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Components in tobacco-free school policies—A coding tool for assessment

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ABSTRACT

Objective: To develop an instrument to examine tobacco-free campus policy components. **Participants:** Missouri two- and four-year, specialized/technical, and religious colleges and universities ($N=76$). **Methods:** The instrument was informed via literature review and expert interviews. Coder agreement was strong ($\kappa=.80$). Qualitative policy language examples were identified. **Results:** Model policy components including consideration for population, prohibited products, location restrictions, enforcement, consequences, promotions, communications, cessation, designated smoking areas and exemptions; comprehensive policies included all populations, for all tobacco products, and at all locations on the campus. Nineteen campuses had comprehensive tobacco-free policies, five had comprehensive smoke-free policies (cigarettes and e-cigarettes), and no policy included all model components. Fifty-two were non-comprehensive. **Conclusions:** This instrument can allow campuses to identify components for comprehensive and model tobacco-free campus policies and assist officials in improving policy language. Future research can use this instrument to examine the effectiveness of components and their impact on tobacco use outcomes.

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Introduction

Tobacco-free campus policies represent a useful strategy for tobacco control aimed at young adults and are a recommended best practice by the American College Health Association (ACHA).¹ Over the past two decades, a significant increase in the number of colleges and universities adopting smoke-free and tobacco-free campus policies has occurred. The July 1, 2020 report by Americans for Nonsmokers' Rights (ANR) stated that 2,511 US campuses had smoke- or tobacco-free policies, an over 20% increase from October 2017.^{2,3} These policies promote health among college communities (eg, students, staff and faculty) and are associated with increased quit attempts, reductions in the use of and exposure to tobacco, and a decrease in social acceptability of tobacco use.⁴⁻⁶ Additionally, tobacco-free policies demonstrate increases in support over time by both non-users and users of tobacco products.⁷ Despite the uptick in policy adoption, only a quarter of all students, faculty and staff in the United States were protected by a tobacco-free policy in 2017, and over 50% of colleges and universities with such policy did not explicitly include all tobacco products.⁸

Campus-wide policies have been categorized as either smoke-free or tobacco-free.^{6,9-11} *Smoke-free policies* strictly prohibit the use of cigarettes or combustible tobacco products on college campuses, while *tobacco-free policies* prohibit all tobacco product use.⁹ The changing landscape of tobacco products requires updates to policy in order to maximize effectiveness. The use of alternative tobacco products, such

as e-cigarettes, has increased over the past five years to the point that they are now one of the primary types of tobacco products used by college students.¹²⁻¹⁶ In many cases, tobacco-free campus policies predate the advent of these new and emerging tobacco products; thus, policy language updates are necessary to ensure all nicotine products are included within the policy and/or the definition of tobacco products is broad enough to include current and emerging products.¹⁷

While the inclusion of the type of tobacco products encompassed in the policy has clearly been identified by categorization of smoke or tobacco-free, there remains a lack of research on the components that should be included or required for policy. The term “comprehensive” has been used to identify the need for a broader policy and implies the policy extends beyond the type of tobacco product prohibited. Several instruments and research studies have considered additional components. For example, Lee et al's¹⁸ policy strength rating tool includes the location where smoking and tobacco use is prohibited (eg, inside campus buildings and on campus grounds). Another study evaluated 16 California college and university policies using the original ACHA tobacco policy guidelines to assess if the policy included cigarette/tobacco use, prohibited campus relationships with tobacco companies, promoted awareness of the policy, supported cessation services, planned for implementation, and inclusion a campus tobacco-free task force.¹⁹ Additionally, tobacco control organizations have offered policy language that employs best practices components.^{9,20}

Although there are a wide-range of recommendations for college smoke- and tobacco-free campuses, to date, no tested instrument exists in literature that includes all of the most updated recommendations within one tool.

Improving the assessment of comprehensive tobacco-free campus policies and understanding model policy components included within college and university policies is a foundational step that must be complete before evaluation studies are conducted to determine components' effectiveness to reduce tobacco initiation and use among students, staff and faculty. Thus, the purpose of this study is to (1) establish components for classifying comprehensive smoke-free and tobacco-free policies; (2) develop an instrument for measuring model policy components; and (3) testing the reliability of the instrument on a sample of college campus policies.

