



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

An Impact Evaluation of Trinity's Tobacco Free Zones Pilot Project

Summary

Tobacco Free Zones were introduced on Trinity's main campus in July 2016 (see map in figure 1). Over the summer and following academic year, Smoke Free Ambassadors visited the Zones a number of times each week recording the frequency of smoking in each Zone and requesting compliance to the Policy when necessary. The data were analysed in MS Excel. There was an 81% reduction in frequency of observed smoking in the Zones and the vast majority of the Trinity Community complied with the policy. The small number (6%, n=21) of refusals to comply were almost always in Fellows' Square, where observed smoking frequency was 75% lower. There was an upward trend in frequency of observed smoking at the end of both terms. The Trinity community was supportive of the Zones. This report recommends extending the tobacco free zones, encouraging compliance through positive communications and on-campus ambassadors, focusing efforts on students and monitoring compliance.

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Background

In March 2016, the Board of Trinity College Dublin, the University of Dublin gave permission for three Tobacco Free Zones to be introduced on Trinity's main campus, as per Figure 1.

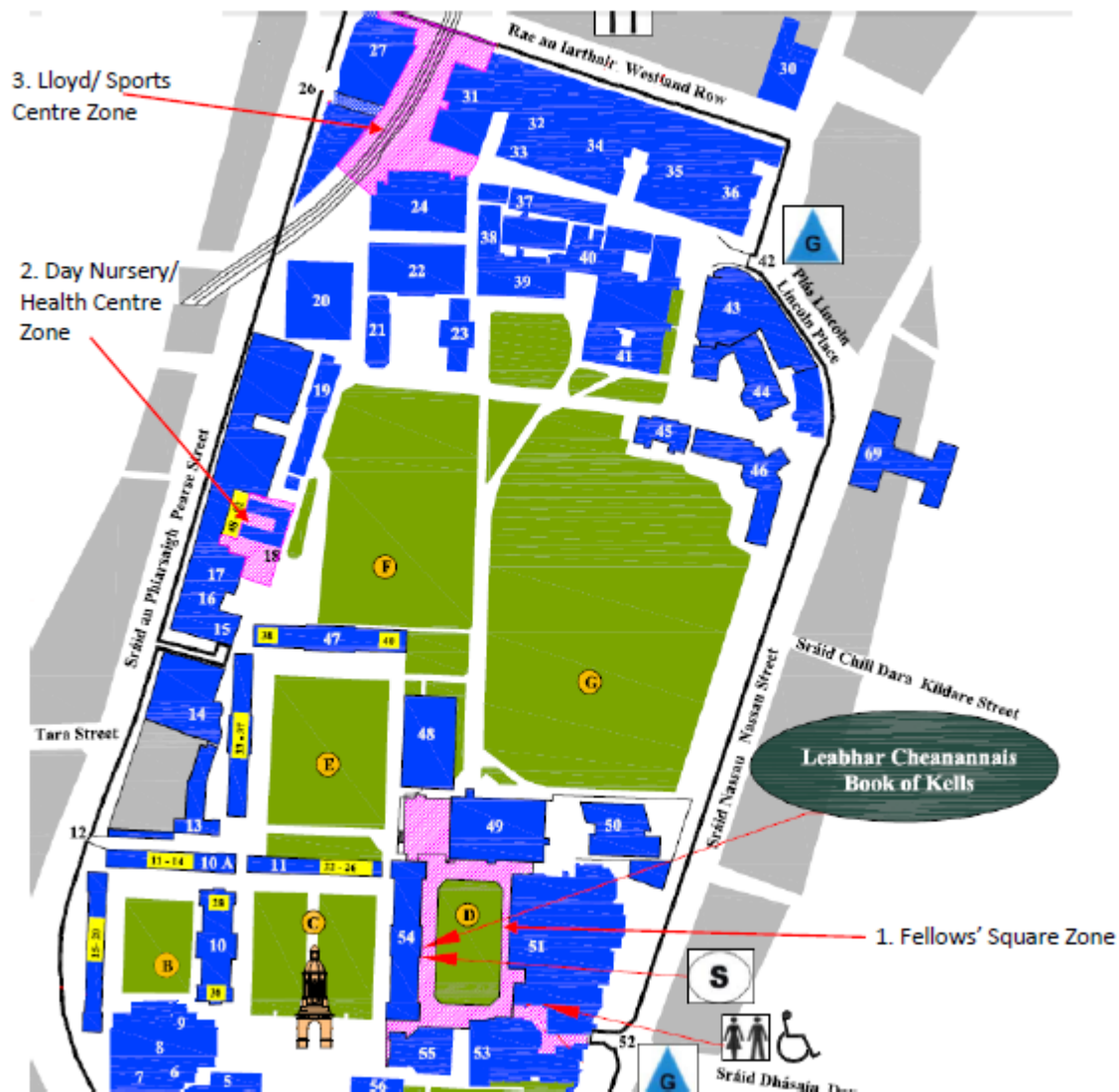


Figure 1: Tobacco Free Zones marked in pink

In the Zones, smoking is prohibited both indoors and outdoors. A full description of the Zones and an explanation of how and why they were introduced is available on the Healthy Trinity Website¹.

