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The Three Ts of Adopting Tobacco-free Policies on College Campuses

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Exposure to secondhand smoke (SHS) is a known serious cause of preventable disease and premature death, including lung cancer, coronary heart disease and myocardial infarction,¹ and respiratory complications.^{2,3} Within 5 minutes of exposure, SHS makes it harder for the heart to pump blood. In about 25 minutes, fat and blood clots build up in the arteries, increasing the chance of heart attack and stroke. After only 2 hours of exposure to SHS, the heart rate speeds up and leads to abnormal heart rhythms (which can be fatal).⁴ Even outdoor exposure to SHS presents health risks.^{5,6}

Nationwide, colleges, universities, and health care campuses recognize the health threat from SHS and there is a trend toward implementing tobacco-free or smoke-free campus policies.⁷ As of October 7, 2011, there were at least 586 US colleges or universities with 100% smoke-free or tobacco-free campus policies with no exemptions.⁸ Although there has been a recent wave of tobacco-free campuses in the United States, policy restrictiveness and implementation vary, and compliance remains a challenge. Streets and sidewalks not owned or controlled by the college or university create special challenges. This case study describes the 3 Ts strategy to implementing and evaluating the University of Kentucky's (UK's) tobacco-free campus policy and evaluates the outcomes and costs.

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HISTORY/CONTEXT OF POLICY

UK, located in Lexington, joined the list of higher-education institutions with a tobacco-free campus policy in November 2009.⁸ As the state's land grant university, UK is located in a state that is a national leader in tobacco production.⁹ Given the historically protobacco climate,¹⁰ the adoption and implementation of the policy did not come quickly; nor was there immediate adherence. However, there was administrative support for the policy from the beginning. The campus went tobacco-free in stages. First, the academic medical center campus, adjacent to the main campus, went tobacco-free in November 2008, exactly 1 year before the entire campus implemented its comprehensive tobacco-free policy. Great American SmokeOut¹¹ was selected as the implementation date for both the medical center and the entire campus policy.

In both cases, UK spent about 9 to 12 months in the preparation phase to promote buy-in from key stakeholders, including tobacco users, and to develop a strong implementation plan using a 3-pronged 3-Ts approach: tell, treat, and train. Integrated, regular, consistent communications (tell) were critical to creating an environment in which compliance was expected. Given that policy change increases demand for tobacco treatment,¹²⁻¹⁵ providing evidence-based tobacco treatment (treat) was an important hallmark of the policy strategy. Effective policy implementation relied on well-trained administrators, faculty, and student leaders (train) to remind violators of the policy and report if necessary. The 3 Ts approach is designed to institute a culture of policy compliance.

The Tobacco-free Campus Task Force (TCTF), representing 28 sectors of the university community, including faculty, staff, and students, was appointed by the University President about 11 months before implementation of the campus-wide policy. The group initially met semiweekly and they formed 5 committees that met consistently during the 10-month planning period. About 200 people were involved in the planning and they were invited to a kick-off event hosted by the President and TCTF. The communication plan involved integrating the tobacco-free policy message into all new (and prospective) student, faculty, and staff orientation activities, alumni and parents' materials, athletic ticket materials and events, and various campus publications, as well as communicating via Web sites, email broadcasts, brochures, table tents in dining areas, parking tickets, and campus print, television, and radio media.

Existing vendors and contractors were notified and all contracts included policy language and expectations. Tobacco treatment services for employees and students were enhanced and available 30 to 60 days before the policy implementation date. Little research was available to assist the TCTF and the planning committees with effective policy development and enforcement strategies. Despite the recent wave of tobacco-free colleges,⁷ there is little research on campus policy strategies, effectiveness, and enforcement procedures.

THE 3 Ts STRATEGY: TELL

The first component of the 3-pronged approach is tell. For successful policy implementation, adequate and timely notification about the policy provisions is crucial. Communication about the policy was a top priority before policy implementation. Throughout campus, signs

were placed in strategic outdoor locations and in places where pedestrians and vehicles entered campus. The signs were designed with a positive message including the rationale for the policy: “Welcome to our Tobacco Free Campus: A Healthy Place to Live, Work and Learn.” Signage was periodically evaluated and replaced because of damage or vandalism.

Shortly before the policy went into effect, an email from the University President about the policy was sent to students and employees. The message described the need to create a healthy campus environment and information about how to obtain tobacco treatment services. Employees were invited to a 2-day resource fair hosted by the College of Nursing’s Tobacco Policy Research Program before the policy went into effect. Employees were provided with information about BeHIP, a phone-based coaching program for those who wished to quit using tobacco products, individual counseling sessions with the university’s tobacco treatment specialist, and visits to the office of UK Work 1 Life Connections, which provided employees with tobacco education, assessments, and referrals free of charge. Students were provided with information on tobacco cessation options and prescriptions through University Health Services (UHS) and counseling programs through the university’s Counseling and Testing Center. Two brochures were distributed at key campus locations: one brochure contained information about the policy and the boundaries, and the other emphasized various tobacco treatment resource options (see <http://www.uky.edu/Tobaccofree>).

