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Title	Enforcement of smoke/tobacco-free policies at public universities in the US
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Publication date	2018-07
Original Citation	Seitz, C. M., Kabir, Z., Greiner, B. A., Davoren, M. P. and McIntyre, S. C. (2018) 'Enforcement of Smoke/Tobacco-free Policies at Public Universities in the US', Tobacco Regulatory Science, 4(4), pp. 22-31. doi: 10.18001/TRS.4.4.3
Type of publication	Article (peer-reviewed)
Link to publisher's version	10.18001/TRS.4.4.3
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Download date	2026-10-12 06:51:36
Item downloaded from	https://hdl.handle.net/10468/10459

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Enforcement of Smoke/Tobacco-free Policies at Public Universities in the US

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Objective: In this study, we examined how smoke/tobacco-free campuses are enforced at 4-year public universities in the United States. **Methods:** During September of 2016, smoke-free and tobacco-free policies of 4-year, public universities were located via the American Nonsmokers' Rights Foundation and the College Navigator websites. Policies were categorized based upon those who were responsible for initially confronting policy violators, those who were responsible for receiving reports of policy violations, methods for reporting a violation, and the types of sanctions for violators. **Results:** Of 167 policies, most (62%) relied on the entire campus community (students, faculty, staff) to provide initial policy enforcement. The majority (59%) did not mention who would receive violation reports, only 15% included a detailed method for reporting a violation, and over one-third did not mention any sanctions for students, employees, or visitors. **Conclusion:** This study highlights the need for more specific and robust policy enforcement at smoke/tobacco-free universities.

Key words: smoking; tobacco; policy; enforce; university
***Tob Regul Sci.*™ 2018;4(4):22-31**
DOI: https://doi.org/10.18001/TRS.4.4.3

The American College Health Association (ACHA) and American Lung Association recommend that universities prohibit indoor and outdoor tobacco use on campus to protect students, faculty, staff, and visitors from the negative health effects of firsthand and secondhand exposure of tobacco.[1,2] Their recommendations are based on empirical research. There is compelling evidence in the literature regarding the association between tobacco-free universities and a decrease in tobacco use and secondhand smoke among the campus communtiy.[3-11]

During the past decade, there has been a dramatic increase in the number of smoke-free and tobacco-free universities internationally. Smoke-free universities prohibit the use of combustible tobacco products, such as conventional cigarettes, anywhere on campus. Tobacco-free universities, in addition, prohibit the use of non-combustible tobacco product, such as chewing tobacco and e-cigarettes anywhere on campus. The Americans for Nonsmokers' Rights Foundation (ANRF) estimates that in 2010, there were only 446 smoke-free universities in the United States (US). By 2016, however, there were over 1400 smoke-free universities.[12] During the past few years, peer-reviewed research also has suggested a trend of smoke-free campuses in other countries, including the United Kingdom,[7] Canada,[13] Spain,[14] Lebanon,[15] Saudi Arabia,[16] Australia,[11,17,18] and New Zealand.[19]

Even though the number of smoke-free and tobacco-free universities are increasing, research suggests that students, faculty, and staff who use tobacco are not always compliant. Violation of

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campus tobacco-free policies have been documented internationally in both qualitative[13,17,20] and quantitative[21-28] research studies. For example, in a US study, researchers observed 529 violations of a tobacco-free campus policy during a 4-week period.[24] In a separate study from Australia, 50 staff and students observed in violation of a tobacco-free policy were interviewed to better understand why people do not comply with the policy. The reasons included: (1) the intentionality of defying a policy that intrudes on self-governance; (2) the inconvenience of walking off campus to smoke; (3) the physiological craving to smoke; (4) the misunderstanding of campus boundaries; and (5) the ability to violate the policy without being seen or without subjecting others to secondhand smoke.[17]