Prior to implementing the Zones, baseline data was recorded. Frequencies of observed smoking in the three Zones in the morning, at lunchtime and in the afternoon on one day during exams in May 2016 were recorded.

The Zones were launched in July 2016 and supported on an on-going basis by a communications campaign that encouraged compliance. Tobacco Free Ambassadors checked the three Zones on four days per week and recorded data on their checks. The Tobacco Policy Committee held regular compliance reviews during which they used the data to change and improve the process of implementing the Zones.

¹ <http://www.tcd.ie/collegehealth/Promotion/smoking/>

This document is an impact evaluation of the Tobacco Free Zones pilot project that answers the following questions:

1. Did the introduction of Tobacco Free Zones stop or reduce the frequency of observed smoking in the Zones?
2. Did those who were smoking comply with the Tobacco Free Zones Policy?
3. Does the Trinity Community support the Zones?

Methodology

Frequency of Observed Smoking in the Zones

Quantitative data was analysed in Excel and where appropriate, compared to baseline data on frequency of observed smoking in the Zones before they were created. A thematic analysis of qualitative data collected during circuits was also completed.

Trinity Community Engagement

Communications received by the Tobacco Free Zones Committee about Trinity's Tobacco Policy were thematically analysed. Details of a Graduate Students Union discussion and opinion poll on becoming tobacco free were also included.

Results

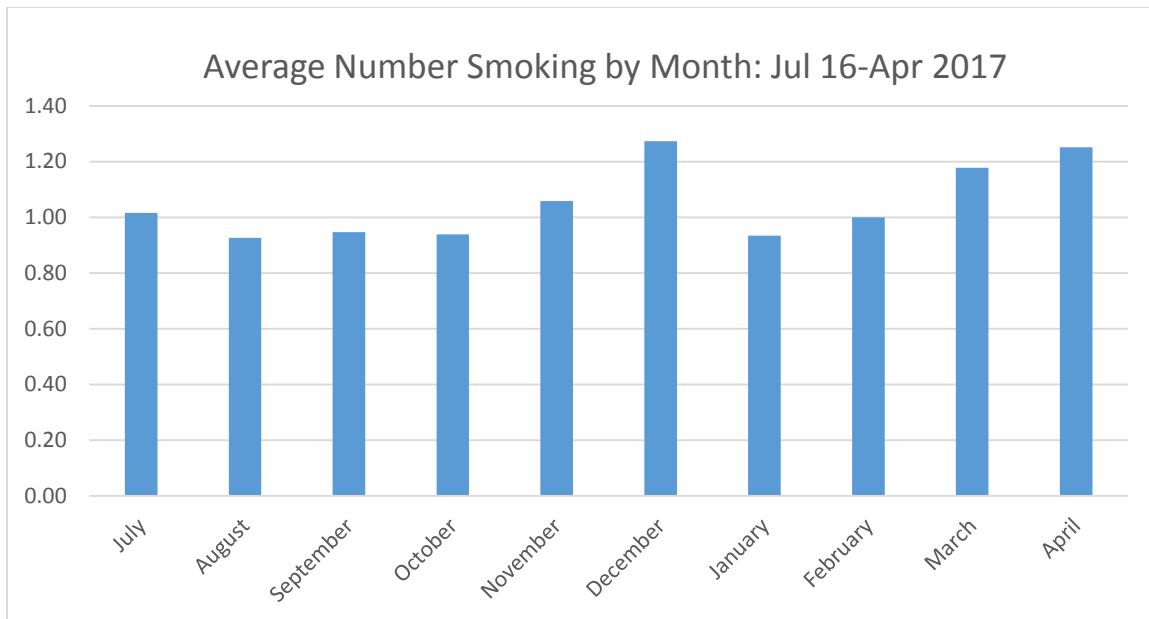
Tobacco Free Zones Ambassador Data: Analysis from May 2016-April 2017