Methods

The study employed a document analysis of tobacco-free and smoke-free campus policies passed at colleges and universities in Missouri. Such methodology has been employed in prior tobacco-control policy research to examine components or elements described within policy that may influence implementation, enforcement, and effectiveness of policy.^{21,22} While the systematic process of reviewing policy language can provide a valuable snapshot of the societal views and values at the time the policy was passed, it does not require human interaction. Thus, the current study was exempt from review by the University of Missouri Institutional Review Board (IRB).

Instrument development

The "College Campus Tobacco Policy Coding Instrument" (Figure 1) was developed to code each tobacco use policy for all colleges and universities in Missouri by using a review of scholarly literature^{10,11,18,19,22,23} and publicly available recommendations made by public health organizations on components, including the "Tobacco Policy Gold-Standard Components,"¹⁸ "Creating a Healthier College Campus: A Comprehensive Manual for Implementing Tobacco-Free Policies,"²⁴ "Campus Tobacco Policy Strength Rating Tool,"²⁵ the ACHA,¹ Texas College Tobacco Policy Database,²⁶ ANR,^{2,9} the Eliminate Tobacco Use Initiative of the MD Anderson Cancer Center of Texas,²⁶ and Tobacco Control Enforcement for Racial Equity.²⁸ Such documents were recommended by community partners and policy content experts from ANR, MD Anderson, University of Texas - Austin, and East Carolina University who provided professional expertise to the Eliminate Tobacco Use Missouri Initiative, a participant in the Eliminate Tobacco Use Initiative founded by the University of Texas MD Anderson Cancer Center and the University of Texas System. The first author served as a project coordinator for the Eliminate Tobacco Use Missouri Initiative at the time of the study. Missouri provides a unique case study to test the instrument, as it was home to the nation's first smoke-free campus policy at Ozark Technical Community College²⁸ and it has 30 colleges on the ANR smoke- and tobacco-free campus list.²

Policy components were included in an initial instrument when they were identified in more than one organizational document and/or literature. Similar to previous instrument development,²¹ this working document was then reviewed

Component	Survey Question
	Comprehensive Components:
Policy Population:	Who is explicitly included in the scope of the policy (students, staff/faculty, visitors)?
Prohibited Products:	Products explicitly included in the policy (cigarettes, e-cigarettes, other tobacco products [chew, snuff, snus, dissolvable, etc.]?)
Locations	Location in which the products are explicitly prohibited for use
Restrictions:	(buildings, campus grounds, campus owned vehicles, campus owned housing [if available], personal vehicles anywhere on campus)?
Designated Smoking Area:	Does the policy state that it allows for a designated smoking area?
	Model Components:
Policy Enforcement:	Does the institution enforce its tobacco use policy by (general enforcement, campus security, staff/faculty [text entry], community driven, other [text entry])?
Policy Consequences:	Are the following penalties in place for violating campus policy (general penalties, request for compliance, verbal/written warning, disciplinary measures, cessation services, fine, other [text entry])?
Prohibit Promotions:	Does the institution prohibit sales, sponsorship, advertising, and promotional activities of all tobacco products?
Policy Communications:	Does the institution require the tobacco policy be communicated through (signage, additional means of required communication [text entry])?
Tobacco Cessation:	Beyond penalties for violation, does the policy mention cessation and/or education?
Exemptions:	Are there any exemptions to the tobacco use policy (theatrical performances, research, religious purposes, other [text entry])?

Figure 1. College campus tobacco policy coding instrument.