Several experts blame non-compliance on poor enforcement. Faculty, staff, and students, who are both tobacco users and non-users, have voiced concerns about limited enforcement of tobacco-free campus policies.[13,17,19,20,27-31] Even university presidents consider enforcement to be a hindrance towards establishing a tobacco-free campus. Specifically, after surveying 405 presidents of 4-year universities, researchers found that 68% of the presidents considered enforcement decisions (eg, deciding who will enforce the policy, deciding on penalties) to be a major barrier to implementing a tobacco-free policy.[32]

Although the ACHA and other health professionals recommend enforcing campus tobacco-free policies, there is a lack of literature regarding how such policies are enforced, if at all. The ACHA suggests that universities should "plan, maintain, and support effective and timely implementation, administration, and consistent enforcement of all college/university tobacco-related policies, rules, regulations, and practices. Provide a well-publicized reporting system for violations."[33] Health professionals have echoed the ACHA's recommendation;[29,34] however, only one study, conducted by Plaspohl et al,[35] has assessed the number of universities that enforce their tobacco-free policy, finding that a majority (75%) do so. Unfortunately, the study did not specify the methods of enforcement.

Currently, only 4 studies have evaluated certain approaches to enforcement of smoke/tobacco-free campuses. One study evaluated the impact of handing out educational cards to the campus community that contained information about the policy and cessation resources.[22] Three studies evaluated ambassador programs, in which volunteer faculty, staff, and students regularly patrol the campus to inform violators of the policy and politely ask for compliance.[24,36,37] There was support for the effectiveness of each enforcement program, measured as a decline in collected cigarette butts[22,24,36] and observed violators post-implementation compared to pre-implementation.[24,36] This raises the question: Are educational cards and ambassador programs the only ways that universities ensure that people are not using tobacco on campus?

Therefore, the purpose of the study was to address the gap in the literature regarding the "who" and "how" of the issue. Who exactly enforces a smoke-free or tobacco-free campus and how do they do it? Specifically, the study aimed to answer the following research questions: Who is responsible for initially confronting violators and reporting the violation? Who is responsible for receiving violation reports? How are violations reported? How are people sanctioned for violating the policy?

METHODS

Institutional Review Board review preceded conducting the study. Data were collected from available online websites and did not involve contact with people.

The ANRF maintains a list of colleges that have comprehensive smoke-free or tobacco-free policies.[12] During September of 2016, we filtered the list to only include 4-year, public universities. Motst (77%) of the 17.5 million college students in the US attend public universities versus private universities, and most (58%) attend 4-year universities as compared to 2-year universities.[38] As such, we wanted to explore how tobacco control policies are enforced within campus environments that include the largest proportion of university students. In addition, Plaspohl et al's previous research suggests that universities with larger enrollment tend to have weaker enforcement of tobacco-free policies as compared to universities with smaller enrollment.[35]

To determine which universities from the ANRF list were 4-year, public universities, we used the government's National Center for Education Statistics' "College Navigator" website (http://nces.

ed.gov/collegenavigator/).[39] College Navigator allows users to filter universities based on demographics of location, public, private, 4-year, and 2-year. Universities that matched both the ANRF list and the College Navigator search were included in the study.

To access the tobacco policies, we followed the hyperlinks included in the ANRF's list. However, if the hyperlink was broken or did not lead directly to the policy, we attempted to locate the policy by using the search pane of each university's website. We used a combination of the following terms: smoking, smoke, tobacco, policy. If the website did not produce the university's tobacco policy, we used the same search terms on the Human Resources' webpage, policy listing webpage, and the most current student and faculty handbooks. In addition to official policies, we also included any supplemental information to the policy, such as a campus website dedicated to informing the community about the policy. These websites tended to include "frequently asked questions" about the policy, which may have provided additional information about enforcement that may not have been specified in the official policy. If we were unable to locate the tobacco policy, it was excluded from the study, because it was assumed that if members of a university community could not easily locate a tobacco policy on the Internet, then they might not contact university administration to determine the official campus tobacco policy.

