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The Tobacco Free College Campus: An Assessment of Policy Implementation and Enforcement at the University of Massachusetts Boston

Annie McDougall

Spring 2016

I. Abstract

To date, one of the greatest successes in the field of public health has been the nationwide awareness campaign about the negative health effects of smoking cigarettes and using tobacco. Smoking and tobacco use have been associated with a number of health problems including the increased risk of cancers and cardiovascular diseases (Office on Smoking and Health 446). The success of the anti-smoking initiative can be attributed to a number of public outreach methods including TV advertisement bans on cigarettes, an increase on taxes on cigarettes, the placement of the Surgeon General's warning on cigarette packaging and smoking and tobacco regulations in public and private locations (Centers for Disease Control and Prevention 1). To combat the loss in sales due to this public health campaign, the tobacco industry spends an estimated \$34 million a day on the marketing and promotion of their products (Glassman et. al 765). A significant amount of this marketing targets young adults and youth who have the potential to take up lifelong tobacco use (Glassman et. al 765). As a result, many institutions of higher education have adopted policies that limit or ban smoking or tobacco use on their campuses. Data collected from universities with comprehensive tobacco-free policies indicates that fewer students report exposure to secondhand smoke (Fallin et. al 1098). There is a strong consensus among health representatives that universities seeking to implement a tobacco-free policy should also employ an enforcement plan for optimal success. The University of Massachusetts Boston's recently introduced tobacco-free policy prohibits all tobacco use and activity on university owned property. The future of success for this policy relies on the development of a comprehensive enforcement plan, which will increase compliance and strengthen the university's commitment to a healthy academic environment.

II. Introduction

It has been over half a century since the 1964 Surgeon General's Report on smoking and health was released, which concluded that smoking cigarettes causes lung cancer. This report marked a watershed moment in the field of public health and launched an intensive health campaign (Centers for Disease Control and Prevention 1). Since then, one of the greatest nationwide public health initiatives has led to an incredible decrease in the number of smokers. A number of methods have been used to discourage smoking and tobacco use, including bans on smoking and tobacco use in certain locations. The health initiative to discourage smoking is far from over, and as the tobacco industry moves into a new age of smokeless tobacco products, new methods of promoting healthy living must be made. As a result, public and private institutions with smoking regulations are now altering their policies to include bans on all tobacco products. Notably, public health officials have been advocating for colleges and universities to implement comprehensive tobacco-free policies, in an effort to discourage young adults to take up smoking and tobacco habits. Studies show that college campuses with comprehensive tobacco policies see a decrease in secondhand smoke exposure (Fallin et. al 1098).

Health and the Environment

Because of the Surgeon General's historical report and nationwide health campaign, nearly every individual is aware that smoking tobacco is an undeniable cause

of lung cancer and numerous other health issues. The Center for Disease Control warns that smoking is the cause for the majority of lung cancers and that it is capable of causing cancer in any part of the body (Office on Smoking and Health 446). Tobacco associated cancer risks are not limited to smoking the product, smokeless tobacco products have been proven to cause cancer of the mouth, esophagus and pancreas (Office on Smoking and Health 446). Both non-smoke based and smoke based tobacco products have also been known to trigger asthma and cause cardiovascular diseases, as well as increasing the risk of complications during pregnancy, in diabetic patients, and in HIV positive patients (Office on Smoking and Health 563).

The Environmental Protection Agency classifies secondhand smoke as the most preventable health risk in the world. In a report from 1993, the EPA found that secondhand smoke is capable of causing lung cancer in nonsmokers and acute respiratory conditions in children (Environmental Protection Agency 1). The World Health Organization quotes 600,000 deaths per year due to the effects of secondhand smoke (World Health Organization 1). The effect of secondhand smoke is immediate upon exposure, and more than 50 carcinogens have been identified in secondhand smoke (U.S. Department of Health and Human Services 15).

The most common and socially accepted form of litter in the world is discarded cigarette butts. It's been estimated that each year, 5.6 trillion cigarette butts are tossed out into the environment (Slaughter et. al 4). An astounding amount of cigarette butts are cleaned up from waterways annually, necessitating further research into the possible toxic effects on aquatic life (Slaughter et. al 4). It is possible for over 4,000 chemicals to be released into the environment from cigarette butts, but the extent of their toxicity is not

fully understood. A study found that smoking increased the toxicity of cigarette filters, and cigarette butts are acutely toxic to marine and freshwater fish (Slaughter et. al 1). The environmental impact of cigarette butts and their role as the world's most common form of litter alone is devastating to wildlife and cannot be understated.

