12-18-2016

The Carrot and the Stick? Strategies to Improve Compliance with College Campus Tobacco Policies

Amanda Fallin-Bennett
University of Kentucky, amanda.fallin@uky.edu

Maria Roditis
Stanford University

Stanton A. Glantz
University of California - San Francisco

Right click to open a feedback form in a new tab to let us know how this document benefits you.

Follow this and additional works at: https://uknowledge.uky.edu/nursing_facpub

Part of the Higher Education Commons, Public Affairs, Public Policy and Public Administration Commons, and the Public Health Commons

The Carrot and the Stick? Strategies to Improve Compliance with College Campus Tobacco Policies

The carrot and the stick? Strategies to improve compliance with college campus tobacco policies

Amanda Fallin-Bennett, PhD, RN[a], **Maria Roditis, PhD, MPH**[b], and **Stanton A. Glantz, PhD**[c]

[a]Tobacco Policy Research Program, University of Kentucky College of Nursing, Lexington, Kentucky, USA

[b]Division of Adolescent Medicine, Stanford University, Stanford, California, USA

[c]Center for Tobacco Control Research and Education, University of California San Francisco, San Francisco, California, USA

Abstract

Objective—Tobacco-free policies are being rapidly adopted nationwide, yet compliance with these policies remains a challenge. This study explored college campus key informants' experiences with tobacco policies, and their perceived benefits, drawbacks, and outcomes.

Participants—The sample for this study was 68 key informants representing 16 different California universities with varying tobacco policies (no smoking indoors and within 20 feet of entrances, designated smoking areas, 100% smoke-free, and 100% tobacco-free).

Methods—Qualitative, descriptive study. Semistructured interviews were transcribed verbatim and analyzed using content analysis.

Results—Strategies to improve compliance ranged from a social approach to a heavy focus on punitive enforcement. Key informants from campuses using a social approach alone reported barriers to improving compliance, including a perceived lack of efficacy of the approach. However, these campuses found it challenging to incorporate enforcement through campus police or security.

Conclusions—College campus decision makers should explore using a combined approach (social approach as well as formal enforcement), with enforcement primarily the responsibility of nonpolice university channels (eg, Student Affairs, employee supervisors).

Keywords

College policy; policy compliance; tobacco use; young adults

Smoking and exposure to secondhand smoke cause heart and respiratory disease and many types of cancers.[1] The smoking prevalence is higher among young adults than any other age group, and nearly all adult daily smokers began smoking before the age of 25.[2] Results from the 2015 National College Health Assessment showed that 16.8% of participants had ever used cigarettes, with 11% reporting use in the last 30 days. In addition, 27.4% had used hookah, with 6.9% having used hookah in the last 30 days.[3]

Young adulthood is a vulnerable age for substance use initiation, including cigarettes and other tobacco products.[4,5] This developmental period is characterized by major life changes, and many young adults transition out of their parents' home for the first time. Colleges are increasingly being seen as places to experiment with tobacco use and social smoking. In addition, the major cigarette companies have agreed to suspend most marketing directed primarily at individuals under age 18,[6] which has led the tobacco companies to target young adults for tobacco advertising and promotion.[7]

College campus tobacco control interventions that prevent initiation and promote smoking cessation are needed to address this major public health issue. College campus smoke- and tobacco-free policies are being rapidly adopted nationwide.[8] These policies have been associated with reduced smoking rates[9] and exposure to secondhand smoke,[10] less cigarette butt litter,[11,12] and lower reported intention to smoke on campus.[10] Most faculty, students,[9] administrators,[13] and college and 'university presidents support campus tobacco-free policies.[14]

However, simply adopting college campus tobacco-free policies is not enough; successful implementation is necessary to achieve the desired health outcomes. Previous research shows that many college campus written tobacco policies do not have clear statements on policy enforcement.[15] In addition, results of previous studies indicate that achieving compliance with campus tobacco policies is a challenge.[16–19] For example, Baillie and colleagues[19] explored student perceptions of smoke-free campus policies in Canada, and participants reported the policies had a minimal impact on their smoking behaviors. One individual stated, "It's a total joke—there are no consequences. You can really smoke where you like."