Administration/staff/faculty is any person employed by the institution, including professors, administration, administrative support, and facilities employees.
Buildings is facilities and indoor areas
Campus Grounds is a property of the institution
Campus-owned housing is any place owned or rented by the institution that houses students or staff/faculty; must be explicitly stated (if present at the institution)
Campus-owned vehicles is any form of transportation owned or rented by the institution while on campus, transporting students, or attending events/activities that are associated with the institution
Campus Security is a department who are responsible for enforcing campus safety and policies. This could include campus police or general security staffing.
Cessation Services are the reference of cessation and/or education classes as a consequence for violating the policy, mentioning counseling or support (e.g., encourage or recommend cessation) at the school, and/or the policy explicitly identifies at least one of these strategies (i.e., services, programs, or referral) to assist smokers with quitting
Community enforcement is students/staff/faculty are encouraged to approach an individual(s) violating the tobacco policy or “bystander intervention”
Designated smoking area is any area the campus has explicitly stated to allow tobacco use in their otherwise tobacco-free campus grounds
Disciplinary measures are the formal penalties for violating the policy excluding a fine
E-cigarettes electronic nicotine delivery systems, also be called ENDS, electronic smoking device, etc.
Exemptions are exceptions to the tobacco policy including permissions from faculty members, theatrical performances, research, etc.
Fine is a monetary penalty in consequence of violating campus policy
Formal enforcement is the way an institution holds people accountable for policy violations that explicitly identifies an individual (faculty/staff, campus security, other) to do enforcement
General enforcement is mentioning that the policy will be enforced but specific ways for the enforcement to be conducted are not outlined.
General Penalty is mentioning that the violator will receive a penalty but specific penalties are not outlined.
Means of required communication is any communication of the policy <u>beyond</u> signage that is mandated by the policy
Personal Vehicles is any form of transportation owned or rented by an individual while on campus
Religious Purposes are any instance in which a person uses tobacco for a faith-based reason such as a ceremony or religious practice
Request for compliance is asking an individual(s) violating the tobacco policy to cease the use of the tobacco products
Signage is no smoking or tobacco use signs placed at entrances to the campus buildings and/or at various locations on buildings and across the campus.
Student is any individual enrolled in the institution.
Verbal or written warning is a formal request for cessation of tobacco product use on campus with the threat of future disciplinary action
Visitors is any person other than students and staff/faculty who is on the campus.

Figure 2. College campus tobacco policy coding instrument operational definitions.

by the community partners and policy experts for priority components. Following a discussion with experts where suggested edits were provided, the research team decided to include policy components that were deemed to be the highest priority by a majority and excluded items deemed irrelevant to college campus policies. Via an iterative process of review, the panel provided face validity of the instrument.

First, the instrument established a definition for the term “comprehensive” tobacco-free policy based on three criteria: (1) included all campus populations (students, staff/faculty, and visitors); (2) prohibited all tobacco and nicotine products, including traditional products (eg, cigarettes, cigars, smokeless tobacco such as chew) and newer and emerging products (eg, electronic smoking devices and heat-not-burn products); and (3) prohibited the use of tobacco products anywhere on campus, including but not limited to all buildings, grounds, campus-owned vehicles, and campus housing (if applicable). Campuses were not considered to be comprehensive if they included designated

smoking areas.²⁹ If policies prohibited the use of all cigarettes and e-cigarettes but did not include smokeless products, they were classified as “smoke-free” rather than tobacco-free. Additional components included enforcement, consequences, prohibition of sales/promotion/advertising on campus, communication and cessation services. Considering the components in “comprehensive” tobacco-free policies and the additional components, the term “model” was created, as this included best practices components identified for tobacco-free campus policies. Operational definitions (Figure 2) for each of the policy components were created from the tobacco control literature that informed the instrument.^{18,19,22,23}

Policy identification

A comprehensive list of all two-year, four-year, specialized/technical, and religious colleges and universities in Missouri was compiled using the Missouri Department of Higher

Education and Workforce Development. Contacts for each school were identified and invited to submit their institution's official tobacco use policy. For institutions that did not submit their policy, researchers identified the policy via the individual institution's official website to identify a weblink to the campus's full tobacco use policy or found the policy within the campuses' student handbook. When the tobacco use policy was not located from either of these sources, researchers used the keywords "tobacco" and "smoke/smoking" to search academic policy documents, Clery reports, Annual Security and Fire Safety Reports, employee handbooks, and other available resources for the policy language. In cases where a full policy could not be located, coders used documents or websites with information about the campus's smoke-free or tobacco-free procedures. In rare circumstances, multiple links with complementary information were used for a single institution.

Coding protocol

Using the developed instrument, four research assistants (AK, RP, LR, KS) were trained by the lead author using seven campus policies from institutions outside the state of Missouri to code campus smoke-free and tobacco-free policies by entering data into Qualtrics software. Coders were paired and each person then independently coded five Missouri policies. The coding pairs regrouped and discussed until discrepancies were adjudicated. Following this training protocol, all remaining Missouri policies were coded independently by two coders. Inter-coder reliability was determined using Cohen's kappa (κ).³⁰ Coders demonstrated strong agreement, with κ values ranging from .70–.87 (average κ = .80). Two additional independent researchers (KG, DV) resolved discrepancies between coders. Seventy-six colleges and universities were identified and coded between June and July 2020.