The Tobacco Industry

When an industry loses 443,000 of its customers every year due to deaths caused by that industry's product, it seems unfathomable that such an industry would be able to continue, let alone thrive (Glassman et. al 765). Despite the malignancy of their products, the tobacco industry remains lucrative and is only expanding. The tobacco industry relies on bringing in a substantial amount of new customers, and over \$34 million in a single day may be spent on advertising and promoting their products (Glassman et. al 765). Reports from the Surgeon General also note the outrageous statistic of the tobacco industry's advertising budget, "In 2008, tobacco companies spent \$9.94 billion on the marketing of cigarettes and \$547 million on the marketing of smokeless tobacco" (National Center for Chronic Disease Prevention and Health Promotion 10).

The amount of money spent by tobacco companies to market their products is astounding, with a global recruitment effort to attract new users of tobacco. To make up for an inevitable loss of ailing consumers, the industry must invest heavily on marketing their products towards new customers.

However, not all revenue is lost due to the malicious health effects on the tobacco industry's customers. There is considerable evidence which indicates that smoking regulations on public and private properties make a significant contribution to the decline of sales (Office on Smoking and Health 450). To combat the ever-increasing ubiquity of

smoking bans, the industry has turned to marketing smokeless products as an alternative to cigarettes. A new user of tobacco products need not risk the harm of smoking, and instead may choose from an array of smoke-free alternatives. Chewing tobacco, ecigarettes and vaporizers have become increasingly popular in recent years, and it is these products that the industry is focusing its promotion efforts on. These smokeless products circumvent smoking bans, which only aim to decrease exposure to secondhand smoke, and the prevalence of smoke-free alternatives is only increasing.

Young Adults and Tobacco

Despite the overwhelming public knowledge and well-documented dangers of tobacco use, the tobacco industry continues to thrive and attracts more new users each year. Tobacco use has become an epidemic in youth and young adults, with the Surgeon General reporting that about 88.2% of adults who smoke daily began smoking by the age of 18 (National Center for Chronic Disease Prevention and Health Promotion 1). Tobacco use is especially widespread in young adults aged 18-25, which was found to be the age group with the highest prevalence of smoking (Russette et. al 110). The figures reported by the Surgeon General regarding tobacco use in youth are incredibly astounding and raise serious concerns throughout the entire public health sector.

Although the tobacco industry spends an obscene amount of money on marketing all of its products, companies argue that their advertisement campaigns do not increase a demand for tobacco (National Center for Chronic Disease Prevention and Health Promotion 5). In particular, the industry insists that their advertising does not encourage or influence young people to initiate use of tobacco products (National Center for Chronic Disease Prevention and Health Promotion 5). However, studies conducted by third parties

contradict these claims, with evidence that advertisements endorsed by the tobacco industry are a key contribution to youth initiating tobacco use (National Center for Chronic Disease Prevention and Health Promotion 5). Extensive research cited in Surgeon General reports says that the tobacco industry itself has a major role in enticing youth to take up tobacco use. A 2012 Surgeon General's report on tobacco use in young adults firmly disputes any claims the tobacco company makes on the influence of its marketing: "The evidence is sufficient to conclude that there is a causal relationship between advertising and promotional efforts of the tobacco companies and the initiation and progression of tobacco use among young people" (National Center for Chronic Disease Prevention and Health Promotion 4).

With such blatant evidence that points toward youth and young adults as vulnerable populations when it comes to taking up smoking habits, it is vital that initiatives be taken up to limit tobacco use. Smoking and smoke-free tobacco use both pose a major public health and environmental concern, and it is in the nation's best interest that we begin improvement at the root of the issue.

College Campuses

Tobacco use and its harmful effects on health are a major public health concern for the entire nation, and in the grand scheme of things, college campus bans on tobacco seem like a minor step in the process of reducing exposure to the toxic results of smoking. However, the significance of regulating tobacco use at the university level should not be underestimated. In 2009, Joseph Lee and his colleagues conducted a study on the diffusion of smoking and tobacco policies across campuses in the state of North Carolina. The study notes that tobacco-free policies on college campuses can be very

effective, because many students tend to be recreational or light smokers (Lee et al. 311). Stemming tobacco use becomes significantly more achievable in young adults who do not use tobacco regularly or heavily. When this is considered alongside the fact that the tobacco industry takes incredible steps to specifically target young adults, the contribution of tobacco bans on college campuses towards public health becomes significant. College regulations are an intuitive way to encourage a population of young students to live healthy lifestyles.

When it comes to young adults, college campuses are the most prominent and significant environments of influence. Students work, live and study on college campuses, spending more than just scheduled class times on university property. An assessment done on tobacco use among college students urges communities and institutions to take action by preventing and limiting smoking and tobacco use (Plasphol et. al 162). The assessment written by Dr. Sarah Plasphol and her colleagues focuses on the prevalence of tobacco use among college students, which was "...much higher than the nationally targeted goal of 10.5% identified in *Healthy Campus 2010*." (Plasphol et. al 162).