Campus tobacco-free policies are a recent policy trend; thus, best practices are not well established. Strategies have been implemented to improve compliance, including awareness campaigns[17,20] and Tobacco-free Ambassador Programs.[21,22] Although there are promising interventions to improve tobacco-free policy compliance, there is a lack of research on the predominant enforcement methods selected across campuses, particularly with varying types of tobacco policies (eg, designated smoking areas versus tobacco-free policies). In addition, there is a lack of knowledge on why various enforcement methods are selected or a comparison of outcomes. This study extends the current literature by exploring how college campus representatives conceptualize and select enforcement strategies, as well as the perceived benefits, drawbacks, and outcomes of these strategies.

Methods

Sample

The sample for this study ($N = 68$) represented 16 different public, 4-year California universities with varying tobacco policies (no smoking indoors and within 20 feet of entrances, designated smoking areas, 100% smoke-free, and 100% tobacco-free; Table 1). California state law prohibits smoking indoors and within 20 feet of entrances and windows on college campuses. Campuses were selected to ensure diversity in student body size (range: 3,000–40,000 students) and region (northern, central, and southern California) to capture different social, political, and cultural environments. These universities' policies were either adopted by individual campuses or as part of a university system-wide policy. Participants were selected that represented policy influencers at each campus, including formal members of the campus tobacco task force charged with policy formulation and implementation, as well as other key players highlighted by the American College Health Association (ACHA)[23] (representatives of health and counseling services, residence life/ housing, campus police, human resources, and facilities/maintenance, and other faculty, staff, and students in campus leadership roles).

Measures

A semistructured interview guide was developed to assess elements of adoption and implementation of campus tobacco policies. Based on ACHA guidelines,[23] the interview guide included questions on the development of policy wording, policy communication strategies, campus tobacco prevention and cessation programs, campus collaborations with local, state, and national public health groups, development of a tobacco task force, and enforcement strategies. This study reports the findings relevant to enforcement. Example probes were (1) "Describe tobacco policy enforcement on your campus." (2) "Describe overall compliance with the policy." and (3) "Describe the biggest challenge you have faced with adoption and implementation of your campus tobacco policy."

Procedures

Institutional review board approval was obtained from the University of California prior to initiating data collection. Potential interviewees at each campus were identified through Google searches for individuals serving in relevant campus positions, as well as referrals from knowledgeable tobacco control advocates (eg, California Youth Advocacy Network). We also used a snowball sampling technique, asking respondents to refer other individuals involved with the campus policy. Potential key informants were also identified through campus visits (eg, student organization representatives tabling in a central campus location or campus affiliates smoking on campus). In the extensive interview process, participants were asked about a number of different aspects of tobacco-free policy, such as social norms around smoking, e-cigarettes, and tobacco-free policy adoption. Enforcement was one of the main themes that emerged. Interviews were conducted by investigators (A.F. and M.R.) with extensive experience conducting qualitative interviews. Early interviews were conducted together, and then A.F. and M.R. each led approximately half of the remaining interviews. They were conducted in person where possible or over the phone and lasted approximately

30 minutes to 1 hour. Each interview was recorded, with permission from the participant, and professionally transcribed.

Data analysis

A content analysis of transcripts was conducted using MAXQDA (VERBI GmbH, Berlin, Germany). The code-book was created based on the data, using an inductive approach. Under "enforcement" we had 6 subcodes (punitive approach—further subcode of involvement of security; social norms approach—further subcode of approaching a smoker, compliance/noncompliance, and campus sentiment). Codes were affixed to the data and then used to identify themes, patterns, and relationships. A subset of 5 transcripts were reviewed thoroughly by 2 researchers (A.F. and M.R.), and codes were added to reflect unexpected themes and patterns that emerged from the data. The researchers analyzed a subset of another 5 transcripts separately, affixing and refining codes consistent with their identification in the data. Percent agreement between coders was .80, well within the acceptable rates of consensus. A.F. and M.R. discussed conflicting coding and refined the definitions of codes, and then the remaining transcripts were analyzed independently by A.F. or M.R.

Results

Policy compliance

Policy noncompliance emerged as a major implementation challenge. According to a faculty member from a tobacco-free campus, "Clearly, the smoking has diminished … but there definitely are still people who smoke on campus … the hardest thing to do is to figure out what to do next, how to get the policy 100 percent compliance." Several participants described individuals continuing to smoke on campus. A staff member at a tobacco-free campus stated, "There are signs on campus … there will be a guy smoking right next to it." A staff member at an institution that prohibited smoking within 20 feet of buildings echoed the sentiment, "In our building, we have a courtyard, and then in that courtyard we have several signs that say, 'No smoking within 20 feet.' We still have people smoke right in front of them."