Data analysis

Data frequencies were calculated using IBM SPSS Statistics Version 26. Policies were first analyzed for comprehensive tobacco-free policy components including population, tobacco products and location restrictions (see Table 1). After policies were grouped (comprehensive tobacco-free, comprehensive smoke-free, or noncomprehensive), they were examined for model policy components including enforcement, consequences, communication, sales/promotions/advertising restrictions, cessation, and exemptions (see Table 2).

Table 1. College campus tobacco policy coding components (N=76).

Component	N (%)
Population	
Students	71 (93.4)
Staff/Faculty	56 (73.7)
Visitors	40 (52.6)
Includes comprehensive populations	39 (51.3)
Tobacco products	
Cigarettes	67 (88.2)
Other tobacco products	36 (47.4)
E-cigarettes	60 (78.9)
Includes comprehensive products	35 (46.1)
Location restrictions	
Buildings	61 (80.3)
Grounds	54 (71.1)
Campus-owned vehicles	43 (56.6)
Housing (N=64)*	54 (86.8)
Personal vehicles**	11 (14.5)
Includes comprehensive locations	39 (51.3)
Designated smoking***	13 (17.1)
Comprehensive tobacco-free policies	19 (25.0)
Comprehensive smoke-free policies	5 (6.6)

Note: Comprehensive locations include buildings, grounds, campus-owned vehicles, and campus-owned housing (if campus has campus-owned house).

*Twelve campuses did not have student housing. The reported percentage is out of the 64 campuses with campus-owned housing.

**Personal vehicles not included in operational definitions of comprehensive locations.

***Designated smoking area excluded a campus for comprehensive consideration.

Table 2. Model components within college campuses by policy type.

	Comprehensive tobacco-free campus policies (19)	Comprehensive smoke-free campus policies (5)	Non-comprehensive campus policies (52)	Total (76)
Enforcement N (%)	16 (84.2)	5 (100)	32 (61.5)	53 (69.7)
Police or campus security	8 (42.1)	0 (0.0)	4 (7.7)	12 (15.8)
Staff/Faculty	12 (63.2)	5 (100)	30 (57.7)	47 (61.8)
Community based	9 (47.4)	3 (60.0)	11 (21.2)	23 (30.3)
Consequences	16 (84.2)	4 (80.0)	40 (76.9)	60 (78.9)
Request for compliance	9 (47.4)	2 (40.0)	7 (13.5)	18 (23.7)
Verbal or written warning	5 (26.3)	2 (40.0)	19 (36.5)	26 (34.2)
Cessation services	5 (26.3)	2 (40.0)	8 (15.4)	15 (19.7)
Disciplinary measures	15 (78.9)	3 (60.0)	37 (71.2)	55 (72.4)
Monetary fine	6 (31.6)	2 (40.0)	17 (32.7)	25 (32.9)
Other	4 (21.1)	1 (20.0)	6 (11.5)	11 (14.5)
Communication				
Signage	7 (36.8)	1 (20.0)	3 (5.8)	11 (14.5)
Additional communication	4 (21.1)	1 (20.0)	7 (13.5)	12 (15.8)
Prohibit Sales/Promotion/Advertising	5 (26.3)	1 (20.0)	7 (13.5)	13 (17.1)
Cessation services	12 (63.2)	1 (20.0)	16 (30.8)	29 (38.2)
Exemptions				
Religious	1 (5.3)	0 (0.0)	1 (1.9)	2 (2.6)
Research	3 (15.8)	2 (40.0)	3 (5.8)	8 (10.5)
Theatrical	1 (5.3)	1 (20.0)	3 (5.8)	5 (6.6)
Other	2 (10.5)	0 (0.0)	8 (15.4)	10 (13.2)

Results

Of the 76 institutions identified for coding, 33 policies were coded from official policy documents or tobacco use policy websites, 28 from student handbooks, five from campus security reports, four from multiple links, three within the institution's alcohol and other drug policies, two from employee handbooks/workplace policies, and one was from a residential life policy.