Programs limiting tobacco use within populations, such as college campuses, are a highly effective way to combat the epidemic that is tobacco use. Plasphol and her colleagues stress the importance of policy-based intervention, especially in populations that are vulnerable. Emphasizing the influence of college campuses not only on students, but also in local communities, the assessment on tobacco-free colleges discusses the effectiveness of tobacco-related goals and programs at institutions of higher education (Plasphol et. al 167). Creating an environment that is smoke-free and tobacco-free

encourages healthy living and cessation of tobacco use. Studying or working in an environment that allows smoking may further influence populations that are already the targeted audience of tobacco advertising. Stemming tobacco use nationwide is not an easy task to undertake, but an increasing number of college campuses are taking on the challenge.

III. Methods

To fully analyze policies of smoke and tobacco free college campuses, research was initially collected on nationwide reports from various institutions. Several publications from higher education institutions about smoke-free or tobacco free policies were reviewed and analyzed. Publications ranged from policy reports to thesis texts analyzing the policies among institutions.

Further background research was then done on health, environmental, economic effects of tobacco use. Data was collected from several health institutions including the Center for Disease Control (CDC), the World Health Organization (WHO), and several reports from the Surgeon General. This data provided statistics generated by scientific research about the negative health consequences and diseases associated with smoking and tobacco use. Data and information about the environmental impact of cigarette-associated pollution was collected from the Environmental Protection Agency (EPA). The economic impact of tobacco use was researched to provide background on the tobacco industry.

Further research on tobacco use was narrowed down to the topic of smoke-free and tobacco-free college campuses. A number of resources from tobacco-free and smoke-

free universities across the United States were used. Following background research on college campus policies, focus was placed on to the new tobacco free policy at the University of Massachusetts Boston. The policy itself was reviewed, having been issued in December 2015. A previous report on a survey collected in 2012 at the University was also included in research, to provide background on UMass Boston's journey to the policy.

Based on suggestions of student involvement found in reports from nationwide college campuses, a project was undertaken to increase student involvement in the implementation and compliance of the tobacco-free policy at the University of Massachusetts Boston. Members from Undergraduate Student Government, myself included, partnered with University Health Services, the Department of Public Safety and Student Affairs in an effort to increase student outreach. Several initiatives were undertaken on campus, including student hosted events and tabling so that student awareness on the tobacco-free policy could be improved.

IV. Results

A number of factors need to be considered when a university or college wishes to promote healthy living and create a smoke-free environment through the use of an official policy. Time, finances and considerable resources must be available before an institution even begins drafting a policy or altering an existing one. Careful attention needs to be focused on vocabulary and the message conveyed during the process. Awareness and education campaigns must be planned so that the campus community has easy access to information pertaining to the new policy. Each institution has a unique set

of needs that must be met while implementing a new policy and many considerations will take place over the long and bumpy road to becoming tobacco-free.

Smoke-Free versus Tobacco-Free

In recent years, policy makers have placed an emphasis on clearly defining the differences between smoke-free and tobacco-free. Although it seems as if the end result of both policies would be similar, the vocabulary used and definitions made are very significant. In the context of a policy, the distinction of smoke-free and tobacco-free can have a significant impact on public health and on the tobacco industry.

A smoke-free policy is relatively straightforward: all products that produce secondhand smoke are prohibited. This of course includes cigarettes, the most significant producer of secondhand smoke containing carcinogenic byproducts. Simple and to the point, smoke-free policies aim to eliminate secondhand smoke, but the public health support ends there (Glassman et. al 764). With the increasing popularity of smoke-free policies, tobacco companies have been investing in creating and marketing smoke-free products. In a smoke-free location, smoke-less tobacco use is not prohibited.

While smoke-free policies have one objective, - to combat secondhand smoke - tobacco-free policies encompass all tobacco products in a blanket effect in order to close the loophole of using smokeless tobacco products. Tobacco-free includes any and all smoke-producing products, as well as popular products being marketed as a healthier alternative to cigarettes. E-cigarettes and vaporizers that produce vapor byproducts are also targeted in tobacco-free policies. Although vapor-producing products are often marketed as a harmless alternative to smoke, new research disputes this claim, with exposure studies indicating "...5 minutes of e-cigarette use resulted in a significant

increase in airway flow resistance..." (Grana et. al 1). Even products like chewing tobacco, which don't produce vapor or smoke but have been shown to cause cancer, are included (Office on Smoking and Health 446). This emphasizes the importance of public health beyond just secondhand smoke exposure, and promotes healthy living. By virtue of language and definitions, a tobacco-free policy takes a stand against the tobacco industry and is in the best interests of public health.

Compelling evidence indicates that college campuses that implement tobacco-free policies have more successful results than smoke-free policies (Fallin et. al 1098). Comprehensive tobacco-free policies have been associated with a reduction litter from cigarette use as well as a significant decrease in secondhand smoke (Lee et. al 315). A tobacco-free policy that encompasses all tobacco use is strong and efficient, and thus more likely to succeed. A college that eliminates tobacco altogether demonstrates that it values the health and wellbeing of its students and faculty.