Policies were categorized based upon those who were responsible for initially confronting policy violators, including: None Mentioned (no one specifically stated for being responsible), Community (every member of the campus community including faculty, staff, and students), Supervisors (administration and/or supervisors of each building or department), Campus Safety (police and/or other campus security staff), Faculty/staff, and Ambassadors (volunteer faculty, staff, and students who regularly patrol the campus to inform violators of the policy).

Policies were also analyzed for those who were responsible for receiving reports of policy violations, which included: None Mentioned (no one specifically stated to receive violation reports), Appropriate Office (an appropriate office receives the report depending on the violator; student violators are reported to Student Affairs or Dean of Students; employee violators are reported to their supervisor or Human Resources; campus visitors are reported to campus police/safety), and Campus Safety (campus police or campus safety receive violation reports). In addition, policies were analyzed to determine if a detailed method (eg, e-mail address, phone number, website) for reporting a violation was listed in the policy.

Finally, policies were also categorized based upon sanctions for violators who were students, employees (faculty and staff), and campus visitors. Table 1 lists the types of sanctions and their descriptions.

RESULTS

Of the 707 4-year, public universities listed on College Navigator, 169 (24%) were completely smoke-free or tobacco-free, as determined by the ANRF in 2016. Of these, 2 universities were excluded from the study because we were unable to locate their policies from their websites. This resulted in 167 universities for the final study sample. The universities were located in each region (eg, Northeast, Midwest, South, West) of the US.

Enforcement Responsibility

Of the sample, 44 (26%) did not mention the persons responsible for initially enforcing the policy to a violator. The most common (62%) persons responsible for initial enforcement was the entire campus Community, including students, faculty, and staff. From the remaining policies, those responsible for initial enforcement included: a combination of the Community and Campus Safety (N = 7, 4%), Supervisors (N = 4, 2%), Campus Safety (N = 3, 2%), Faculty/staff (N = 2, 1%), a combination of the Community and Supervisors (N = 2, 1%), and a combination of the Community and Ambassadors (N = 2, 1%).

Reporting Violations

Of the policies, 99 (59%) did not mention who would receive violation reports. Of the remaining policies, 35 (21%) stated that an "Appropriate Office" would field reports of policy violation, depending on the status of the violator. For example, student violators were typically reported to Student Affairs or the Dean of Students, and employee vio-

Table 1
Type and Frequency of Sanctions Described in Policies for Violations among Students, Employees, and Visitors

Type of Sanction	Description	Frequency (%)		
		Student	Employee	Visitor
Disciplinary Action	Violators go through the established disciplinary procedures of the university, which may be defined through the student honor code or faculty/staff handbook	84 (50%)	89 (53%)	20 (12%)
None Mentioned	No sanction stated for policy violation	60 (36%)	57 (34%)	90 (54%)
Referral	Violators referred to the appropriate office, such as Student Affairs, Human Resources, or Campus Safety	34 (20%)	37 (22%)	6 (4%)
Fine	Violators must pay a certain monetary fine	34 (20%)	29 (17%)	16 (10%)
Verbal Warning	Violators are warned verbally to comply with the policy	18 (11%)	16 (10%)	9 (5%)
Written Warning	Violators are warned through a written document to comply with the policy	12 (7%)	11 (7%)	3 (2%)
Court Citation	Violators are cited to stand before a court	8 (5%)	8 (5%)	6 (4%)
Dismissal	Violators are fired from their job or expelled as a student	7 (4%)	13 (8%)	0 (0%)
Suspension	Violators are suspended from campus for a period of time	7 (4%)	6 (4%)	0 (0%)
Educational Meeting	Violators meet with appropriate office to be educated about the policy	5 (3%)	3 (2%)	0 (0%)
Educational Class	Violators must attend educational and/or cessation classes about tobacco use, policies, and/or cessation	4 (2%)	3 (2%)	0 (0%)
Probation	Violators are placed on a probationary period	4 (2%)	1 (<1%)	0 (0%)
Community Service	Violators perform acts of service to the community	3 (2%)	1 (<1%)	0 (0%)
Homework Assignment	Violators must complete an educational assignment about the harms of smoking	2 (1%)	0 (0%)	0 (0%)
Counseling Session	Violators must attend a session with a counselor	1 (<1%)	0 (0%)	0 (0%)
Leave	Violators are told to leave the campus	1 (<1%)	1 (<1%)	43 (26%)
Written Reprimand	Violators receive a formal written reprimand	0 (0%)	2 (1%)	0 (0%)
Banishment	Violators are permanently banned from campus	0 (0%)	0 (0%)	7 (4%)
Arrest	Violators may be subject to criminal arrest from police	0 (0%)	0 (0%)	5 (3%)