Comprehensive tobacco-free policy components

Policy population

Among the 76 institutions coded, 51.3% ($n=39$) included students, staff/faculty, and visitors within their policy (see Table 1). The most common population covered by the campus policy was "students" ($n=71$; 93%), followed by staff/faculty ($n=56$; 74%), and visitors ($n=40$; 53%). An example of comprehensive protection for all populations included:

"This policy applies to faculty, staff, students, contractor and consultant employees, performers, visitors and the general public on the main campus."—Maryville University

Prohibited tobacco products

Overall, 57 (75%) institutions prohibited the use of cigarettes and e-cigarettes. However, only 35 (61.4% and 46.1% overall) of these institutions explicitly prohibited the use of all tobacco and nicotine products (including cigarettes, e-cigarettes and other tobacco products). An example of comprehensive protection from all tobacco products included:

"Tobacco use of any kind, or use of the following products, including, but not limited to: cigarettes, smokeless tobacco, e-cigarettes, snuff, hookah, vapor, or any other tobacco or non-tobacco smoking product is prohibited"—Drury University

Location restrictions

Of coded policies, 51.3% ($n=39$) prohibited the use of tobacco products on all campus locations (buildings, grounds, campus-owned vehicles and student housing [if applicable]). Few policies, ($n=11$; 14.5%), extend their restrictions to privately owned vehicles, a feature coded but not required to be classified as comprehensive.

"Effective January 1, 2017, smoking and the use of tobacco products is prohibited on all property owned, leased or operated by Rockhurst University. This includes all indoor and outdoor campus spaces including, but not limited to, campus buildings, grounds, exterior open spaces, parking lots, on-campus sidewalks, streets, driveways, athletic facilities, practice facilities, residence halls/housing, recreational spaces and in all university-owned or operated vehicles."—Rockhurst University

Designated smoking area

Policies that included designated smoking areas ($n=13$; 17.1%) were disqualified from designation as comprehensive.

Comprehensive tobacco-free policies

Institutions that prohibited the use of all tobacco products, among all populations, in all locations, with no designative

smoking area ($n=19$) were considered to be comprehensive tobacco-free. However, these policies did not necessarily include all model components, as they may have lacked enforcement measures, included harsh consequences for policy violation or have exemptions (eg, theatrical performances).

Comprehensive smoke-free policies

Institutions that prohibited cigarette and e-cigarette use (but not all tobacco use) among all populations, in all locations, with no designated smoking areas ($n=5$) were considered to be smoke-free.

Model policy components

Model policy components included the type of enforcement used, consequences for violation, communication requirement, tobacco product sales/promotions/marketing restrictions, cessation services offered, and exemptions to policy restrictions. As seen in Table 2, inclusion of model policy components varied between campus policies categorized as comprehensive tobacco-free ($n=19$), comprehensive smoke-free ($n=5$), and non-comprehensive ($n=52$). No comprehensive policy included all the model components, but all model components were found in at least one policy that was coded.

Enforcement

Policies were coded for formal (identifying a specific individual or department to conduct enforcement) and community-based enforcement (encouraging all members of campus community to approach policy violators). Seventy percent ($n=53$) of campuses mention some form of enforcement, with 63.2% ($n=48$) including formal enforcement (campus staff/faculty, security or police), 30.3% ($n=23$) including community-based approaches (eg, bystander intervention), and 26.3% ($n=20$) designate both formal and community-based enforcement. For comprehensive tobacco-free campuses ($n=19$), 84% mention some form of enforcement, with 63% ($n=12$) indicating formal enforcement by staff/faculty and 42% ($n=8$) campus police/security; and 47% ($n=9$) including community enforcement. For smoke-free campuses, 100% ($n=5$) indicate enforcement would be conducted by staff/faculty and 60% ($n=3$) also included community enforcement. For non-comprehensive campus policies ($n=52$), 62% ($n=32$) have enforcement strategies documented, with 58% ($n=30$) of these campuses mentioning faculty/staff, 8% ($n=4$) campus police/security, and 21% ($n=11$) community enforcement. Policies which contained both community and formal enforcement follow what research has shown to be the strongest compliance model.²³

Faculty, staff and students have a joint responsibility to share in the enforcement of this policy. Individuals found in violation are to be reminded in a professional and courteous manner of the University policy. In the event a person is uncomfortable confronting another person about smoking violations, individuals may email studenthealth@lincolnu.edu to report violations; or

they may notify the contact person in the individual buildings.—Lincoln University

Consequences

Seventy-nine percent ($n=60$) of policies included consequences for violators. Consequences included: “requesting compliance” ($n=18$; 23.7%), “verbal or written warning” ($n=26$, 34.2%), “providing cessation services” ($n=15$; 19.7%), monetary fines ($n=25$; 32.9%), and using “disciplinary measures” ($n=55$; 72.4%) for repeat violators. Other consequences were mentioned in 11 (14.5%) policies, including community service, removal from campus, eviction from housing or even suspension, or expulsion from school.