Nationwide Policies

Enacting a new policy at an institution of higher education is no simple or swift task. Before even drafting a new tobacco policy, the administration of most universities will spend a significant amount of time dedicated to on and off campus research. Health representatives at universities will look to the experiences and reports from other institutions as examples, especially when it comes to strategizing and implementing a new policy. Many schools might run into significant obstacles, especially when it comes to support from students, staff and faculty. A university that is looking to update its policies when it comes to smoking and tobacco regulations can expect a long road ahead.

Although there is no comprehensive guide to follow when introducing a 100% tobacco-free policy, in recent years many institutions and public health representatives have looked to the statewide case of North Carolina as a model. From January 2006 through December 2009, The North Carolina Health and Wellness Trust Fund enacted a multilevel intervention program that aimed to implement tobacco-free policies at institutions of higher education across the state (Lee et. al 311). Before the initiative took place, only one institution in North Carolina, a small private college, had an official tobacco-free campus policy (Lee et. al 311). Four years after the initiative began, 33 institutions across the state had implemented tobacco-free policies on their campuses (Lee et. al 311). These institutions included both private and public universities, as well as community colleges and represented a total of 159,300 students (Lee et. al 312). The study concluded that adoption of tobacco-free policies is highly accelerated with the diffusion of a statewide multilevel intervention (Lee et. al 316).

Among the many institutions that participated in the North Carolina initiative, many different approaches and methods for success were taken. A significant factor that led to policy change was the practice of various activities, which opened the process up to the entire campus, gaining a significant amount of support and cooperation. Many of the campuses created new coalitions during the initiative, which invited students and staff to become active in the process of creating a new policy (Lee et. al 314). It was reported that across the state, 175 surveys and 231 petitions were completed in order to gain support for the incoming policy (Lee et. al 314). Also impressive were the 1,810 meetings and presentation held during the process, proving that people were eager to become involved in the initiative (Lee et. al 314). The statistics show that with

participation from a large portion of the campus population, policy implementation is likely to be successful in the future. The successful adoption of smoke-free and tobaccofree policies by so many institutions across North Carolina made it a national leader in tobacco-free college campuses.

A mixed-methods approach to implementing tobacco-free policies has been strongly advocated by many universities. An article published in the Journal of American College Health about a newly tobacco-free campus cited empirical research, which "...demonstrated the effectiveness of a multiple-component intervention (ie, incentives, reminders, marking, environmental changes)..." on campuses with new tobacco policies (Russette et. al 111). The benefit of a mixed-methods approach is that each institution is able to tailor its procedures to its own needs. Smaller colleges may benefit from simple reminders aimed at reducing non-compliance, while larger universities may have to rely on incentives or consequences as a means of regulation.

As with any other policy, the passing of a tobacco-free campus policy relies on support and active participation from members of the university, as demonstrated in North Carolina. Without a solid foundation of support, a policy will be considerably ineffective or fail. Participation can be gained in a mixed-methods approach, as suggested by empirical research completed at tobacco-free campuses. Another notable research study completed at the University of Toledo in Ohio offers overviews of various methods suggested for a campus seeking to become tobacco-free (Glassman et. al 764). The foremost-suggested step to successfully becoming tobacco-free is to create a committee, which oversees the drafting and implementation of the policy (Glassman et. al 765). This committee should be made up of representatives from the administration, student body,

staff and other members of the university who are interested in becoming actives in the process (Glassman et. al 765). With members from diverse areas of the university, a collaborative team will be able to ensure that the needs of all faculty, staff and students are met.

Following the creation of a Tobacco-free committee, further participation from the population of the institution should be a top priority. The importance of student involvement is often emphasized, and possible activities include debates, polls or events aimed at garnering interest and support (Glassman et. al 766). Another important method universities should use to their advantage is generating publicity through social media or the news (Glassman et. al 766). School newspapers are of course a valuable source of information and publicity on a college campus and should be utilized to help spread awareness and encourage debate. Outside media and local news agencies are also important in a publicity campaign, and it invites the local community to become involved in the process. In today's age of technology, social media is another crucial part of generating awareness and gathering support.

For a tobacco-free policy to even pass, let alone succeed, the importance of administrative and staff support cannot be understated. The study published by Tavis Glassman and his colleagues says that without the guidance and strong support of the administration, a tobacco-free initiative will most likely fail (Glassman et. al 766). Most successful tobacco-free movements note that administrative support was a key factor, especially since the administration has resources and the knowledge to strategize a new policy (Glassman et. al 766). Another aspect of success can also be attributed to the support of university's board of trustees. Support from the board of trustees is crucial, as

it is their responsibility to oversee the institution and overall, a tobacco-free policy is in their best interests when it comes to health and finance (Glassman et. al 766). An institution of higher education is made up of several different populations, and all of them should be involved in the process of developing such an important initiative.

Compliance and Enforcement

There is no standard guide to follow when implementing a tobacco policy, and each case will be unique. As more universities adopt official tobacco policies, discourse has been opened among the many institutions that seek to improve compliance. There has been strong debate about whether or not tobacco-free policies necessitate enforcement, and what methods of enforcement may be most fair and successful.