Enforcement approaches

Written policies range from including (1) no provision for enforcement; (2) enforcement through standard channels, including Student Affairs, an employee's supervisor, or a visitor's host department; and (3) a citation or fine, issued by campus security or police. However, key informants described that in practice, they were using or considering 1 of 2 strategies: (1) a social approach designed to raise awareness about the policy and change the social norms on campus around smoking, primarily relying on participation from campus community members as a whole; and (2) formal enforcement through campus police or security. Respondents also described problems and barriers with relying on the campus community as a whole and on-campus security to have primary enforcement roles.

The social approach

The social approach (also referred to as the "social normative approach") encourages the college or university community to raise awareness about the policy and promote a tobacco-free lifestyle. Many participants described the purpose of the social approach as a university community effort to raise awareness about the policy and change social norms on campus around tobacco use, which would prompt policy compliance. This was frequently operationalized as putting up signs, providing educational materials, and training members of the campus community to approach individuals smoking on campus.

Most participants initially used the social approach alone and treated the social approach and formal enforcement as mutually exclusive alternatives. One student on a tobacco-free campus explained, "We decided not to go to the citation side of the policy. We don't want to cite, like fine people or issue citations to people because we think education and creating community will be better than just punishing people." Another student on a tobacco-free campus illustrated the perceived dichotomy between the 2 methods of enforcement: "Some of the things that I think we've really talked about is how could you in a sensitive way approach someone who's smoking about the fact that the policy is no smoking on this campus and try not to be confrontational? We were very supportive of the idea of not doing penalties or citations, those kinds of things, but providing education." Another faculty member on a tobacco-free campus described, "Some people really want these people arrested, and in the stockades, frankly. Others, [name omitted] and I, have taken the point of view that we still need to educate, educate, educate people through a change in social norms." According to a member at a campus that was in the process of implementing a smoke-free policy, "Through peer pressure … it will make the change. We're not going to be issuing tickets or anything like that." Another staff member at that campus stated, "It's not going to be like you're driving fast and you're going to get a speeding ticket … it's going to be more education and training on our campus. And that's how we intend to enforce it, is through peer pressure, education programs."

Methods to enhance the social approach—Campus representatives have developed creative methods to enhance the social approach. To improve confidence and skill of campus community members for approaching an individual smoking on campus, tobacco task force members on one campus developed and disseminated "AIR" (approach, inform, and refer) to campus community members, which is a training including tips for talking with on-campus smokers and tobacco users. The training included scripts and videos demonstrating various scenarios, including a student approaching another campus community member, a faculty member explaining the policy to campus vendors, and a supervisor explaining the policy to an employee. A staff member at a tobacco-free campus described the AIR approach, "So you approach someone if you feel comfortable, if you feel safe, and then you inform them of the school's policy, and then you refer them to cessation resources or even information about the policy … it's obviously on a volunteer kind of basis, but if you wanted to speak to someone about smoking on campus—that's kind of approach that they're advocating."

Another staff member on a tobacco-free campus described tracking "hot spots," or areas of campus where individuals continue smoking. "We've tracked this (non-compliance) with

little sort of hotspot maps all over campus, and we meet regularly. Some student volunteers have gone around and documented where the butts were appearing and where clusters of people are smoking still … over time we'll have security or various people rove around to sort of shine the light on smokers, put up signs there, clean up their butts, and you know, eventually that group either stops or moves somewhere else."

Another faculty member at a tobacco-free campus recommended selective enforcement to increase compliance with the policy. "Perhaps it's reasonable to think that people would give up that habit just because the policy changes, but research just clearly doesn't warrant that kind of perspective … I think ultimately we'll need to do some selective enforcement and try to get some media coverage for it."

Issues with implementation of the social approach—Key informants noted several issues when relying on the social approach, particularly around the issue of asking the campus community as a whole to approach individuals smoking on campus. Participants reported a feeling of reluctance or intimidation about approaching an individual smoking on campus. One faculty member on a smoke-free campus stated, "It [not approaching individuals on campus] makes me feel like a hypocrite … I should be an advocate for the students. But at the same time, I don't know how to approach a stranger … it's a courageous thing that I just have not been able to get the courage to do. And so, if I can't do it as a faculty member… this [tobacco control] is my research area—I don't know how our students are supposed to do it [approach individuals smoking on campus." A student at a smoke-free campus explained, "I think most of the time I … wimp out. … I'm one of those people that, like, starts coughing loudly."