Before and after the policy went into effect, the coauthors of the TCTF conducted road shows with employee and student groups (eg, library employee group, staff and faculty senates, arts and sciences student ambassadors). A 15-minute slide presentation introduced the policy (including specific boundaries), resources available for students and employees who wished to quit using tobacco, consequences for violating the policy, and answered questions and concerns. In 2011 (nearly 2 years after policy implementation), information about the tobacco-free policy and tobacco treatment services was added to the course content for UK 101, a class for incoming freshman that acquaints the student with campus during their first semester.

Clear communication is particularly important when discussing policy boundaries. For example, the tobacco-free policy does not cover city-owned or state-owned sidewalks or streets, creating confusion when smokers congregate in areas that may seem to be on campus. The TCTF published the following statement related to these areas: “For those sidewalks adjacent to streets not controlled by the university, we ask that you respect the pedestrians and our efforts to provide a healthier environment by refraining from tobacco use on those sidewalks.” This statement was integrated into the maps of policy boundaries.

In the 2 years after implementation, it has been important to continue and repeat tell strategies. Anniversary events raised awareness about the policy. UHS distributed cold turkey sandwiches (“You need more than cold turkey to quit”) and s’mores (“Ask us s’more about quitting”) in high-traffic campus areas. Policy reminder cards with a positive message including a coupon for a free fountain drink (eg, iced tea, lemonade, soft drinks) were distributed in high-traffic areas and during busy times (ie, class change times).¹⁶ Media

stories in the student newspaper and on radio attracted interest from students completing individual and group class projects.

THE 3 Ts STRATEGY: TREAT

Providing evidence-based tobacco treatment services¹⁷ is the second element of the 3 Ts strategy. Cessation strategies are most effective when there is a combination of medication, counseling, smoke-free policy, cigarette tax increases, and media education. Tailored approaches to medication and counseling are most effective in helping people quit tobacco use.¹⁷ UK followed the 2008 Update of the Clinical Practice Guidelines for Treating Tobacco Use and Dependence as a framework¹⁷ for enhancing and developing tobacco treatment programs for students and employees before and during implementation of the tobacco-free campus policy. Based on these guidelines, a variety of cessation group and individual counseling options are offered to students, employees, and sponsored dependents covered on the university health plan. Cessation medications (ie, combination nicotine replacement therapy [NRT], including patches plus gum or lozenges) are made available for free for persons participating in one of the cessation programs.

The existing employee health and wellness program, a structured, telephone-based cessation counseling program including NRT products and a personal health coach, was expanded because of the anticipated and actual increase in program participation after the tobacco-free campus policy went into effect. Employees also have access to individualized counseling at UKHealthCare by a nurse practitioner who is also a certified tobacco treatment specialist. Individual counseling is available in person and via phone, email, or online support. Sessions provide motivational counseling, development of tailored treatment approaches, and the use of medications approved by the US Food and Drug Administration.¹⁷ Group sessions are also available in partnership with the local health department's ongoing group tobacco cessation classes. To maximize access to treatment, counseling services are provided at varying times of the day and evening. Students have access to tobacco use treatment through UHS and the student counseling center. In these settings, a nurse practitioner, health education specialist, and psychologist provide individualized cessation counseling and treatment. To receive a 2-week coupon for free NRT patches, gum, or lozenges, students and employees are required to participate in some form of a structured cessation program.

The TCTF delegated the responsibility for enhancing existing services and creating a coordinated tobacco treatment program to the Tobacco Dependence Treatment Committee, including members of student health, counseling services, health and wellness, employee benefits, health care, and faculty, students, and the tobacco control specialist from the local health department. Three of the committee members were certified tobacco treatment specialists.

A campus-wide online survey to assess prevalence of tobacco use and interest in quitting resources among students and employees was conducted 6 months before policy implementation. Given that nearly one-third expressed interest in quitting, there was a documented need to enhance tobacco cessation support. Given the number of tobacco users

on campus and in an effort to promote compliance, low-cost NRT products were available for purchase at multiple convenient campus locations. The message to users who may not be ready to quit was that they could be comfortable while on campus by using nicotine gum or patches.