Respect and accountability by the University Community to this policy will be primarily achieved through education, awareness and providing support to those who desire to stop using prohibited products. If someone is seen using these products on University property, an individual may inform the user of this policy and request that they comply. To report a violation of this policy click the "Report an Issue" button below. Violators of this policy will be offered cessation resources. Repeated violations of the policy may be subject to appropriate disciplinary procedures.—University of Missouri, Columbia

Communication

Policies were coded to report how the policy would be communicated to the public. Signage to convey the tobacco restrictions was required in 11 (14.5%) policies. Additional means of required communication was mandated in 12 (15.8%) policies.

Policy statement signage will be clearly posted on the perimeter of the property, at all entrances, and other prominent places.—St. Charles Community College [signage]

Organizers and attendees at public events, such as conferences, meetings, public lectures, social events, cultural events and sporting events using College facilities will be required to abide by the Smoke-free Campus policy. Organizers of such events are responsible for communicating the policy to attendees.—Stephens College [additional communication example]

Sales/promotion/advertisements

Seventeen percent ($n=13$) of coded policies explicitly prohibit the sale, promotion, or advertisement of tobacco products on campus.

The University prohibits the sale, distribution, or free sampling of tobacco products on campus.—Southeast Missouri State University

Cessation services

Policies were coded for the presence of cessation services and/or tobacco use education ($N=29$; 38.2%) beyond as a consequence for violating the tobacco policy.

Students, faculty and employees will be provided, upon request, assistance with identifying tobacco cessation resources, including free information and access to low-cost referral programs, through appropriate campus resources...—University of Central Missouri

Exemptions

Policies were coded for exceptions to policy that allow for tobacco use on campus. Identified exemptions to the policy included: religious purposes ($n=2$; 2.6%), research ($n=8$; 10.5%), theatrical performances ($n=5$; 6.6%), and other ($n=10$; 13.2%). Other exemptions included those such as “Chancellor approved” (University of Missouri—St. Louis) and an allowance for tobacco use in a specific off-campus housing location (Washington University).

Discussion

In the current study, researchers were able to establish components for classifying comprehensive smoke-free and tobacco-free policies, develop the College Campus Tobacco Policy Coding Instrument, and testing the reliability of the instrument on a sample of college campus policies from colleges from the state of Missouri. This instrument gives stakeholders the ability to determine if their campus policy includes or excludes model policy components. The instrument advances tobacco policy by assessing for the inclusion of explicit components using clear operational definitions and provides a more in-depth examination of policy enforcement than previous measures.¹⁸ For example, although the ACHA provides many recommendations for tobacco-free college campuses,¹ they did not mention designated smoking areas in their 2011 recommendations. Alternatively, ANR explicitly states that campuses that include any designated smoking areas are not considered to be smoke-free. Thus, discrepancies in previous recommendations for smoke and tobacco-free college campus policies left a need for an updated assessment tool for college campus tobacco-free policies.

Another contribution of the instrument is that it measures language that prohibits e-cigarette products and other tobacco products broadly, as supported by previous research regarding product definitions.¹⁷ Including this policy component will reduce ambiguity for the campus community and reduce the threat of potential policy implementation challenges. While previous instruments have measured the type of tobacco products included within the policy,¹⁸ public health organizations have acknowledged campuses as tobacco-free when they simply include the term “tobacco” within policy, even if the policy does not mention smokeless products. One example is the classification of the University of Missouri—Kansas City by ANR in their 2020 review to include “tobacco” by stating the term in policy when the types of products are not clearly defined or included. Additionally, some instruments have assessed e-cigarettes separately from other traditional tobacco products (eg, combustible cigarettes) or may use terminology for e-cigarettes that is outdated and not inclusive of emerging nicotine products. Given the current landscape of product use among the target demographic,¹³ it is important that the definition of tobacco in campus tobacco-free policies includes immerging products to provide an all-inclusive assessment.