lators were commonly reported to their supervisor or Human Resources. There were also 22 (13%) policies that stated Campus Safety would receive violation reports and 11 (7%) policies placed both Appropriate Office and Campus Safety in charge of receiving violation reports.

A total of 25 policies (15%) included a detailed method for reporting a violation. Of these, 15 listed a phone number and/or e-mail of either an Appropriate Office or Campus Safety, and 10 provided a Web-based form that allowed members of the campus community to report violations. Half of the Web-based forms were anonymous. Common items on the forms included the location, date, and time of the observed violation, number of violators, status of violators (eg, faculty, staff, student, visitor), names of violators, and an open description of the violation that took place.

Sanctions

More than one-third of policies (36%) did not mention any sanctions for students; in addition, policies did not mention sanctions for employees (34%) or visitors (54%). However, of the policies that did include this information, the most common sanctions for students and employees included Disciplinary Action, Referral, Fine, Verbal Warning, and Written Warning. For visitors, the most common sanctions included Leave, Disciplinary Action, and Fine (Table 1).

Table 2
Description of Universities' Progressive Enforcement of Policy Violations

University	1st Violation	2nd Violation	3rd Violation	4th Violation	5th Violation	6thViolation
Arkansas State University	Written warning by campus police; Report sent to Student Affairs or supervisor	Citation to appear in District Court; Report sent to Student Affairs or supervisor	NA	NA	NA	NA
Arkansas Tech University	Written warning to students, employees, and visitors	Six months probation for student; Written reprimand placed in folder for employee; Visitor banned from campus	$50 fine for student and employees	NA	NA	NA
Chicago State University	Warning by campus police to students and employees	$25 fine for students and emplyoyees	$50 fine for student and employees	Discipline handled by Judicial Affairs for students and Human Resources for employees	NA	NA
Lander University	$15 fine for students and employees	$20 fine for students and employees; Mandatory counseloing session for student; Reminder of assstance program for employee	$25 fine for students and employees; Mandatory counseloing session for student; Reminder of assstance program for employee	Student must stand before Judicial Committee; Employee begins discipline process	NA	NA
Lincoln Univesity	Educational meeting with student or employee about healthy decisions regarding smoking	Verbal and written warning for employee; Research assignment and mandatory training on tobacco harms for student	$50 fine for student and employee	NA	NA	NA
Louisiana State University at Alexandria	Verbal warning to students, employees, and visitors	$10 fine to students and employees (and increase of $10 increments with each subsequent violation); Visitors asked to leave campus	NA	NA	NA	NA

(continued on next page)

Regarding fines, there were 11 policies for students, 9 policies for employees, and 5 policies for visitors that simply mentioned the possibility of receiving a fine in general, without listing the exact fine amount. However, there were 23 policies for students, 20 policies for employees, and 11 policies for visitors that described the exact amount of the fines, all ranging from $10 to $500, with a median fine of $50.