A variety of media were used to promote the tobacco treatment services. Committee members were interviewed by the student newspaper and radio station. Print materials and posters were developed and distributed during special campus events, including a campus house calls event, in which information on campus services was provided to students individually in their dormitories. This information included messages such as “Picture Yourself Tobacco Free,” and “iThink, iQuit, iConquer” themed materials developed by the UHS Health Education Specialist. The tobacco-free Web site (<http://www.uky.edu/Tobaccofree>) provided a comprehensive listing of treatment resources for students, employees, and community members. Bulletins, emails and newsletters included information about the tobacco treatment services and they were distributed through Employee Benefits, Health and Wellness, and UKHealthCare programs.

THE 3 Ts STRATEGY: TRAIN

The third prong of the 3 Ts strategy to tobacco-free policy development is to train supervisors, faculty, administrators, and student leaders on the policy and how to approach violators. The goal of the train component is to create a culture of policy compliance so that enforcing the tobacco-free rules is everyone’s job. Approaching violators can be intimidating, so providing tools is one way to increase compliance with the policy, in addition to tell and treat approaches.

Before the policy went into effect, training was provided to promote compliance with the policy. A slide presentation included proper scripting to use when approaching violators of the tobacco-free policy. Given that compliance is everyone’s business, employees or students were asked to politely but firmly remind the violator about the policy and potential consequences, and ask them to extinguish or dispose of the tobacco product using the scripted messages.

All members of campus were asked to: (1) introduce yourself and your role on campus; (2) remind the violator about the tobacco-free policy; (3) politely but firmly ask them to extinguish and dispose of the tobacco product; and (4) inform them of low-cost NRT available at multiple convenient campus locations to minimize cravings and promote comfort (Table 1). As part of the training protocol, employees and students are provided with a map of the campus boundaries and information on tobacco treatment services.

For those who refuse to comply with the policy, students are reported to the Dean of Students for violating the Student Code of Conduct (Part 1, Article 2, Prohibited Conduct: “Violation of other published University regulations or policies”). Possible sanctions for the student violator included a disciplinary warning, reprimand or probation, social suspension, and disciplinary suspension or expulsion depending on the magnitude of the violation (Part 1, Article 2, Sanctions). Faculty and staff who violate the policy are reported to their manager or academic dean. Employee violations are treated as any other infraction of

campus policy and are dealt with through corrective action. Repeat offenders are subject to possible termination of employment.

Eighteen months after the policy was implemented, the TCTF launched an ambassador program to more deliberately create an environment of compliance. The Tobacco-free Take Action! Ambassador program is comprised of employees and students who are proactive in increasing compliance with the tobacco-free policy. Specific hot spots where policy violators congregate are identified through cigarette butt clean-up efforts and complaints to the TCTF, and they are deliberately targeted for proactive hot spot interventions.

Ambassadors complete training on how to use a firm, yet compassionate approach to violators by using scripted messages. They also learn how to report violators who continue to violate after reminded. Ambassadors are required to show competence in scripting through role playing before they are assigned to hot spots. Ambassadors are assigned to hot spots in teams of 2 and they target a spot for 20 minutes during class change or at other high-traffic times. They approach violators and complete a site-specific checklist assessing number of male and female violators observed, number of violators approached, how the violator responded (eg, immediately extinguished tobacco product, ignored ambassador), and action taken by the ambassador (ie, reported to Dean of Students or supervisor). If a violator refuses to comply with the policy when reminded, the ambassador asks for identification and reports them according to approved compliance procedures (see <http://www.uky.edu/Tobaccofree>).

EVALUATION OF OUTCOMES AND COSTS

Quit attempts among students and employees have increased since the campus-wide tobacco-free policy took effect. Based on use of the free NRT benefit, a total of 335 persons received tobacco dependence treatment during the 2-year period after the policy took effect, compared with only 33 in the year preceding the campus-wide policy (Table 2). On average, about 3 tobacco users sought cessation services per month before the campus-wide policy, compared to 11 per month after policy implementation, reflecting a 4-fold increase in demand for tobacco treatment services. Of the 263 enrolled in tobacco treatment services, 48% were employees, 46% were students, and 6% were spouses/sponsored dependents and retirees. Before the policy, the average number of NRT coupons redeemed per month was 10, compared to 41 per month after the policy was implemented, representing a 4-fold increase in coupons redeemed. The cost associated with NRT coupons increased from \$491.86 per month before the policy to \$696.55 per month after the policy took effect, reflecting only a 1.4-fold increase in cost. These cost savings were because of a lower cost per NRT coupon after the policy negotiated by UK Pharmacy, from \$47.60 per coupon before the policy to \$17.15 per coupon on average after the policy.

A follow-up survey was conducted via email with tobacco treatment program participants 16 months after the tobacco-free campus policy was implemented to assess tobacco use, cessation methods used, and quit status. A total of 207 surveys were emailed to participating students, faculty, and staff, and 36 were returned after 2 reminder emails (17% participation rate). Of the 36 surveys, 25 were employees and 11 were students; 61% were females. The

low response rate limits the generalizability of the analysis, but there are some interesting trends.