One common theme among many articles written about tobacco-free campuses is that poor compliance appears to be more common at institutions that do not enforce their tobacco policies (Russette et. al 115). One study suggests that without an efficient enforcement plan, non-compliance will persist, which brings into question the point of having a policy in the first place (Russette et. al 115). In other words, a policy that isn't enforced does not hold very much substance or validity.

Though there are many factors at play at each university, Glassman suggests steps any institution may take after employing a new tobacco policy. When the policy is first introduced, he suggests that initial compliance should be self-enforced (Glassman et. al 767). It would be up to smokers and non-smokers alike to adhere to the tobacco ban and comply. However, voluntary compliance may end up being poor, as is the case for many universities without official enforcement. In this case, Glassman suggests the university take official action and issue warnings to violators. For those who repeatedly violate the

policy, more serious consequences such as fines may be warranted. Glassman urges universities to treat violation of the tobacco policy as seriously and equally as they would other campus policy violations.

Many universities that do not employ an enforcement plan alongside with a new tobacco-free policy will face poor compliance and the campus community may not adhere to the new regulations. In 2012, a proposed enforcement plan for a tobacco-free campus that was experiencing poor compliance was published in the Journal of American College Health by Dr. Reginald Fennel. The article repeatedly stresses that a policy without enforcement undermines the hard work of health representatives for the university (Fennel 492). The proposed plan to better regulate compliance relies on warnings and fines for violators. First-time violators would simply be issued a warning, but repeat offenders would receive a more serious consequence (Fennel 492). A second offense would result in a \$25.00 fine charged to the Bursar's office, and a third offense would result in a heftier fine of \$100.00 (Fennel 492-493). Each time a citation is issued, resources for smoking cessation would be offered to the violator. This enforcement strategy would be applied to not only students, but also faculty and staff (Fennel 492). While this enforcement plan may be considered harsh or promoting the victimization of smokers, Fennel argues that a tobacco-free policy ought to be regulated with the same enforcement as any other campus policy.

The University of Massachusetts Boston

As the only public research university in the city of Boston, the University of Massachusetts Boston has a considerable role in the community and significance to the state of Massachusetts. Despite the institution's role as a leading public university,

UMass Boston was not able to successfully implement a policy that bans smoking or tobacco use on its property until the fall of 2015. It has been an incredibly complex and long road to the tobacco-free policy for UMass Boston, which is the last campus in the University of Massachusetts system to ban smoking on University owned property. The successful passing of the tobacco-free policy marks an incredible achievement for UMass Boston, and serves as a significant factor in maintaining the university's high standards as a leading teaching and research institution.

Prior to passing the tobacco-free policy, UMass Boston only prohibited smoking inside buildings, but had no official restrictions on smoking outdoors (Center for Survey Research 3). Although the university made an attempt at discouraging smoking near entrances to buildings, the lack of official restrictions made it impossible to regulate secondhand smoke from entering the buildings themselves. During this time, one method to limit public exposure was the placement of "no smoking" signs in these areas, but noncompliance was commonplace. In a report completed by University Health Services in 2012, a campus survey found that 57.5% of nonsmokers were bothered by smoke outdoors at least once a week (Center for Survey Research 3). Even though smoking was prohibited indoors, 13.3% of nonsmokers also reported being bothered by smoke indoors at least once a week (Center for Survey Research 3). Overall, data collected from this survey conveyed strong support for some form of enforcement and penalty for noncompliance of the indoor smoking ban, as well as significant concern about exposure to secondhand smoke. It was clear that a critical change needed to be made at UMass Boston regarding its smoking policy.

In the fall semester of 2015, the newly drafted tobacco-free policy at UMass Boston fully went into effect. The policy opens with a message to the entire campus, explaining why there is a need for a comprehensive tobacco policy.

"There is considerable evidence that concentrations of smoke are harmful to nonsmokers, as well as smokers. Findings of the Surgeon General indicate that tobacco use in any form, active and passive, is a significant health hazard. The University of Massachusetts Boston has a responsibility to its faculty, staff, students, and visitors to provide a safe and healthy environment.

The Tobacco-Free Campus Policy is intended to eliminate exposure to secondhand smoke, provide an environment supportive of tobacco-free lifestyles, mitigate the risk of accidental fire, eliminate the health risks associated with expectoration from smokeless tobacco, and eliminate the environmental impact of cigarette litter.

With this action, the University of Massachusetts Boston will join the other four campuses of the UMass System, which have implemented a tobacco-free campus policy" (University of Massachusetts Boston 2015)

The official tobacco-free policy for UMass Boston defines "tobacco" as any form of tobacco or nicotine product (UMass Boston Tobacco Free Campus 1). This includes any product that contains either of these ingredients, regardless of whether or not it is smokeless. Defining tobacco this way is significant, because it bans not only smoking,

but includes smokeless products that may be inhaled or ingested. With the rising popularity of electronic cigarettes and vaporizers, this definition will help to ensure that these new alternatives to cigarettes are not allowed on campus. With the health effects of these smokeless tobacco products still under study, this tobacco-specific policy sets a new standard to keep any potential health and environmental threats off campus.