Frequency of Observed Smoking

Month	Baseline before Zones Open (no monthly data) 13 th May 2016			Data after Zones Open			Average reduction	
	No. Checks	No. Smokers	Average Smokers per check	No. Checks	No. Smokers	Average Smokers per check	n	%
July	9	51	5.66	63	64	1.02	4.64	82%
August				68	63	0.93	4.73	84%
September				76	72	0.95	4.71	83%
October				82	72	0.88	4.78	84%
November				136	144	1.06	4.6	81%
December				146	186	1.27	4.39	78%
January				122	114	0.93	4.73	84%
February				160	160	1.00	4.66	82%
March				180	212	1.18	4.48	79%
April				159	199	1.25	4.41	78%
Total	9	51	5.66	1192	1291	1.08	4.58	81%

The average decrease in the frequency of observed smoking in the Zones was 81% compared to baseline. When at their highest, in December and April, the average smoking frequencies of 1.27 and 1.25 respectively were approximately 78% less than the average baseline of 5.66 taken in May 2016. The lowest average observed smoking frequency achieved was in October when there were 85% fewer people smoking in the Zones.

The Committee increased the number of checks during the academic year. The increase in the number of checks had no effect on the average observed smoking frequency which rose in that period.



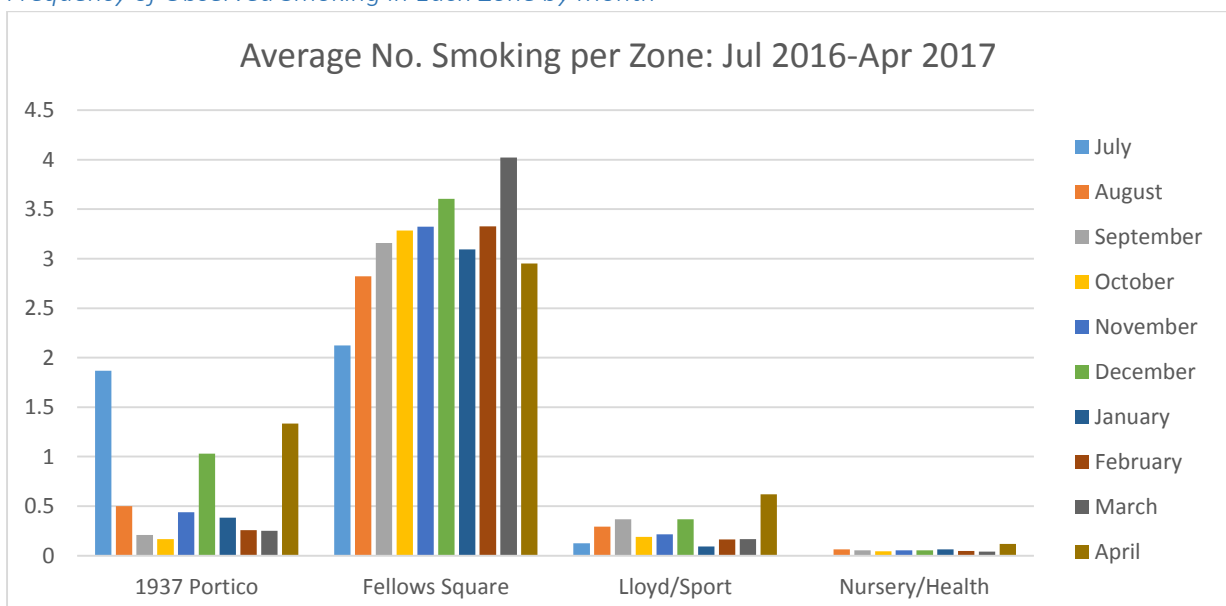
There was an upward trend in frequency of observed smoking at the end of both terms i.e. December and April