Of the 36 participants, 18 (50%) were current tobacco users. Using an intent-to-treat analysis in which nonrespondents are considered tobacco users, the quit rate for the sample of 207 program participants was 8.7%. Thirty respondents (83%) reported smoking cigarettes in the past year, with an average of 14 cigarettes smoked per day (range 5 to 35 daily). Other tobacco products used included smokeless (8%), cigars (6%), and hookah (6%). Both students and employees reported relatively high levels of confidence in quitting, and these groups did not differ in confidence to quit; mean values were 7.3 ± 2.8 and 7.5 ± 2.7 , respectively (0 = not at all to 10 = extremely confident). Both groups reported even greater confidence that they could remain tobacco free while on campus (students 8.4 ± 3.2 ; employees 8.3 ± 2.8).

Overall, nearly three-fourths of those who had quit using tobacco reported being abstinent for more than 30 days (Table 3). Of those who were unable to quit, nearly half of them reported that they reduced their tobacco use by 50% or more. Regardless of whether or not they quit, nearly all (92%) used NRT; only 8% used Chantix (2 quit and 1 did not). Given the low overall response rate and small sample size, it is difficult to determine cessation outcomes. Considering these limitations, the evaluation data on cessation and cigarette reduction rates should be interpreted with caution.

Although observed and reported smoking has declined since the policy took effect, evidence of cigarette butts remains.¹⁸ The recent launch of the Tobacco-free Take Action! Ambassador program aims to improve compliance. Early observations show promise in the effectiveness of the program, but evaluation data are not yet available.

SUMMARY

This case study described the 3 Ts (tell-treat-train) strategy, designed to institute a culture of policy compliance, and evaluated its impact on outcomes and costs. treatment medications and counseling, and ongoing training of supervisors and student leaders. Sustained, clear communications using multiple channels targeting students, employees, visitors, and vendors is essential to successful policy implementation (tell). Providing access to free or low-cost evidence-based tobacco treatment services by qualified personnel is important for meeting the demand for tobacco cessation (treat). For users who were not ready to quit, low-cost NRT products were available for purchase at multiple convenient campus locations to promote symptom management while on campus. Creating a climate of policy compliance is also achieved by initial as well as ongoing training of supervisors and student leaders about the policy and how best to approach violators using a firm, yet compassionate approach (train). Demand for tobacco treatment services increased, from an average of 3 enrolled in cessation programs per month before the campus-wide policy to 11 per month after the policy took effect, representing a 4-fold increase in quit attempts. During this period, 975 free nicotine replacement coupons (2-week supply) were redeemed, a 4-fold increase in treatment use, for a total postpolicy cost of \$16,717. Although the intent-to-treat estimated quit rate was only 8.7%, both students and employees reported high levels of confidence that

they could remain tobacco free while on campus. NRT was the medication of choice, likely because the university covered the full cost of the medication for 12 weeks. Of treatment participants sampled (N 5 36) and unable to quit, nearly half of them reported they had reduced their tobacco use by 50% or more. Administrative support, access to tobacco treatment, campus buy-in, sustained communications, and careful implementation planning are critical to instituting a tobacco-free university policy.

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Table 1

Example of scripting used with violators of the tobacco-free policy

Type	Script Example
Scenario I:	"Hello, my name is _____, and I am an (employee /student) here at UK. Are you aware that our campus is tobacco-free? This means I'm going to have to ask you to put your cigarette out and dispose of it in the trash can. Thank you for respecting our policy. There are locations on campus that sell nicotine replacement for a discounted price so you can be comfortable on campus."

Table 2
Cessation Program Participation and Nicotine Replacement (NRT) Use Over Time

	1 Year Before Policy 11/08–10/09	November 09–March 2010	April– September 2010	October 10–March 2011	April– September 2011	Total Post- Policy
Enrolled in Program	33	116	86	87	105	263
NRT Coupons	124	272	198	221	284	975
Cost of NRT (US\$)	\$5902.37	\$5096.43	\$3979.46	\$3595.11	\$4046.20	\$16,717.20

Note. The total post-policy number enrolled reflects unique patients. Students, employees, and sponsored dependents are eligible to receive free NRT for 12 weeks (distributed in 2-week coupons).

Table 3

Tobacco Use Patterns of Cessation Program Survey Respondents (N = 36)

	Current Tobacco User/ Quit 7 days		Quit 8-30 days		Quit > 30 days		Total Responses	
	n	(%)	n	(%)	n	(%)	N	N
Students	7	(38.9)	0	(0.0)	4	(30.8)	11	
Employees	11	(61.1)	5	(100.0)	9	(69.2)	25	
Total	18	(50.0)	5	(13.9)	13	(36.1)	36	