Another barrier identified was the fear of conflict stemming from approaching an individual smoking on campus. A staff member at a tobacco-free campus described this concern, "Do we really want students accosting and confronting faculty and staff members about their smoking? Do we want students tackling each other about this?" Participants also relayed accounts of confrontations that occurred. An example account from a faculty member at a tobacco-free campus was "A townsperson, an adult … was very obnoxious and resistant. Basically told him to go 'f himself.'"

Participants also reported that the social approach led individuals to selectively approach individuals smoking on campus based on their rank or authority. One faculty member from a smoke-free campus described, "I usually pick on students, because I'm a gray haired professor." Another faculty member on a smoke-free campus explained, "As I approached, these folks were probably in their forties or fifties … I was like, 'What if they are, you know, tenured faculty?' It's just all of these scenarios going through my head. So, I was like, Oh, I'm not going to say anything.'" A staff member at a tobacco-free campus echoed this sentiment, "If you have a visiting professor who lights up, is a student going to tell them, 'Actually you can't do that here?'"

Others reported a lack of full buy-in from the campus community, which led respondents to feel an unfair burden of responsibility. One staff member at a tobacco-free campus described being designated to approach individuals smoking on campus as part of his job. "So if I'm

the guy that's supposed to be doing this enforcement and I'm not being supported, how effective if that going to be in the long run? I mean, most recently, I'm starting to think, 'Why am I the only person out here doing this? Like why are there only five of us doing this, when it's supposed to be this campus community?" This individual went on to explain feeling that the process of approaching individuals smoking on campus without a method for formal enforcement undermined his authority. One staff member at a tobacco-free campus described, "If I walk up to the same person five times and say, 'Remember, you and I had this conversation last week? You're not supposed to be smoking here.' 'Yeah, whatever!' [sarcasm] And that's happened a couple of times. So that makes us look like idiots, and … doesn't make me feel like anyone has my back." Another staff member at a tobacco-free campus stated, "I can … give them a card and tell them that, 'Remember, we're a non-smoking environment.' But when I see them for the second and the third and the fourth time, it really dilutes my authority, as a leader and a manager, not to be able to take further action."

There was also a perceived lack of efficacy of the social strategy. One staff member at a tobacco-free campus explained, "When I see a smoker or someone smoking on campus, I will go up and explain the policy, that this a smoke-free campus, and I would say its kind of 50–50 in terms of people's receptiveness in listening to me." Another faculty member at a smoke-free campus explained, "At first I started a conversation with every smoker I encountered. I'm not doing it anymore because it has not been very successful, my own personal efforts." Another staff member at a tobacco-free campus stated, "I think there was hope amongst most of the community that the signs would be enough and people with this powerful addiction would simply be like, 'Oh, January 2nd. I guess I'm not smoking on campus anymore.'"

Implementation of the formal enforcement approach

Some campus advocates were reluctant to use formal enforcement for the following reasons: concern over excessive or harsh punishment (eg, expensive fines), the legality of using the police to enforce a college campus policy, and the lack of resources available for enforcement. Many participants associated formal enforcement with involvement of the police (versus typical campus channels, such as Student Affairs). Barriers and drawbacks to police involvement in policy enforcement were a major contributor to the decision not to pursue formal enforcement. Perceived barriers to using campus security or law enforcement to enforce the policy included confusion about the ability of police to enforce a campus policy, the issue's low priority for campus police, as well as inadequate resources.

With regard to formal enforcement, there was concern over excessive punishment. One faculty member at a smoke-free campus stated, "For a lot of our students, a significant monetary fine could really disrupt their finances for the month." A staff member on a tobacco-free campus described difficulty in selecting an enforcement method that led to high policy compliance without harsh punishment. "We decided we had to have some enforcement beyond just education and information, without being, we're going to lock you up and send you to jail."

There was also confusion over whether or not campus police could enforce the tobacco policies. In 2011, Assembly Bill 795 was passed, which gave colleges within the California state systems the authority to cite and fine individuals who violated the tobacco policies. However, one staff member at a tobacco-free campus explained there remained an involved process to begin issuing fines: "Just because a law is passed and the code goes into the California code, to enforce it at the local jurisdiction, the police have to inform the local judicial jurisdiction that you're going to start enforcing this. And so what this means is … the city's general counsel has to write formal letters notifying the court, 'We will now being enforcing 'this' and 'this.' 'This' will be the fine … there's a process."