With this new policy put into effect, tobacco use is now prohibited in all buildings and outside on any university owned property including parking lots and in university owned vehicles (UMass Boston Tobacco Free Campus 2). The extension of the prior restriction that only banned smoking indoors is a notable achievement for UMass Boston. With the new prohibitions, Chancellor Keith Motley has appointed a committee dedicated to the tobacco-free policy. The committee has representatives from several administrative departments as well as student representatives.

Success of the tobacco-free policy relies on compliance and support from the entire UMass Boston community. As of Spring 2016, no official enforcement plan is in place for the tobacco policy, and there are no punitive procedures for noncompliance. Though the policy cannot be enforced, the administration is dedicated to monitoring prohibited activities on campus. Annual reviews of the policy are scheduled for the first three years of implementation, and the Department of Public Safety will document any tobacco related complaints (UMass Boston Tobacco Free Campus 3). Complaints of noncompliance are to be passed on to the Tobacco-Free committee, and if needed, the policy will be altered.

With no official enforcement plan, volunteers who are trained by the Tobacco-Free Policy Committee will encourage compliance for individuals who are found to be using tobacco on campus (UMass Boston Tobacco Free Campus 3). This training involves a procedure in which volunteers are able to remind individuals who are not complying with the policy in a professional manner. These volunteers may also provide cards that have information about the policy, in an effort to spread awareness about the tobacco-free campus and the availability of smoking cessation assistance. Most of the volunteers to do this task are drafted from the Department of Public Safety's student cadet program, but any member of the university may become a volunteer if they wish. However, the foremost method of success for the tobacco-free policy remains voluntary compliance.

Since the implementation of the tobacco-free policy, an awareness campaign has been essential thus far. Signage in the form of flyers and posters has been posted throughout the entire campus. Initially, these signs were not always met well once the tobacco-free policy went into effect, and some ended up torn down or vandalized by those opposing the policy. However, these signs still act as a source of information for the UMass Boston Community. A web page dedicated to information about the policy is available on UMass Boston's website, and it provides access to the policy itself, answers to frequently asked questions and resources for cessation. The web page acts as an accessible source of information about tobacco and smoking restrictions on campus and it is available for the public's use. However, the existence of this webpage does not seem fully recognized by most of the university, and is underused.

A significant source of awareness of the tobacco policy for students in particular is in the form of student involvement. For the policy to be at all effective, it is crucial that the student body understands the policy and voluntarily complies. As a result, a number

of student representatives from the Undergraduate Student Government have been involved in the creation and implementation of the policy. Members of the executive branch of Undergraduate Student Government helped to provide input for the drafting of the policy and attended many meetings, acting as ambassadors for the student body. A partnership between student representatives and the administration has opened a gateway, allowing coordination and communication to be shared openly. Students have long advocated for the creation of restrictions for smoking and tobacco use on campus, and now student representatives are dedicated to spreading education and awareness about the new policy.

V. Analysis

One of the greatest public health success stories this past century has been the dramatic decline of smoking, a result of numerous efforts from health representatives, the public and the media. Clear evidence indicates that smoking bans and tobacco regulations are highly effective methods of reducing secondhand smoke and encouraging cessation (Centers for Disease Control and Prevention 1). With the tobacco industry doing everything in its power to circumvent smoking bans in public and private locations and recruit new, young consumers, it is crucial that this public health campaign continue to expand and improve. Young adults in particular are a vulnerable population that is the target of the industry's marketing efforts. Tobacco-free policies at institutions of higher education are an effective way to discourage the uptake of tobacco use, especially for young adults.

A metaphorical arms race between the tobacco industry and public health officials has been taking place for years. Given the tobacco industry's increased efforts in marketing smokeless tobacco products – a response to locational bans on smoking – representatives of public health have begun to advocate for policies to specify tobacco-free. This distinction is extremely significant, as noted earlier, and universities that consider public health as a priority should implement tobacco-free policies rather than smoke-free policies. For a time, UMass Boston remained the only campus in the University of Massachusetts system that allowed smoking on university owned property. The push for a smoke-free campus did not seem enough, and UMass Boston has joined the ranks of universities with a tobacco-free policy.

Due to the immense success of the public health campaign against smoking, regulations on smoking in public and private locations have become increasingly common. The presence of secondhand smoke is reduced significantly because of bans on smoking in these locations, but in larger institutions it is not enough to simply ban tobacco use and expect results. Universities in particular must be prepared to dedicate resources and time to advocate for the policy and ensure its effectiveness. One suggestion that is often given for campuses seeking to become tobacco-free is to use a mixed-method approach during the process. By using different tactics of advertising and raising awareness, universities are more likely to see success when implementing a new tobacco policy (Russette et. al 111).