Finally, there were 14 policies that included a progressive method of sanctioning (Table 2). These policies progressed in sanction intensity with each

Table 2 (continued)
Description of Universities' Progressive Enforcement of Policy Violations

University	1st Violation	2nd Violation	3rd Violation	4th Violation	5th Violation	6thViolation
Mayville State University	Student is rerequired to meet with the administrator after course completion	Student receives a written reprimand and $100 fine	Student receives further disciplanary action, which may include fines, probation, and suspension	NA	NA	NA
Southern University at New Orleans	Verbal warning to students and employees	Disciplinary probation for student; Written warning for employee	Potential dismissal for student and employee	NA	NA	NA
University of Illinois at Chicago	Warning	Final warning	$50 fine (waived after completion of educational course)	$50 fine	$75 fine	$100 fine
University of Illinois at Urbana-Champaign	Written warning	$25 fine (waived after completion of video educational program)	$50 fine	$100 fine	NA	NA
University of Maine at Augusta	Warning to student	Warning to student	$25 fine or 2 hours community service for student	$50 fine or 4 hours community service for student	Disciplinary action, including possible suspension of student	NA
University of Massachusets Amherst	Educational meeting with employee	Written warning to employee	One day suspension of employee	More than one day suspension of employee	NA	NA
University of Montana	Educational meeting with student or employee about the policy	E-mail sent to student or employee about the policy	Task Force makes recommendations to administration on a case-by-base basis	NA	NA	NA
University of Oklahoma-Health Sciences Center	Students, employees, and visitors given a warning and reminder of the policy	Students, employees, and visitors given a $10 fine	Students, employees, and visitors given a $50 fine	NA	NA	NA

subsequent violation. All of these policies began with a low level of punishment for the first violation (eg, verbal warning, written warning, $15 fine) and then progressed in a range of 2 to 5 additional sanctions of increased disciplinary action (eg, mandatory counseling session, probation, suspension, $25 fine, $50 fine).

DISCUSSION

This study was timely given the growing popularity of smoke/tobacco-free university policies, the major issue of non-compliance and the lack of literature specifying enforcement strategies for smoke/tobacco-free campuses. Our paper presented the processes used by smoke/tobacco-free universities for confronting violators, reporting/receiving violations, and sanctioning violators. Although one-third of the universities did not list any sanctions for policy violation, and most placed the responsibility of enforcement on the entire campus community, other universities embraced a variety of sanctions and progressive disciplinary actions. Our findings have practical implications for college

administration designing a smoke/tobacco-free campus policy. Specifically, the findings can act as a resource for which enforcement methods are currently being used or not used by other colleges.

Most of the policies placed the responsibility of enforcement almost entirely on the community. The literature indicates that, in general, people are not assertive enough to ask a smoker to extinguish a cigarette.[40-43] Perhaps most telling is that staff at smoke-free hospitals have reported fear of confronting policy violators.[44,45] If staff at a hospital, whose focus is improving the health and wellbeing of others, will not enforce a smoke-free policy, then expecting all students, faculty, and staff at a university to confront tobacco users may be unrealistic.

Regardless of assertiveness, only 25 policies specifically listed how people could report a violation (eg, phone number, e-mail, Web-based report). Assuming that an entire university community was bold enough to confront a policy violator, how could they report a violation if they do not know who to contact?

Unfortunately, our study found that many of the smoke-free and tobacco-free policies also lacked "teeth" (ie, sanctions). Specifically, one-third or more of the colleges did not list any sanctions for students, employees, or visitors. This raises Fennell's well-cited question: "Should college campuses become tobacco-free without an enforcement plan?"[29] Several studies from the US have indicated that large percentages of students and employees want sanctions, with most preferring warnings/reminders and fines[18,28,40,46,47] The perceived need for strict campus-based sanctions is also reflected among campuses located in other countries.[13,15,16,18,19] As such, smoke-free or tobacco-free policies should include a component regarding enforcement with clear sanctions.

It is interesting that educational interventions were not used as a common sanction. Only 9 policies (7%) included an educational meeting, educational class, or homework assignment. In comparison, it is commonplace in colleges to mandate that student violators of campus alcohol policies complete an educational class on alcohol abuse.[48] Perhaps universities should view tobacco policy violations as an opportunity to encourage cessation and refer violators to appropriate service or resources, as opposed to merely fining or warning a violator. For instance, a random survey of students and staff at a large university in Australia found that of 969 participants, 32% reported wanting sanctions that included education for smoking cessation.[18]

It is also worth noting that only 14 universities had a progressive process of sanctioning. Nicotine is addictive.[49] Research indicates that smokers need to make several quit attempts before succeeding in becoming a non-smoker.[50] By adopting a progressive style of sanctioning, universities may provide addicted tobacco users with some much-needed opportunity to adapt to a tobacco-free policy.