Additionally, tobacco-free policy enforcement was a low priority for campus police. One staff member on a tobacco-free campus stated, "Our police officers have real crimes to investigate." A staff member on a campus with designated smoking areas stated, "We have a police force on campus that runs like a real police force. They have important things to be doing … it sometimes falls lower on the priority list than the armed robbery or whatever else they might be responding to." Another student on a campus where smoking was prohibited 20 feet from buildings reported that enforcement of the policy was dedicated to only a few officers. "People just smoked and then enforcement basically was not there … there were only two police offers in charge of enforcement for the whole campus. So that wasn't enough. I guess people kind of took it as, 'Yeah, I can smoke.'"

Study participants also reported a lack of resources allocated to this issue. One staff member on a tobacco-free campus stated, "We had discussed budgets … and the representative board, the enforcement committee, and the police department was pretty confident in saying that we didn't want to use a lot of resources. So they weren"t confident that we could get resources to kind of sustain an enforcement policy as far as getting police involved."

Transition from social approach to formal enforcement

All 16 campuses initially started with a social enforcement approach. (Nine campuses were mandated to begin with a social approach without formal enforcement as part of a top-down mandate that a university system adopt a tobacco-free policy). Based on barriers to the use of a social approach alone, 3 campuses transitioned to formal enforcement, and key informants at other campuses reported considering this transition.

One faculty member at a tobacco-free campus described their rationale to transition from a social approach to formal enforcement, "Obviously, it'd be ideal if the social normative approach worked, but we've learned, at least in alcohol prevention literature … it typically requires the carrot and stick approach." A staff member on a campus with designated smoking areas stated, "They tried at first without enforcement. That we're just relying on people's willingness to be part of a community, and to accept the rules that go along with being a part of the community … once they realized that wasn't working, they were willing to put some teeth into it."

Comment

This qualitative study describes decisions around enforcement strategies, and the perceived benefits, drawbacks, and outcomes of each. In the current study, many participants reported selecting either a social norms approach or a formal enforcement approach. However, given lessons learned from the smoke-free community policy literature as well as the college campus alcohol prevention literature, it is clear that the use of both approaches leads to high levels of policy compliance.

Lessons learned from other tobacco control successes

Tobacco control has been a major public health success, and smoking rates have dramatically declined since the 1960s. Much of this success can be attributed to tobacco control policies, including smoke-free community policies (eg, smoke-free bar and restaurant policies). Although the primary purpose of these policies was to reduce secondhand smoke exposure, these policies radically shifted the social norms around smoking. Since the 1970s, laws and social norms have changed from permitting smoking nearly everywhere (including airplanes, elevators, and hospitals), to nonsmoking areas, and then to smoke-free community policies (including smoke-free bars, restaurants, and workplaces).

Given the long-standing success of smoke-free community laws (eg, smoke-free restaurant and bar laws), campus tobacco-free policy advocates should consider using best practices for community smoke-free law enforcement. Successful implementation of community smoke-free laws involves both education and active enforcement as complementary strategies.[24] Education and signage are important for building awareness and improve compliance with smoke-free workplace policies.[25,26] Smoke-free laws typically also assign responsibility for enforcement to a specific government agency. These laws are generally enforced by local health departments, and if establishments do not come into compliance after education and warnings, policy infractions often lead to citations and fines. Although there is a process for formal enforcement after the educational period, punitive enforcement is rarely needed.[26,27] Skeer and colleagues documented high levels of compliance within 3 months of the implementation of Boston's smoke-free law. The percentage of bars with observed smokers dropped from 100% to 2.5%. This policy was implemented through a combination of raising awareness (educational campaigns and required signage) as well as formal enforcement (a graduated scale of fines for establishments with repeated violations). However, in the 3 months immediately following implementation, only 6 formal citations were issued.[27]

Participants in our study reported concern over a lack of resources for formal enforcement. However, community smoke-free laws with both social norms and formal enforcement provisions lead to high levels of compliance with relatively few citations needed.