When a policy is new, one priority is informing the target population about its existence and meaning. This advertising campaign is most effective when it is available in several different forms and accessible to the public. UMass Boston has approached this

area in a number of ways, in an effort to inform the entire campus about the newly introduced tobacco policy. Signs pertaining to the policy have been posted around the campus in multiple locations since before the policy even became fully implemented. However, the signage may not be substantial enough to convey the message intended. During the first weeks of the policy being put into effect, signs and flyers announcing the policy were often torn down or vandalized. Though well-meaning thought has been put into the placement of the signage, the average student or visitor to the campus may never even notice or be aware of the signs in the first place. The reality of the situation is that signs and flyers alone do not make for a very effective awareness campaign, and yet more resources are necessary for success at UMass Boston.

Another method of outreach that UMass Boston has used is the webpage dedicated to information and resources about the tobacco-free policy. While the webpage follows standard recommendations of providing access to the policy itself and resources for cessation, its goal falls short. Most members of the UMass Boston community are not even aware of the existence of the webpage, and are unlikely to use it. For this reason, the webpage cannot be considered a valuable source of information about the tobacco-free policy.

Emphasis is often placed on the necessity of support and education about smoking cessation when a campus becomes tobacco-free. It is not enough for a university to ban smoking – the foremost goal of tobacco policies is to promote healthy living, and an institution must also provide health support. While it is not a university's place to tell students and staff they need to quit tobacco use, it is essential that the school offer judgment-free support for those individuals who do want to quit. The South Carolina

Tobacco-Free College and University Summit recommends that cessation resources be made available at the time the policy is introduced (Wynne 1). These resources may be in the form of on-campus classes, support groups, medical consultation, access to free cessation products, and referrals to third-party resources (Wynne 1).

Since the tobacco-free policy went into effect, UMass Boston has used several of these cessation support strategies on campus. Workshops for cessation have been made available to faculty and staff and free nicotine gum is always available at University Health Services. In addition, the webpage dedicated to the tobacco policy provides a link to cessation resources not affiliated with the university. However, the effectiveness of these strategies is questionable and must be evaluated. As of Spring 2016, there has been no attendance at the cessation workshops. While the nicotine gum is freely available, tobacco users looking to quit have not used this to their advantage. The availability of nicotine gum may not be well known and is not often advertised. The webpage for the policy is made easily available to the public, but there is no guarantee that people will refer to it, due to pure ignorance on its availability. Even though UMass Boston has been making efforts to promote cessation and provide support for anyone who wants to quit, the effectiveness thus far has been minimal.

Though the mixed methods of creating public awareness on the tobacco-free policy at UMass Boston have not been as successful as hoped, the policy has not been a complete failure. There is no doubt that health representatives have student outreach regarding the policy as a priority. Members of the tobacco committee worked alongside student representatives from Undergraduate Student Government while drafting the policy. While a select group of students have shown interest in advocating for the policy

and becoming active in the initiative, the majority of students has not been involved or has not shown interest in the process. This is not to say that most students do not support having a tobacco-free campus — in fact most do (Center for Survey Research 3). Most students just do not take action beyond silently complying with the policy. There are many possible reasons for this, but an important factor in student support at other universities is the fact that many student activists live on campus. UMass Boston does not currently own residence halls, and it is considered a commuter campus. While health representatives value student outreach, garnering active support and participation from students is understandably difficult. As a non-traditional school, UMass Boston must find new methods to gain support from students.

To improve student outreach and increase awareness on the tobacco-free policy, members from Undergraduate Student Government and the pre-medical fraternity Phi Delta Epsilon partnered with University Health Services. With support from Health Services, these student groups planned tabling events that would cater to student's interests. As a way to improve the problem of a lack of effective signage, a poster design contest took place. This contest served as an invitation to the student body to use creativity and become actively involved in the tobacco-free initiative. However, response to the events and to the contest was poor. There was not much participation in these initiatives, and they were not successful in increasing student awareness and activeness. A solution to the problem of unsuccessful student outreach has yet to be determined, but may include a more effective advertisement campaign.

Much of the literature discussing tobacco-free college campuses argues that enforcement is an essential key to success. One prominent article from Miami University

makes a strong case advocating for the necessity of enforcement in a comprehensive tobacco ban. In an interesting take on the debate, Reginald Fennel takes a strong stand on the issue by comparing it to the university's policy on alcohol. With a tobacco policy weakened by a lack of enforcement, a student receiving punishment for violating the alcohol policy could make the case that violators of the tobacco policy are not held to the same standard (Fennel 493). Fennel asks why tobacco policies should be considered less enforceable and valid than an alcohol policy, especially if you consider the likelihood that secondhand smoke from tobacco violations are doing harm to more than just the individual violator.