Frequency of Observed Smoking in Each Zone

Zone name	Baseline before Zones Open (no monthly data) 13/5/2016			Data for Zones after Opening			Average difference	
	No of checks	Total smoking	Average smoking	No of checks	Total smoking	Average Smoking	n	%
Fellows Square	3	38	12.66	313	1030	3.29	9.37	74%
Lloyd/Sport	3	10	3.33	313	84	0.27	3.06	92%
Nursery/Health	3	3	1	313	18	0.06	0.94	94%
1937 Portico				253	159	0.63	-	-

People are most likely to be observed smoking in Fellows' Square. Frequencies of observed smoking are very low in the Lloyd/Sport and Nursery/Health Centre zones.

Frequency of Observed Smoking in Each Zone by Month



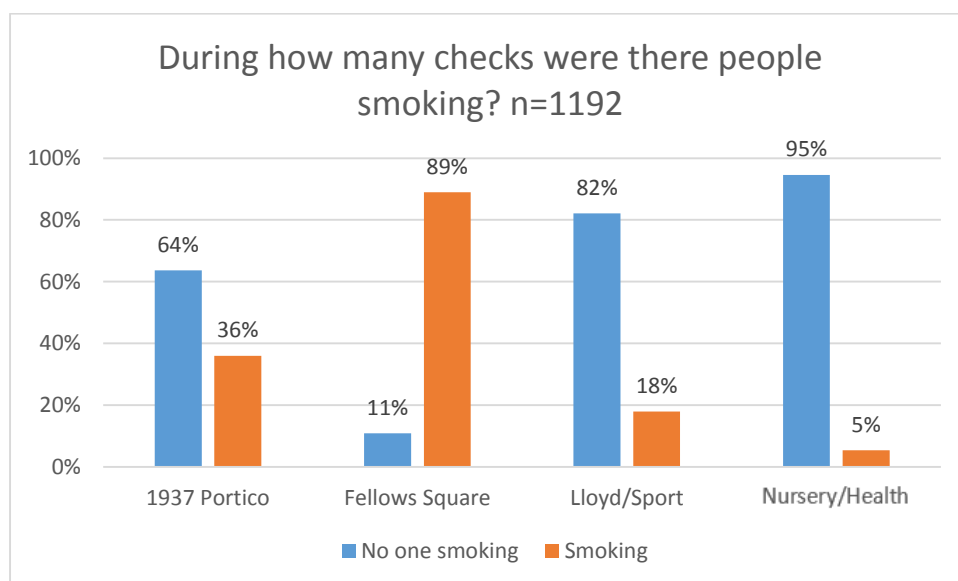
Generally, each of the Zones had upward trends in smoking as academic terms progressed. In Fellows' Square however, frequency of observed smoking decreased in April and increased quite markedly in all other Zones. There was a large reduction in frequency of observed smoking in the 1937 Portico in September.

Compliance per Check

The table below refers to the status of each check rather than the number of people smoking during that check because data on individual behaviour was not recorded.

Status of Check: July 2016-April 2017	n	% of checks
No one smoking	748	63%
Smoking	444	37%

During nearly two thirds of checks, there was no one smoking in the Zones.