Lessons learned from alcohol prevention programs

Results of this study indicated that campus advocates perceived social and formal approaches as distinct, separate options. However, this is not supported by the literature on the prevention of college drinking behavior. The complex relationship between enforcement,

social norms, and behavior change is also illustrated through the example of underage drinking. Lipperman-Kreda and colleagues found that perceived enforcement of underage drinking restrictions was linked to a decrease in the perceived availability of alcohol and drinking by peers. Perceived enforcement of underage drinking laws also was associated with an increase personal disapproval of alcohol use and perceived parental disapproval of underage use of alcohol. These beliefs and perceptions were directly linked to underage drinking behaviors.[28]

Another example of the interrelatedness of social norms, policy enforcement, and behavior change is evident in campaigns to reduce drunk driving. Mothers Against Drunk Driving (MADD), a nonprofit grassroots campaign, has been credited with changing social norms around the acceptability of impaired driving. This change in social norms has been linked to increasing enforcement and penalties associated with the practice, as well as a decrease in impaired driving.[29]

Alcohol prevention on college campus also provides important insight into the utility of multipronged individual and environmental level strategies.[30,31] According to Ringwalt and colleagues, sound policy and enforcement strategies for preventing alcohol use on college campuses should include a variety of both educational and disciplinary components such as providing new students information about the policy while also increasing student disciplinary sanctions.[32] Additionally, results from the Harvard School of Public Health College Alcohol Study highlight the relationship between these different strategies.[33] Between 1993 and 2001, while rates of alcohol-related sanctions went down, rates of fines and other disciplinary actions increased. At the same time, there was also an increase in perceived likelihood of being caught engaging in underage drinking. Additionally, it is also important to recognize that approaches utilizing both social norms and penalties can take many forms. For example, college alcohol prevention policies often dictate that students who are caught using must attend an alcohol program.[34]

These examples from the college alcohol prevention literature suggest that smoking prevention policies should also utilize an approach that incorporates both social and formal enforcement. Key informants in our study described the social approach and formal enforcement as 2 completely separate concepts, and efforts need to be made to ensure that key stakeholders of these policies are made aware of and recognize the utility of a multipronged approach.

Implications

The results from this current study have a number of implications for how to construct and enforce tobacco-free policies on college campuses. First, it is important to discuss with key stakeholders during the early stages of policy creation how the policy will be enforced. Although enforcement may feel like the final phase of policy implementation, this is often one of the most frustrating and complicated aspects of policy development and thus needs to be addressed early on. Additionally, there is a need to inform key stakeholders and decision makers regarding the range of enforcement strategies available as well as the utility of using a variety of approaches for enforcement. The use of both the social and formal enforcement may improve the campus community's willingness to participate in raising awareness about

the tobacco-free policy. Similar to a creative approach described in this study, the University of Montana trained students in 2015 to participate in an Ambassador program to approach policy violators.[22] Students who participated in this program had a positive experience, but they also reported feeling uncomfortable and questioning their own level of authority.

It is also important that key stakeholders and policy makers go into the creation of enforcement strategies with a clear idea of the challenges they will face. This study shows that a major roadblock to effective social norms enforcement is the fact that individuals may feel uncomfortable with the often used model of community enforcement in which it is up to community members to inform people about the policy. A study conducted in Indonesia[35] similarly demonstrated that although individuals may report support for smoke-free policies and a willingness to ask individuals to refrain from smoking in areas where it is restricted, they continue to be reluctant to approach community leaders. The study's authors suggest that support from government officials and increased policy enforcement might also empower community members to approach individuals smoking in restricted areas.[35]

When forming policies, formal enforcement officials should be included to discuss their role in the policy and the possibility of collaboration. At the same time, policy makers should be aware of all the possible channels available for punitive enforcement, including the use of other university partners or even novel enforcement strategies such as mandatory participation in prevention classes after a violation. In the present study, one of the biggest barriers that participants reported in incorporating formal enforcement was related to issues surrounding campus police involvement.

Lessons learned from implementation of smoke-free community policy indicate that enforcement should not be typically not handled by police. Smoke-free community policies are typically enforcement through an entity such as the health department. This suggests that colleges may have more success in reducing smoking on campus if tobacco-free campus policies included a formal enforcement piece, and explored enforcement through nonpolice channels.

