faculty/staff issues ( $M = 1.60$ ). The highest ranked individual barriers were student objections ( $M = 2.46$ ), ownership of implementation and enforcement ( $M = 2.33$ ), and the issue of personal rights ( $M = 2.17$ ). For both samples, too few qualitative statements were collected to analyze or categorize into themes.

**Table 2** Tobacco Policy Barriers in Laboratory School Sample ( $N = 16$ )

<b>Barrier</b>	<b><i>N</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>
Faculty/staff issues	12	1.30	0.70
Faculty/staff tobacco use	12	1.33	0.78
Fear of faculty/staff attrition	10	1.20	0.63
Social issues	11	1.22	0.66
The issue of personal rights	11	1.55	1.04
Fear of transferring the smoking problem to the surrounding community	10	1.10	0.32
Lack of awareness about key tobacco issues	11	1.00	0.00
Internal Policy Implementation Challenges	13	1.15	0.67
Problems developing monitoring and enforcement strategies	13	1.54	1.20
Ownership of implementation and enforcement	13	1.00	0.00
Lack of faculty or administrative champion	10	1.00	0.00
Layout and geographic limitations of campus	10	1.00	0.00
Financial concerns	11	1.08	0.35
Financial support from the tobacco industry (i.e., grants, athletics, etc.)	10	1.20	0.63
Enrollment concerns	11	1.09	0.30
Funding shortfalls	10	1.00	0.00
Tobacco industry marketing on campus	9	1.00	0.00

**Table 3** Tobacco Policy Barriers in College/University Sample ( $N = 31$ )

<b>Barrier</b>	<b><i>N</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>
Internal Policy Implementation Challenges	24	1.98	1.14
Ownership of implementation and enforcement	24	2.33	1.43
Problems developing monitoring and enforcement strategies	24	2.08	1.10
Layout and geographic limitations of campus	22	1.77	0.92
Lack of faculty or administrative champion	21	1.67	0.91
Social issues	23	1.75	1.05
The issue of personal rights	23	2.17	1.23
Lack of awareness about key tobacco issues	21	1.52	0.68
Fear of transferring the smoking problem to the surrounding community	20	1.50	1.05
Faculty/staff issues	26	1.60	0.94
Faculty/staff tobacco use	26	1.96	1.08
Fear of faculty/staff attrition	19	1.11	0.32
Objections by key stakeholders	24	1.42	0.80
Students	24	2.46	1.14
Faculty senate	21	1.52	0.81
Visitors	21	1.33	0.66
Alumni	21	1.33	0.66
Administrators	22	1.14	0.47
Teacher Unions	21	1.14	0.48
Parents	20	1.15	0.37

**Table 3 Continued**

<b>Barrier</b>	<b><i>N</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>
Objections by key stakeholders <i>continued</i>	--	--	--
Politicians	20	1.15	0.37
Financial concerns	20	1.18	0.47
Funding shortfalls	19	1.32	0.67
Enrollment concerns	20	1.20	0.52
Financial support from the tobacco industry (i.e., grants, athletics, etc.)	20	1.10	0.31
Tobacco industry marketing on campus	20	1.10	0.31
Laws and policies	21	1.14	0.38
Affiliated laboratory school policies	20	1.25	0.55
Weaker preemptive state tobacco laws	19	1.11	0.32
Weak tobacco laws in surrounding communities	19	1.11	0.32
State tobacco/smoke laws	21	1.10	0.30

*Note.* The reported category means and standard deviations were calculated from the combined responses of the sub-category items. The category *N* sizes were calculated by the number of unique respondents from the combined sub-category items.

### **Factors Assisting In Passage of Tobacco Campus Policies**

The third research question explored aspects of the school environment perceived by school administrators to assist in passage of tobacco campus policies. As illustrated in Table 4, the means of the responses for eight main categories of influences in the laboratory school sample ranged from 2.71 to 4.10, indicating relatively minor to relatively major influences. The highest ranked category of influences was laws and policies ( $M = 4.10$ ) followed by communication strategies ( $M = 3.77$ ) and support from key stakeholders ( $M = 3.63$ ). The highest ranked individual influences were affiliated college/university policies ( $M = 4.46$ ), state laws ( $M = 4.40$ ), faculty/staff support ( $M = 3.93$ ), strong awareness about key tobacco issues ( $M = 3.83$ ), and communication of key messages that personalized health risks of tobacco use ( $M = 3.80$ ).