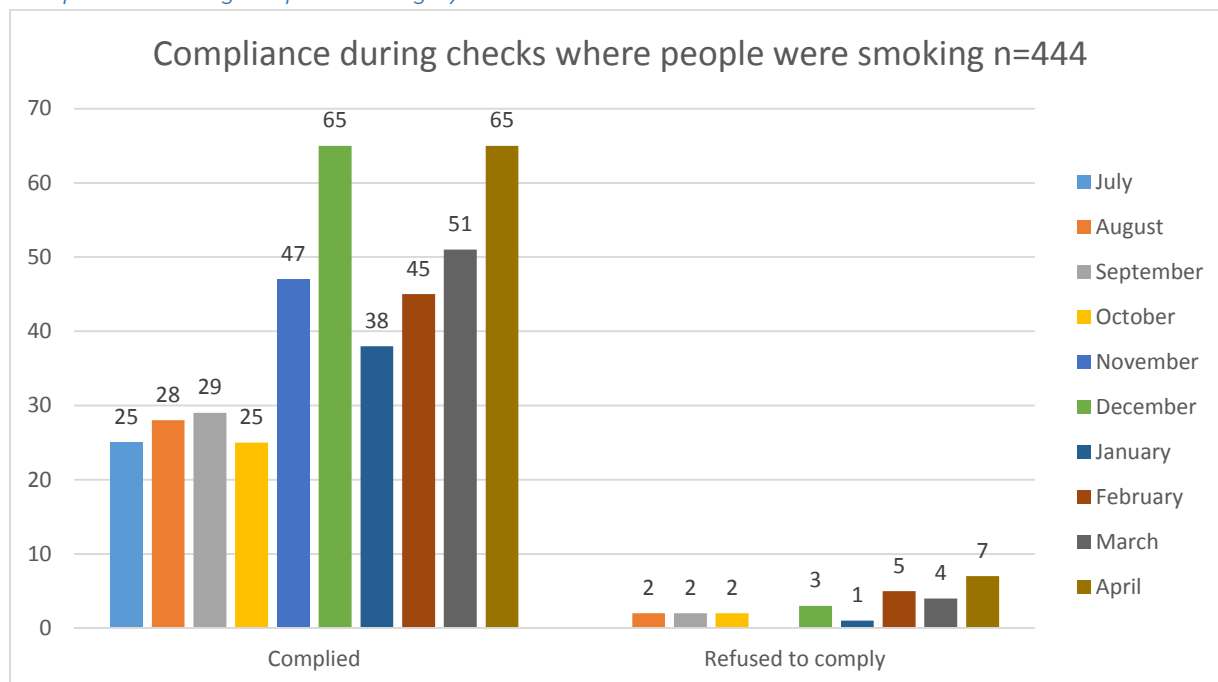


During 89% of checks in Fellows' Square there were people smoking. The majority of checks in the other areas found no one smoking.

Did those who were smoking comply with policy?	Number of checks	% of checks
Yes	418	94%
No	26	6%
Total	444	100%

Further analysis of checks during which people were smoking showed that most people when asked to comply with the Tobacco Free Zones policy, did so. During 6% of checks however, people refused to move.

Compliance among People Smoking by Month



Where people were asked by an ambassador to leave Zones, they were more likely to refuse later in the term and more so in the second term than the first. There were no months in the second term with complete compliance when asked to move.

Compliance among People Smoking by Zone

Did people smoking comply?	1937 Portico		Fellows' Square		Nursery/ Health Centre		Lloyd/Sport		Total	
	n	%	n	%	N	%	n	%	n	%
Yes	89	97%	258	92%	17	100%	54	96%	418	94%
No	3	3%	21	8%	0	0%	2	4%	26	6%

People who were smoking in Fellows' Square were most likely to refuse to comply.

Ambassador Comments on Refusals to Comply

Comments by ambassadors about their interactions with those who refused to comply with the policy were analysed into the following themes:

No reason given: Some people simply refused to comply and gave no reason. On one occasion, an ambassador noted "He has been warned it is a non-smoking area and continues to not comply and told me he would indeed not comply in the future"

At the Arts Café tables: Some people sitting at the Arts Café tables were difficult to reach due to crowds or didn't comply when asked. Ambassadors felt the tables were a factor in their refusal.

Acknowledged but continued to smoke: Some people apologised to Ambassadors for smoking in the Zones but continued to smoke. There was one large group of 6-9 people at the Arts Café tables who on at least two occasions did so. On another occasion at the tables, a different group said they would "move in a while".

Communications Received by Committee about Zones

The following unsolicited communication was received by the Committee about the Zones during the pilot programme.