Limitations

Data were collected only on campuses in California, a state that has historically had progressive tobacco control policies and low smoking rates. In addition, data were collected only on public, 4-year universities, which limits generalizability to private or 2-year institutions. Therefore, future research should focus on rigorously evaluating campus smoke-free policies in a broader range of settings. There is also the potential for social desirability bias among respondents, although they were informed that their responses would be confidential and only reported in aggregate. Rigorous studies are needed to assess what factors contribute to the creation of effective policy, specifically more studies are needed that track the efficacy of policies from creation to implementation to maintenance; additionally, studies are needed that compare policy effectiveness based on enforcement strategy.

Conclusion

Campus tobacco-free policies are important public health interventions to reduce smoking among young adults. However, achieving compliance with tobacco policies can be a

challenge. Campus tobacco policy advocates discussed 2 distinct approaches to increase compliance with these policies: the social or formal approach. However, respondents described challenges with using either of these approaches alone. Results of this study highlight the need for campus decision makers to consider enforcement strategies prior to the adoption of a tobacco policy, have a clear understanding for the limitations of a purely social approach, and use both social and formal enforcement as complementary strategies.

Acknowledgments

References

1. US Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Heatlh Promotion, Office on Smoking and Health; Atlanta, GA: 2014.

2. US Department of Health and Human Services. Preventing Tobacco Use Among Youth and Young Adults. US Department of Health and Human Services, Public Health Service, Office of the Surgeon General; Rockville, MD: 2012.

3. University of Texas Austin Executive Summary. American College Health Association, National College Health Assessment II. American College Health Association; Hanover, MD: 2015.

4. Arnett JJ. The development context of substance use in emerging adulthood. J Drug Issues. 2005; 35:235–254.

5. Nichter, M. Lighting Up: The Rise of Social Smoking on College Campuses. NYU Press; New York: 2015.

6. National Association of Attorneys General. The Master Settlement Agreement. 1999. http://www.naag.org/naag/about_naag/naag-center-for-tobacco-and-public-health/master-settlement-agreement.php

7. Ling P, Glantz S. Why and how the tobacco industry sells cigarettes to young adults: evidence from industry documents. Am J Public Health. 2002; 92:908–916. [PubMed: 12036776]

8. Americans for Non-smokers' Rights. [Accessed May 5, 2015] Smokefree and tobacco-free U.S. and tribal colleges and universities. http://www.no-smoke.org/pdf/smokefreecollegesuniversities.pdf. Published 2015

9. Lupton JR, Townsend JL. A systematic review and meta-analysis of the acceptability and effectiveness of university smoke-free policies. J Am College Health. 2015; 63:238–247.

10. Fallin A, Roditis M, Glantz S. Association of campus tobacco policies with secondhand smoke exposure, intention to smoke on campus, and attitudes about outdoor smoking restrictions. Am J Public Health. 2015; 105:1098–1100. [PubMed: 25521901]

11. Lee J, Ramney L, Goldstein A. Cigarette butts near building entrances: what is the impact of smoke-free college campus policies? Tob Control. 2013; 22:107–112. [PubMed: 22135167]

12. Fallin, A., Roditis, M., Glantz, S. Evaluation of the Implementation of the University of California Tobacco-Free Policy. University of California San Francisco; San Francisco: 2015.

13. Gerson M, Allard JL, Towvim LG. Impact of smoke-free residence hall policies:the views of administrators at 3 state universities. J Am Coll Health. 2005; 54:157–165. [PubMed: 16335315]

14. Reindl D, Glassman T, Price J, Dake J, Yingling F. Perceptions of college and university presidents regarding tobacco-free campus policies. J Am Coll Health. 2014; 62:193–202. [PubMed: 24372397]

15. Roditis ML, Wang D, Glantz SA, Fallin A. Evaluating California campus tobacco policies using the American College Health Association Guidelines and the Institutional Grammar Tool. J Am Coll Health. 2014; 63:57–67. [PubMed: 25257333]

16. Jancey J, Bowser N, Burns S, Crawford G, Portsmouth L, Smith J. No smoking here: examining reasons for noncompliance with a smoke-free policy in a large university. Nicotine Tob Res. 2014; 16:976–983. [PubMed: 24532382]

17. Fallin A, Johnson AO, Riker C, Cohen E, Rayens MK, Hahn EJ. An intervention to increase compliance with a tobacco-free university policy. Am J Health Promot. 2013; 27:162–169. [PubMed: 23286592]

18. Russette HC, Harris KJ, Schuldberg D, Green L. Policy compliance of smokers on a tobacco-free university campus. J Am Coll Health. 2013; 62:110–116.