IMPLICATIONS FOR TOBACCO REGULATION

There are important implications from our study. First, our findings revealed a wide range of measures used by the universities to ensure compliance with tobacco-free policies; however, there is a need for a more robust scientific evidence base for the best form of enforcement. To our knowledge, only ambassador programs and the handing out of reminder cards for observed violators have been researched in relation to effectiveness, with some evidence of success of increased compliance.[22,24,36,37] There is a need for researchers to make a systematic comparison of the different forms of enforcement and compliance winning strategies including the "soft" approaches (eg, warnings, educational classes) and "hard" approaches (eg, fines, disciplinary action), as well as investigate the benefits of progressive sanctions. In addition, given that tobacco-free campuses are becoming more popular in other parts of the world, and because most of the previous research about compliance/enforcement was conducted in the US and Canada, additional international research is needed to determine whether barriers for implementation of policies and compliance are similar to universities in North America.

Second, administrators at smoke/tobacco-free colleges should consider updating their policies. It was disheartening that one-third of the policies in the study did not specify any sanctions for violations and that over 60% of the policies relied on the entire campus community to enforce the policy. These policies can be improved by including new text that is clear and explicit in terms of this study's research questions. We suggest that univer-

sity administrators consider the following items for policy reform: (1) specify who is responsible for enforcing the policy; (2) place responsibility of enforcement beyond the entire community to include other campus authorities (eg, ambassadors, campus safety); (3) provide contact information (eg, e-mail, phone number) of those responsible for fielding violation reports, or provide other mediums for violation reports (ie, anonymous online portal); and (4) include specific sanctions (eg, soft, hard, progressive, educational) for policy violations.

Third, administrators at smoke/tobacco-free colleges may want to consider a combination of community-based enforcement but without sanctions and rely on change of norms and denormalization of tobacco use over time. Fallin-Bennett et al[51] compared the various enforcement strategies of 16 California universities with differing tobacco policies. After interviewing 68 key informants, the researchers suggested using a "carrot and stick" approach, in which all community members enforce the policy by raising social norms of a smoke-free area, as well as relying on campus safety or supervisors for more formal enforcement. They found that due to non-compliance, universities that solely relied on community-based enforcement eventually felt the need to transition to a more formalized enforcement with sanctions.

Finally, enforcement of smoke/tobacco-free policies also should be formed on each university's distinctive non-compliance data. Suppose that non-compliance is not a major issue at a smoke/tobacco-free campus, then it could be assumed that only using community-based enforcement without sanctions would be warranted. For example, Seo et al's[10] longitudinal analysis found improvements of students' smoking behavior/attitudes before and after a smoke-free policy was implemented. The improvements on campus were documented, even though the policy was not actively enforced. On the other hand, campuses experiencing non-compliance, may want to use enforcement strategies that we recommended previously in this paper. There are many tools in the published literature that can be used to measure compliance and inform enforcement needs. These include questionnaires,[26] observational assessment,[21,23,24,52] and the mapping of littered cigarette butt "hot spot" areas.[24,53]

Limitations

There are limitations that need to be considered when interpreting the results of the study. First, we only included 4-year public universities. Enforcement strategies may differ in private universities. Second, although we were able to locate all but 2 of the smoke/tobacco-free policies of the 169 eligible universities, we may have missed recent updates of policies that were not available online. In addition, because all policy information was collected through the Internet, it is possible that policies may have existed or that retrieved policies included enforced elements that were not documented online.

Human Subjects Approval Statement

The Institutional Review Board (IRB) of Appalachian State University considered the study to be non-human subjects research, and therefore, exempt from full IRB review.

Conflict of Interest Disclosure Statement

All authors of this article declare they have no conflicts of interest.

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