Date	Format	From	Supportive of Zones?	Notes
Sept '16	Email	Staff member	Yes	Complaint and proposed solution to cigarette litter
Sept '16	Email	Staff member	Yes	Request for Zone outside Aras an Phiarsaigh
Sept '16	Email	Staff member	Yes	Complaint about smoking in Front Square
Nov '16	Email	Staff member	Yes	Request for back of Arts Block to be added to the Zones
Ongoing	Email, Verbal	Safety Committee, Staff, Visitors	Yes	Complaints about smoking at the entrance to the Hamilton and the entrance to East End 4&5. Beside the Cocker lab there are people gathering (though they are more than 4metres away) and concerns were raised about the safety of smoking where there are many chemicals.
Dec '16	Phone	Staff member	Yes	Complaint from housekeeping staff about litter
Dec '16	Phone	Staff member	Yes	Complaint about smoking outside Arts Building
Dec '16	Email	Staff member	Yes	Complaint about smoking in Fellows' Square
Dec '16	Email	Staff member	Yes	Complaint about smoking outside the Library

All communications received were in support of the Zones.

Graduate Students' Union Vote

On the 15th February 2017, independent of the Tobacco Free Zones pilot, the Graduate Students Union held a discussion and informal vote on Trinity becoming tobacco free with covered smoking areas and fines for non-compliance. The vote was passed.

Discussion

Effectiveness of the Zones

The Zones are effective at reducing the frequency of observed smoking outdoors. This is particularly encouraging because the locations of the Zones were chosen precisely because they had been highlighted to the Committee as areas where people habitually gathered to smoke.

Compliance

The large reduction in frequency of observing smoking in each of the Zones shows that most people who had smoked in the Zones prior to them being designated tobacco free complied with the new policy.

Non-Compliance in Fellows' Square

Compliance in the Nursery/Health Centre Zone and the Lloyd/Sport Zone is very good. In Fellows' Square however, despite much lower frequencies of observed smoking overall, non-compliance is an issue.

A number of elements of the pilot evaluation suggest that many of those who smoke in Fellows' Square are simply ignoring the policy. During almost 90% of the Fellows' Square checks, ambassadors found at least one person smoking and despite increased circuits of the Zones during term, the average number of people smoking there continued to rise until the end of each term. While the vast majority of people complied with the policy when asked to do so, the continued presence of people smoking, viewed in the context of emails from staff who work near or in Fellows' square, suggests that people only stopped smoking when they were asked to do so; if there was no ambassador present, they smoked.

More serious in terms of the Committee's support of Smoke-Free Ambassadors, is data on the 21 outright refusals to comply in Fellows' Square when people were informed of the policy. On one occasion, the person smoking told an ambassador he would continue to smoke while they spoke and in the future. On another occasion, a group of people smoking outside the Arts Building café told an ambassador "we'll move in a while". Furthermore, the rise in refusals to comply towards the end of the second term could be construed as an entrenchment of the view that non-compliance was acceptable.

The upward trends in smoking as academic terms progress, coupled with reports from ambassadors of groups refusing to comply at Arts Building Café tables, suggest that non-compliance with Trinity's Tobacco policy is more prevalent among students than staff or visitors. A University Times article published in September 2017² alludes to the student smoking culture in Fellows' Square.

"The Arts Block benches are where Trinity Smokers Society (Central Societies Committee's approval pending) gather each day to smoke."

Data Collection

The sight of even one person smoking in a Zone, can give the impression that the Policy is ineffective. Collecting data on frequency of observed compliance to show that the Policy was working was therefore, invaluable. The data collected were also useful for evaluating the process of implementing the Zones.

Research on implementation and evaluation of smoking policies in university campuses is very limited³. Prior to the Tobacco Free Trinity consultation in 2013, a baseline survey on attitudes to and prevalence of smoking amongst Trinity undergraduates was undertaken⁴. That published research, together with data captured on observed instances of smoking during the implementation of the Tobacco Free Zones pilot project, if combined with ongoing data capture, could make a useful contribution to the literature on tobacco policies in third level campuses.

The baseline data on frequency of observed smoking before the Zones were introduced is limiting as it was only taken on one day in May 2016. Future evaluations of tobacco policies should take broader baseline data.