As shown in Table 5, the means of the responses for the eight main categories of influences in the college/university school sample ranged from 2.13 to 3.32 indicating relatively minor to moderate influences. The highest ranked category of influences was support from key stakeholders ( $M = 3.32$ ) followed by communication strategies ( $M = 2.97$ ) and environmental concerns ( $M = 2.96$ ). The highest ranked individual influences were administrative support ( $M = 4.00$ ), faculty/administrative champion ( $M = 3.61$ ), strong awareness about key tobacco issues ( $M = 3.46$ ), Faculty Senate support ( $M = 3.36$ ), and student support ( $M = 3.21$ ). Again, for both samples, too few qualitative statements were collected to analyze or categorize into themes.

**Table 4** Aspects of the School Environment Assisting in Passage of Tobacco Campus Policies – Laboratory School Sample (N = 16)

<b>Aid</b>	<b>N</b>	<b>M</b>	<b>SD</b>
Laws and policies	13	4.10	1.44
Affiliated college/university policies	13	4.46	1.13
State laws	10	4.40	1.26
Strong community tobacco laws	10	3.30	1.77
Communication strategies	12	3.77	1.52
Strong awareness about key tobacco issues	12	3.83	1.47
Communication of key messages that personalized health risks of tobacco use through discussion of second-hand smoke exposure, children's health risks, and adult role modeling behaviors	10	3.80	1.62
Examples of successful policy adoptions by other school districts	8	3.62	1.69

**Table 4 Continued**

<b>Aid</b>	<b><i>N</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>
Support from key stakeholders	14	3.63	1.50
Faculty/Staff	14	3.93	1.14
School district	9	3.67	1.66
Students	11	3.64	1.43
Parents	12	3.58	1.68
Politicians	8	3.12	1.89
Environmental concerns (i.e., cigarette butt litter on campus and campus fires)	11	3.36	1.43
Advocates	12	3.20	1.65
Faculty/administrative champion	12	3.50	1.68
Youth policy champions	7	3.14	1.68
Community partnerships	9	3.00	1.66
Community coalitions	9	3.00	1.80
Ownership of implementation and enforcement	10	3.10	1.66
Anti-tobacco campus activities	9	3.05	1.64
Educational materials on campus (i.e., posters, flyers, newspaper ads, campus television ads, etc.)	8	3.38	1.60
Petitions	7	3.14	1.68
Student-led campaigns	8	3.00	1.85
Community-led campaigns	9	2.89	1.76
Grant activities	7	2.86	1.68

**Table 5** Aspects of the School Environment Assisting in Passage of Tobacco Campus Policies – College/University School Sample ( $N = 31$ )

<b>Aid</b>	<b><i>N</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>
Support from key stakeholders	29	3.32	1.40
Administration	29	4.00	1.10
Faculty Senate	25	3.36	1.41
Students	28	3.21	1.29
Politicians	22	2.95	1.46
Parents	21	2.86	1.56
Communication strategies	24	2.97	1.29
Strong awareness about key tobacco issues	24	3.46	1.28
Communication of key messages that personalized health risks of tobacco use through discussion of second-hand smoke exposure, children's health risks, and adult role modeling behaviors	23	3.00	1.17
Examples of successful policy adoptions by other school districts	21	2.38	1.24
Environmental concerns (i.e., cigarette butt litter on campus and campus fires)	23	2.96	1.58
Ownership of implementation and enforcement	24	2.54	1.35
Advocates	23	2.48	1.46
Faculty/administrative champion	23	3.61	1.23
Community coalitions	21	2.43	1.66
Community partnerships	19	1.95	1.08
Youth policy champions	18	1.67	0.91