To consider Fennel's comparison of a campus tobacco policy versus its alcohol policy, an analysis of UMass Boston's own policies can be made. The drug and alcohol policy at UMass Boston is extensive and well detailed. Some of the consequences of violating the policy include disciplinary action in the form of an investigation led by the Dean of Students, with the possibility of several penalties (University Policy on Alcohol and Other Drugs." 1). Depending on the severity and specifics of the violation, a student or staff member may face written reprimand, probation, suspension, arrest or expulsion (University Policy on Alcohol and Other Drugs." 1). In comparison, at this point in time violators of the tobacco-free policy face no official consequences. The only possible consequence of non-compliance is a reminder of the policy, provided by volunteers who are trained to do so in a courteous manner ("UMass Boston Tobacco-Free Campus" 1).

While alcohol and tobacco policies do not necessarily warrant total equality, Fennel's point on the matter does create a debate worth having. There is a major disparity between two policies that concern public health and safety at UMass Boston. Both

policies share a common mission to provide a safe and healthy environment that is conductive to learning, and the reality is that the tobacco-free policy at UMass Boston should be just as valid and respected as the drug and alcohol policy. Fennel's discussion on the disparity between alcohol and tobacco policies becomes even more compelling when it is considered that in recent years, there has been public health discourse regarding the possibility of raising the age of legal access to tobacco products (Bonnie et. al 4). Many health officials have been advocating to raise the age of using and purchasing tobacco to 21 years old, the same as the drinking age (Bonnie et. al 4). If in the future the legal age of access to tobacco is raised to 21 years old, colleges with tobacco bans will need to uphold the tobacco policy to the same standard as their alcohol policy, especially since a large number of college students may be under 21 years old. As of now, the disparity between the alcohol and tobacco policies at UMass Boston is clear, and the public discourse on raising the tobacco access age to 21 should be taken into consideration when constructing an enforcement plan. It is relatively uncommon to witness someone explicitly violate the drug and alcohol policy on campus, but violators of the tobacco policy do so openly and repeatedly.

Though smoking has clearly decreased since the tobacco-free policy went into effect, any visitor to the UMass Boston campus is able to see the results of a lack of enforcement for the policy. Tour groups of prospective students and their families pass by smokers standing in front of "No Smoking" signs, and students and faculty are continually exposed to secondhand smoke. The tobacco-free policy at UMass Boston is still in its infancy, and it is the duty of the Tobacco-free Committee to improve the policy in the future as needed.

VI. Conclusion

Based on literature and discourse among representatives from the health field and institutions of higher education, it is in the best interests of a university to develop and employ a comprehensive tobacco-free policy. While smoke-free policies do greatly eliminate secondhand smoke, the policy's dedication to public health does not extend beyond the reduction of secondhand smoke and environmental litter. A plan that places a ban on all tobacco products is the most effective method to promote cessation and discourage the habitual use of tobacco. The tobacco industry has dedicated its resources to producing smokeless tobacco alternatives to cigarettes, and a policy that specifically bans all tobacco products aims to combat this.

A tobacco-free campus must be fully prepared to commit to a public health mission of promoting healthy living. Tobacco policies without corresponding enforcement plans have been shown to be ineffective, generally resulting in continual non-compliance. To improve compliance, many health and university officials agree that enforcement must become official and employed by the university's public safety office. An institution that becomes tobacco-free must have a multitude of resources available in order to create a successful enforcement plan. These resources include but are not limited to employees dedicated to regulating the policy, finances, accessible assistance for cessation and a comprehensive process of disciplinary action. Only once these resources are secured can a campus fully regulate and support its tobacco-free policy.

It is in UMass Boston's best interests to design and implement a comprehensive enforcement plan for the tobacco-free policy in the future. Currently, the tobacco-free policy is weakened by the lack of enforcement, and improvements must be made in order for the university to achieve its mission of a healthy working and academic environment. The hard work and efforts of health representatives for the university is diminished without enforcement for violators of the tobacco policy. To develop an enforcement plan, the university needs to take steps that complement the severity of non-compliance. If compliance remains poor but is not severe, consideration of a simple disciplinary procedure should be taken, perhaps in the form of citations. If at some point there is a high number of repeat offenders, the enforcement plan should be altered to reflect the severity of violations. Whether that alteration takes the form of fines, suspensions or confiscation of the product remains to be seen, but these steps of disciplinary action could be necessary to improve compliance and strengthen the policy.

The tobacco-free policy at UMass Boston is well meaning and establishes a commitment to protecting public health and promoting healthy living. The comprehensive ban on all tobacco products takes a stand against the tobacco industry's marketing and production of smokeless products. The commitment to public health must not end with the implementation of a tobacco-policy, but it should be strengthened and validated with an enforcement plan that reflects the university's values and mission. The tobacco-free policy at UMass Boston must be held to the same standard as other university policies and much work is necessary to uphold the university's commitment to be a safe and healthy academic institution.

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