² Ó Néill, C. (2017) Live Like a Local: How to Speak the Trinity Logo. *University Times* downloaded on 20th September 2017 from <http://www.universitytimes.ie/2017/09/live-like-a-local-how-to-speak-the-trinity-lingo/>

³ Bennett, B.L., Deiner, M., Pokhrel, P. (2017) College anti-smoking policies and student smoking behavior: a review of the literature. *Tobacco Induced Diseases* downloaded on 30th April 2017 from <https://tobaccoinduceddiseases.biomedcentral.com/articles/10.1186/s12971-017-0117-z>

⁴ McKee G, Barry J, Mullin M, Allwright S and Hayes C. (2017) Predictors of Daily and Occasional Smoking and Quitting in Irish University Students, *Health*, 9, 435 - 450

Tobacco Free Ambassadors

Because so many tourists visit Fellows' Square, it is likely that ambassadors will continue to be required to encourage compliance.

Students were recruited as Ambassadors because a central tenet of health promotion⁵ is to engage members of the community in promoting health. The early dramatic reductions in frequencies of smoking in the 1937 Portico were likely due to a very committed post-graduate smoke-free ambassador. The same Ambassador championed the debate with the GSU on Trinity becoming tobacco free. Had a non-Trinity community member been employed to be the ambassador, the pilot project would not have reaped these benefits.

Support for the Zones

The Tobacco Free Trinity Consultation found that 75% of staff, 70% of post-graduates and 56% of students supported Trinity becoming a tobacco free campus with smoking areas⁶. Unsolicited communications from the Trinity community during the pilot plus the GSU debate on becoming tobacco free support those findings. This support is consistent with a US study that found strong support for a tobacco free campus in a US university one year after its introduction⁷.

Conclusions & Recommendations

This report aimed to answer three questions about the Tobacco Free Zones pilot. Responses to each question plus further conclusions and recommendations are detailed below.

1. Did the introduction of Tobacco Free Zones stop or reduce the frequency of observed smoking in the Zones?

Average frequencies of observed smoking in Tobacco Free Zones were reduced by 81% at the end of the pilot when compared to baseline. In the Nursery/Health Centre Zone average frequency of observed smoking were 94% and 92% lower respectively. In the Fellows' Square Zone they were 74% lower.

The Committee has gained experience in implementing a policy that affects a large proportion of the Trinity Community, in three areas of the campus that were noted, during the Tobacco Free Trinity Consultation, as places where smoking was a problem. It has devised and implemented an effective means of monitoring compliance and is experienced in encouraging compliance with a policy that restricts smoking. Data collection during the pilot was invaluable and can make a much needed contribution to research on tobacco policies on third level campuses.

Recommendation: The Zones should be expanded and the Committee should request funding to enable the capture and publication of further data on the process and effect of changing Trinity's tobacco policy.

2. Did those who were smoking comply with the Tobacco Free Zones Policy?

Yes, generally. There was an 81% reduction in the average frequency of observed smoking. Where people had to be asked to comply, 94% (n=418) did so. Compliance was however, an issue in Fellows' Square and likely undermined the perceived effectiveness of the policy and the role of the Ambassadors trying to implement it. There is some evidence to suggest that compliance was lower amongst students than staff or visitors.

⁵ World Health Organization (1986) *The Ottawa Charter for Health Promotion*. Geneva, Switzerland.

⁶ Tobacco Policy Group (2014) Tobacco Free Trinity Consultation. Downloaded on 8th May 2017
<http://www.tcd.ie/collegehealth/assets/documents/Smoking/TFT%20Consultation%20Report%20Final.pdf>

⁷ Braverman MT, Hoogesteger LA, Johnson JA. (2015) Predictors of support among students, faculty and staff for a smoke-free university campus. *Prev Med.* 71:114–20.

Recommendation: Encouraging compliance should be the main focus of Trinity’s tobacco policy implementation and the Committee should focus in particular on students. It may be useful for Ambassadors to ask people in breach of Trinity’s Tobacco Policy, if they are students, staff or visitors.

3. Does the Trinity Community support the Zones?

Yes. Staff and post-graduates in particular were actively supportive of the Zones during the pilot. The vast majority of students respected it. Having Ambassadors who were members of the Trinity community increased support.

Conclusion: A majority of the Trinity community would support an expansion of the Zones. Any expansion should be supported by Ambassadors from Trinity.