**Table 5 Continued**

<b>Aid</b>	<b><i>N</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>
Laws and policies	23	2.31	1.47
Strong community tobacco laws	21	2.67	1.56
State laws	23	2.91	1.47
Affiliated laboratory school policies	18	1.61	0.92
Financial concerns (i.e., cost for cigarette butt clean up and cost for property cleaning, maintenance, and repair as a result of cigarette-induced fires)	21	2.19	1.36
Anti-tobacco campus activities	23	2.13	1.18
Educational materials on campus (i.e., posters, flyers, newspaper ads, campus television ads, etc.)	23	2.65	1.19
Community-led campaigns	21	2.52	1.54
Student-led campaigns	22	2.27	1.08
Grant activities	20	1.55	0.69
Petitions	19	1.53	0.77

*Note.* The reported category means and standard deviations were calculated from the combined responses of the sub-category items. The category *N* sizes were calculated by the number of unique respondents from the combined sub-category items.

### **Perceptions of Responsibility to Protect PreK – 12 Students on College Campuses**

The fourth research question explored school administrators' perceptions regarding the responsibility of colleges and universities to protect the health of PreK - 12 laboratory school students on their campuses by implementing tobacco or smoke-free campus policies. All of the laboratory school principals marked "definitely yes" (94%) or "yes" (6%) to this question. Similarly, nearly all of the

college/university administrators marked “definitely yes” (70%) or “yes” (17%) while 13% remained neutral on the issue. When combined, 91% of the study population felt that colleges and universities have the responsibility to protect the health of laboratory school students on their campuses through the implementation of tobacco- and smoke-free policies.

## **DISCUSSION**

The primary objective of this study was to examine the current status of smoke-/tobacco-free campus policies at select PreK - 12 laboratory schools and their affiliated colleges and universities. The data revealed that inconsistencies between college/university policies and state board of education guidelines existed for nine of the schools. Of the 10 paired schools in this study, only two afforded complete protection to PreK - 12 laboratory school students from exposure to tobacco use and environmental tobacco smoke through passage of 100% tobacco-free campus policies. Those schools without comprehensive policies are of concern due to the fact that the dangers of ETS are well established and the school environment has emerged in recent research as an important level of influence associated with tobacco initiation among adolescents (Leatherdale et al., 2006; Leatherdale, & Manske, 2005; Huang et al., 2010).

### **Identifying and Overcoming Barriers to Passage of Comprehensive Tobacco-Free School Policies**

Colleges and universities housing PreK - 12 laboratory schools are in the unique position to protect their primary and secondary school students from smoking influences and ETS by passage of comprehensive smoking and/or tobacco policies. According to the survey results, an overwhelming majority of respondents agreed that offering this protection is a responsibility of the colleges/universities. However, there were a number of barriers identified by the study participants that helped to explain why this sense of responsibility has not translated into comprehensive policy implementation. The same top three categories of barriers emerged in both the laboratory school and college/university samples: faculty/staff issues, social issues, and internal policy implementation challenges. However, it is important to note that the means for all three categories indicated the strength of the barriers to be minor to moderate.

The faculty/staff issues category included faculty/staff tobacco use and fear of faculty/staff attrition. These barriers are supported by Goldstein et al. (2003) and Wold, Torsheim, Currie, and Roberts (2004) who found low compliance with and disgruntled attitudes towards tobacco campus bans by school staff members who were current smokers. The study by Goldstein et al. (2003) also reported fear of teacher attrition as a common barrier to North Carolina

school districts passing 100% tobacco-free school policies. However, the researchers noted that the fear was unfounded as teacher attrition did not occur.

The social issues category included lack of awareness about key tobacco issues, the issue of personal rights, and fear of transferring the smoking problem to the surrounding community. Support for these notions is provided by two studies that examined barriers to tobacco control policies in Canadian universities. The first is a study by Callard and Hammond (2006) that identified lack of awareness about key tobacco issues among decision makers at 35 Canadian colleges and universities. The second study by Baille et al. (2009) identified the issue of personal rights as one of many barriers facing Canadian universities and described fear of transferring the smoking problem to the surrounding community as an unintended consequence of smoking bans.

The internal policy implementation challenges category included problems determining who would take ownership of policy implementation and enforcement, developing monitoring and enforcement strategies, and identifying a faculty or administrative champion to spearhead the policy adoption process. The Canadian study by Baille et al. (2009) reinforces these findings as it identified all three issues as part of a broad range of barriers facing Canadian universities.