19. Baillie L, Callaghan D, Smith ML. Canadian campus smoking policies: investigating the gap between intent and outcome from a student perspective. J Am Coll Health. 2011; 59:260–265. [PubMed: 21308585]

20. Harris KJ, Stearns JN, Kovach RG, Harrar SW. Enforcing an outdoor smoking ban on a college campus: effects of a multi-component approach. J Am Coll Health. 2009; 58:121–126. [PubMed: 19892648]

21. Ickes MJ, Rayens MK, Wiggins AT, Hahn EJ. A Tobacco-free campus Ambassador program and policy compliance. J Am Coll Health. 2015; 63:126–133. [PubMed: 25612060]

22. Kuntz M, Seitz CM, Nelson M. Enforcing a tobacco-free campus through an Ambassador-based program: a phenomenology. J Am Coll Health. 2015; 63:195–202. [PubMed: 25668101]

23. American College Health Association. ACHA Guidelines: Position Statement on Tobacco on College and University Campuses. American College Health Association; Hanover, MD: 2009.

24. Drope J, Glantz S. British Columbia capital regional district 100% smokefree bylaw: a successful public health campaign despite industry opposition. Tob Control. 2003; 12:264–268. [PubMed: 12958385]

25. Rigotti NA, Bourne D, Rosen A, Locke JA, Schelling TC. Workplace compliance with a no-smoking law: a randomized community intervention trial. Am J Public Health. 1992; 82:229–235. [PubMed: 1739153]

26. Magzamen S, Glantz SA. The new battleground: California's experience with smoke-free bars. Am J Public Health. 2001; 91:245–252. [PubMed: 11211633]

27. Skeer M, Land ML, Cheng DM, Siegel MB. Smoking in Boston bars before and after a 100% smoke-free regulation: an assessment of early compliance. J Public Health Manage Pract. 2004; 10:501–507.

28. Lipperman-Kreda S, Grube JW, Paschall MJ. Community norms, enforcement of minimum legal drinking age laws, personal beliefs and underage drinking: an explanatory model. J Community Health. 2010; 35:249–257. [PubMed: 20135210]

29. Fell JC, Voas RB. Mothers Against Drunk Driving (MADD): the first 25 years. Traffic Inj Prev. 2006; 7:195–212. [PubMed: 16990233]

30. DeJong W, Langford LM. A typology for campus-based alcohol prevention: moving toward environmental management strategies. J Stud Alcohol, Suppl. 2002; (14):140–147. [PubMed: 12022720]

31. DeJong, W., Vince-Whitman, C., Colthurst, T., et al. Environmental Management: A Comprehensive Strategy for Reducing Alcohol and Other Drug Use on College Campuses. Higher Education Center for Alcohol and Other Drug Prevention; 1998. http://files.eric.ed.gov/fulltext/ED421942.pdf

32. Ringwalt CL, Paschall MJ, Gitelman AM. Alcohol prevention strategies on college campuses and student alcohol abuse and related problems. J Drug Educ. 2011; 41:99–118. [PubMed: 21675327]

33. Wechsler H, Lee JE, Nelson TF, Kuo M. Underage college students' drinking behavior, access to alcohol, and the influence of deterrence policies. J Am Coll Health. 2002; 50:223–236. [PubMed: 11990980]

34. Borsari B, Hustad JTP, Mastroleo NR, et al. Addressing alcohol use and problems in mandated college students: a randomized clinical trial using stepped care. J Consult Clin Psychol. 2012; 80:1062–1074. [PubMed: 22924334]

35. Kaufman MR, Merritt AP, Rimbatmaja R, Cohen JE. 'Excuse me, sir. Please don't smoke here'. A qualitative study of social enforcement of smoke-free policies in Indonesia. Health Policy Plan. 2015; 30:995–1002. [PubMed: 25244917]

Table 1

Sample characteristics.

Campus policy	Campuses	Regions	Total sample	Faculty	Staff	Students
Tobacco-free	10	Central (2)	30	5	4	4
		Northern (3)				
		Southern (5)				
Smoke-free	2	Southern (2)	12	5	1	6
Designated smoking areas	2	Northern (2)	11	1	7	3
No smoking indoors or within 20 feet of building entrances	2	Northern (1)	15	2	4	9
		Southern (1)				