This policy coding instrument also offers a deeper examination of policy enforcement and consequences for violation, which have been reported as major concerns for

campus leaders considering a tobacco-free campus policy.^{6,31} We found 70% of campuses identified enforcement agents and 79% of campuses described consequences for a violation, although we found there to be a wide range of consequences included within the campus policies. Given that most tobacco-free policies are put in place as public health measures aimed at reducing exposure to tobacco use, strategies for enforcement and addressing violations should be aligned with interventions focused on health education and cessation. Our findings indicate that a majority of campuses are utilizing health-focused remedies for policy violations. However, almost a third of policies coded indicate a monetary fine for policy violation, and some suggest monetary fines should be employed only after an initial warning is issued.³² Moreover, requiring payment of a fine is not supported by public health organizations that seek social justice and equity in the enforcement of tobacco control.³² The component of penalty structure had not appeared in prior instruments and provides a novel contribution to research that is necessary when exploring such policies.

Enforcement strategies, both formal and community-based, were identified at higher rates for campuses with comprehensive tobacco- and smoke-free campuses compared to non-comprehensive policy campuses. Research shows that campuses with both forms of enforcement have better policy compliance.²³ Our study shows that formal enforcement by faculty/staff (61.8%) were the most commonly cited designees to implement the policy across all campuses. Community-based approach appeared in about one-third (30.3%) of the studies. Formal enforcement by police or campus security was present in 12 (15.8%) policies. Congruent with a health-focused intervention, and highly publicized events related to social justice issues (eg, police brutality and racial discrimination), placement of enforcement authority for campus tobacco policies may best be served by specified members of the campus community (eg, health ambassadors) instead of campus police/security.¹⁸ Similarly, institutions and organization model language should avoid the use of negative or harsh consequences such as monetary fines, eviction from housing, or suspension/expulsion from the institution, which were all found in one or more of the coded policies.²⁷ This balance between a social approach and formal enforcement has been encouraged particularly for tobacco-free campus policies.²³ However, enforcement of such policies has been difficult given that some who support smoke-free policies are less supportive of tobacco-free policies, especially when they include e-cigarettes.^{10,33} More research is needed to understand the efficacy of enforcement approaches and prescribed consequences to improved policy compliance while adequately acknowledging health equity and social justice issues.

A better understanding of the effects of or need for exemptions to a tobacco-free campus policy is warranted. The College Campus Tobacco Policy Coding Instrument coded for exemptions but did not disqualify a college from a comprehensive classification for the presence of certain exemptions. Any policy explicitly stating tobacco use could occur at any time in a certain area on the campus (“designated smoking area”) was automatically classified as a noncomprehensive policy, as

designated smoking areas have been identified as detrimental to effective health policy.

Limitations

The current study was subject to limitations. First, the instrument was used to code campus tobacco policies within one state. Other states may have laws that preempt the authority of lower levels of governance (eg, state law supersedes college campuses from enacting their own administrative policy), which may result in less variability of policy language. Utilizing the instrument in additional states could further validate the tool and highlight similarities and differences in institutions across the country.

Much of prior research on assessing policies have attempted to create a rating system to score policy.¹⁸ The current instrument does not provide a rating system, but instead it simply identified the presence or absences of policy components. Without understanding the significance of each component on policy outcomes, a rating system seemed premature to the authors. It is likely that certain components have a greater public health impact. Future research could examine policy components and their association to tobacco use rates, uptake, cessation, and social desirability of various tobacco products of students, faculty, and staff. Thus, the instrument yields findings capable of future assessment of policy impact.

Conclusions

College campus stakeholders involved with policy development are encouraged to use the College Campus Tobacco Policy Coding Instrument to determine if their policy is comprehensive and if their policy includes model policy components. Where deficiencies exist, those working on college campuses who seek to decrease tobacco use are encouraged to use this instrument to identify and close these gaps by including comprehensive policy language and model policy components. Inclusion of these components can allow for appropriate resources to be allocated to maximize the effectiveness of a policy and improve the health of the campus community by reducing exposure to tobacco use.

Authors' note

The data that support the findings of this study are available from the corresponding author, [GC], upon reasonable request.

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Conflict of interest disclosure

The authors have no conflicts of interest to report. The authors confirm that the research presented in this article met the ethical guidelines, including adherence to the legal requirements, of United States and this

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