Additional barriers identified in the literature also resonated with the study samples: engagement in some form of tobacco marketing on campus (Callard & Hammond, 2006); funding shortfalls (Baille et al., 2009); layout and geographic limitations of campuses (Baille et al., 2009); fears about opposition to tobacco-free school policies from students, parents, faculty and staff, and alumni (Rigotti, Regan, Moran, & Wechsler, 2003; Summerlin-Long & Goldstein, 2008); enrollment concerns (Rigotti et al., 2003); political opposition and pressure on a local, state, and national level (Hopkins et al., 2010); and existence of weaker preemptive state tobacco laws (CDC, 2005; CDC, 2010; Hopkins et al., 2010). The means for all of these barriers indicated that the strength of the barriers was only minor to moderate.

Despite these perceived barriers, several aspects of the school environment were identified as assisting in passage of smoke-free campus policies. Laws and policies emerged as the highest ranked category in the laboratory school sample. This category included affiliated college/university tobacco policies, state tobacco laws, and community tobacco laws. This finding is not surprising considering that a majority of the schools indicated they adhere to the tobacco policies of their affiliated universities and the remaining schools were governed by state board of education guidelines.

In the college/university sample, support from key stakeholders emerged as the strongest category of perceived influences that aided in passage of smoke-free campus policies. This category was ranked number three in the laboratory school sample. Stakeholders included faculty/staff, students, parents, visitors,

politicians, and faculty senates. Interestingly though, anti-tobacco campus activities such as petitions, youth- and community-led campaigns, educational materials, and anti-tobacco grant activities that would involve these key stakeholders and provide them with opportunities to express their support for tobacco policies were ranked as one of the least influential aspects of the school environment by both samples. The perceived lack of effectiveness of petitions directly contrasted research by Summerlin-Long and Goldstein (2008) that named petitions in support of local policies as one of the most effective communication strategies. Similarly, the perceived lack of effectiveness of youth-led campaigns contrasted research by Goldstein et al. (2003) that gave credence to the power of youth-led tobacco policy movements.

The third highest ranked category of influence in the college/university sample was environmental concerns, which included cigarette butt litter on campus and campus fires. The concern about cigarette butt litter is well-founded as a study by Sawdey, Lindsay, and Novotny (2011) that assessed the number of cigarette butts collected in one hour during student-led cleanups at two large universities in San Diego published a final count of 30,410 butts collected by 80 volunteers. Likewise, the concern about campus fires caused by unattended cigarettes or discarding of lit cigarette butts is justified by the half billion dollars in property damage, \$3 billion in property cleaning and maintenance, and numerous deaths they are reported to cause each year (CTFK, 2013).

Both study samples also ranked communication strategies as one of the strongest perceived influences aiding in passage of tobacco-free campus policies. These strategies included strong awareness about key tobacco issues, examples of successful policy adoptions by other schools, and communication of key messages that personalized the health risks associated with tobacco use. These communication strategies were also identified as important factors in the passage of effective tobacco-free school policies by Goldstein et al. (2003) and Summerlin-Long and Goldstein (2008). Goldstein et al. (2003) specifically noted the powerful influence of personalizing the health risks of tobacco use through discussions of involuntary exposure of non-smokers to environmental tobacco smoke, health risks to children, and adult role-modeling of healthy behaviors for youth.

Finally, the need for effective policy advocates as identified by Goldstein et al. (2003) and Summerlin-Long and Goldstein (2008) also resonated with both survey samples. However, both samples ranked this category fifth in its level of influence on passage of school smoke-free policies. This mid-level ranking is interesting considering the fact that policy advocates are generally needed to garner the support of key stakeholders, which was identified as a key influencer by both samples. This discrepancy may be due to the fact that the data were based

on school administrators' perceptions, which vary among individuals and may not represent the entire picture.

### **Limitations**

The generalizability of the findings is limited by the small size of both the laboratory school and college/university samples. The generalizability of the findings was also limited by the nature of the sample. The sample consisted of laboratory school and college/university executive-level administrators; however, these individuals may not have been directly involved in the passage of their institutions' tobacco policies or responsible for staying abreast of federal, state, and local laws governing tobacco use on school properties. In fact, several college/university administrators who were invited to complete the online survey declined to participate due to lack of knowledge about and/or involvement in the policy adoption process. As a result, respondents' perceptions of barriers to and positive influences on passage of tobacco policies may not accurately reflect the forces working for and against policy adoption in school settings.

The internal and external validity of the data were threatened by the self-report, perception-based nature of the data. Due to the sensitive and often stigmatizing nature of the school tobacco debate, administrators may have provided socially desirable responses, especially if their schools did not have strong anti-tobacco policies. Responses to the question of whether colleges/universities have the responsibility to protect the health of PreK - 12 laboratory schools housed on their campuses by passing smoke- or tobacco-free campus policies were particularly vulnerable to this form of response bias. The validity of the data was also limited by the content of the survey questions. The survey questions were pilot tested in order to ensure clarity of meaning; however, interpretation varies among individuals. In addition, the listing of barriers to passage of school tobacco policies and aspects of the school environment that aided in passage may not have been exhaustive as each school environment is unique. Thus, the surveys may not have identified all barriers and influences affecting the adoption of anti-tobacco school policies.

Due to the exploratory nature of this study, the pool of schools chosen was delimited to laboratory schools listed as national members of the International Association of Laboratory Schools (IALS) and their affiliated colleges and universities. While the IALS directory served as a convenient starting point to explore this topic, future studies should expand the sampling frame to include laboratory schools that are not members of IALS.

Finally, it is important to note that the criteria used to examine school policies in this study solely focused on aspects of the policies that prohibited smoking and use of other tobacco products by faculty, staff, students, and visitors on school grounds and property. Model tobacco prevention and control policies

do include other key components such as prohibiting promotion of tobacco products on school campuses and acceptance of donated curriculums from any tobacco-related industry. If these additional components were taken into consideration, it is possible that the evaluation of the school policies may have revealed different results. Due to the exploratory nature of the study, however, the focus was delimited to policies aimed at reducing the role modeling of smoking behavior to PreK - 12 students and their exposure to ETS.

### **Conclusions**

The policy inconsistencies found in this study shed light on the fact that there is not a consistent standard of protection offered for PreK - 12 students across the country regardless of the type of school they attend. This lack of a consistent standard can leave students at schools without comprehensive policies exposed to tobacco use and ETS on school grounds. Colleges and universities housing laboratory schools may be placing their PreK - 12 students at even greater risk of exposure to pro-tobacco influences primarily through older student and faculty/staff role models if they are not governed by comprehensive smoke-free or tobacco-free policies.

It is important to note though that this study did not examine the enforcement of school policies; it strictly focused on determining the current type of policy in place. Due to this fact and the limitations associated with the exploratory nature of this study, no causal relationships can be established. But one can surmise from the study results that more exploration is needed into the role comprehensive smoke-free and tobacco-free policies at college and universities can play in protecting their laboratory school students from pro-tobacco influences and ETS, as well as the need for a consistent standard of protection for all PreK - 12 students regardless of the type of school attended. Information on the barriers to passage of policies and elements assisting in passage of policies identified in this study can aid legislators and school administrators in the policy development process.

### **Call to Action**

The school setting has been recognized as an important social framework that influences the smoking behavior of children and adolescents due to the effects of peer pressure and role modeling of tobacco behaviors by teachers and older students. As a result of the school environment's influence and the risk of exposure to secondhand smoke on school grounds, public school systems have been the focus of federal and state-level legislation designed to create tobacco-free schools. However, primary and secondary schools housed on university and college campuses that do not have comprehensive tobacco policies may be

placing children and adolescents at risk by not affording them the same protection as students at other public schools with more comprehensive policies.

This paper provides the first study of its kind examining tobacco policies of PreK – 12 schools housed on university and colleges campuses. This study serves as a call to action for primary and secondary laboratory school administrators to work with university administrators to ensure the health and safety of children and adolescents who attend school on university campuses throughout the nation and elsewhere.

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