Research Article

Dental Practitioners and Smoking Cessation in Ireland

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ABSTRACT

INTRODUCTION As the Irish government works towards their stated goal of a 'tobacco free society' in 2025, treatment offered to smokers must be expanded and improved. As such, it is inadequate to confine smoking cessation to a limited group of specialists and rather, it should be widely embraced by all health care professionals. In that regard, dentists could play a significant and crucial role.

PURPOSE To examine smoking prevalence, training in smoking cessation treatment, and awareness of smoking cessation services available to smokers in Ireland among dentists practicing in Ireland.

METHODS We used an internet based, cross-sectional online survey to measure beliefs and behaviours among 289 dentists in Ireland in 2013. The instrument included items on personal tobacco use, training, and awareness of smoking cessation treatments and services. Descriptive statistics were generated for all variables and chi-squared tests examined potential gender differences in providing smoking cessation treatment.

RESULTS Nine percent of dentists were current smokers, 7% reported receiving formal training in smoking cessation, and 5.6% refer their patients to specialist cessation services. Over 65% of dentists surveyed felt they did not have adequate training in smoking cessation. Female dentists were significantly more likely to give advice than male dentists ($P < 0.005$) and more likely to record the smoking status of their patients than male dentists ($P < 0.001$).

CONCLUSIONS The prevalence of smoking among dentists at 9% is well below the national rate of 19.5%. There is a large discrepancy between the number of dentists who feel they should provide advice and those who actually do. Overall, dentists feel they lack adequate training, time and resources to provide smoking cessation services and most were not aware of existing referral pathways to specialist smoking cessation services.

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INTRODUCTION

In Ireland between the years of 1950 – 2000, approximately 235,000 deaths were attributed to tobacco use. Half of the deaths occurred in middle age (35-69yrs) and on average, approximately 22 years of life are lost by those killed in middle age by smoking[1]. Under current tobacco control legislation, tobacco attributable deaths worldwide are projected to rise from 5.4 million in 2005 to 6.4 million in 2015 and 8.3 million in 2030[2].

Despite being the first country in the world to introduce a comprehensive smoke free workplace legislation and having one of the highest tobacco product prices in the world, Ireland has a sizable adult smoking prevalence of 19.5%[3]. Previous research has found that improvement in smoking cessation and increased resource allocation to media campaigns are the highest priority for Ireland's tobacco control interventions at present[4].

While measures have been implemented to discourage people from smoking initiation, attention must also be given to smoking cessation in order to achieve an appreciable reduction in smoking related mortality. Tobacco dependence is a recognized disease with its own international classification of diseases (ICD) code. The treatment of tobacco dependence is a highly cost-effective medical intervention[5]. It is essential that misconceptions about the effectiveness of treatments for smoking cessation are dispelled. Brief advice from a healthcare professional is effective and extremely worthwhile from a public health perspective[6]. For example, a previous study estimated that if general medical practitioners in England advised an additional 50% of smokers to stop using established protocols (including use of nicotine replacement therapy), it would likely lead to an additional 75 000 extra ex-smokers per year nationally, at a cost of under £700 per life year gained. In short, treatments to aid smoking cessation have the potential to save thousands of lives with very little investment[7]. Therefore, it is of critical importance that dentists, along with other health care professionals, are educated and feel competent and prepared to encourage the active treatment of tobacco dependence.

The involvement of all health professionals, including dentists, in offering interventions for smoking cessation should be based on factors such as access to smokers and level of training rather than professional discipline. Dentists, specifically, are in an advantageous position for offering smoking cessation services for a number of reasons. For one, many dental patients are seen on a regular, on-going basis, allowing for a patient-doctor rapport to develop over time. Furthermore, a dental visit often takes longer than a visit with a GP. This provides ample time for dentists to speak with their clients about the benefits of smoking cessation. While cessation services are available throughout Ireland, it has been argued that they are too thinly spread to provide effective smoking cessation services to the whole population[8]. In recent years, programmes have been adopted in an attempt to address this issue, including increased online efforts through www.Quit.ie. As such, it is crucial for all health care professionals, including dentists, to take an active role in the treatment of tobacco dependence in the interest of general public health.

Recognizing the central role that dentists could play in general smoking cessation efforts, this study aimed to:

1. Measure smoking prevalence and second-hand smoke exposure (SHS) among dentists in Ireland;
2. Measure what training, if any, dentists received on the treatment of tobacco dependence (TTD);
3. Determine their attitudes towards TTD;
4. Measure what actions, if any, they take towards TTD;
5. Identify any perceived barriers to determine their attitudes and actions regarding TTD and identify any barriers dentists may experience in recommending tobacco dependence treatment;

METHODS

Study Design

The study relied upon an internet based, cross-sectional online survey. The questionnaire was adapted from a survey of members of the European Respiratory Society (ERS) and was deemed appropriate for the current sample of healthcare professionals[9]. This questionnaire was then uploaded into an online survey service (www.surveymonkey.com) for circulation to the study sample. Prior to full-scale implementation, the questionnaire was piloted to a group of 20 healthcare professionals. Any problems that arose were addressed and rectified prior to the administration of the questionnaire to the dentists. Ethical approval was granted by Dublin Institute of Technology Research Ethics Committee.

Pre-administration meetings were held with the Irish Dental Association (IDA) who agreed to collaborate with the TobaccoFree Research Institute (TFRI) in the promotion and distribution of the survey. A promotional flyer was printed and circulated at the annual IDA conference. The dentists were also addressed at their annual conference, where they were provided with the background and objectives of the project with a view to maximising the number of dentists participating in the survey. The survey link was then circulated to the IDA mailing list by the organisation's assistant CEO. Two weeks later, a reminder email was circulated to all dentists on the IDA mailing list. The survey was available online for one month.

Sample

A target population of 1,000 dentists registered with the Irish Dental Association were emailed the survey link. A total of 289 completed the questionnaire, giving a response rate of 28.9%.

Questionnaire Variables

There were 40 items in the survey including, age, sex smoking status, age of smoking initiation, degree of addiction, quitting history, exposure to second hand smoke, training in smoking cessation, attitudes to tobacco control policies, awareness of smoking cessation services, referrals to these services, advice to smoking dental patients and knowledge of treatment of tobacco dependence (copy of survey instrument: appendix 1).

Statistical Analysis

The data were downloaded and prepared for importation into the Statistical Package for the Social Sciences (SPSS) for analysis (Version 21, IBM, and Illinois). Data preparation included coding responses, evaluating the amount of missing data, and eliminating duplicate entries. Descriptive statistics were generated for all variables. Chi-squared tests examine sub-group differences.

RESULTS

The total sample of dentists (n=289) included 131(45%) females and 158 (55%) males. Most respondents were in the 30 to 44 (45.5%) and 45 to 64 (41%) age groups.

Smoking Prevalence and SHS Exposure

The vast majority of dentists (260, 90.6%) were non-smokers, of which 87 (30.3%) were ex-smokers (Table 1). Of current smokers (29), 25% were trying to quit, 42% were considering quitting and 33% were not ready to quit. Of those who had tried to quit (62.5%) had tried up to 3 times. Will power alone was the most commonly employed method and used in 71.3% of quit attempts. A total of 45.8% of current smokers reported smoking in cars and 33% reported smoking in the home.

Exposure to second-hand smoke in the past week was reported

Table 1: Gender and personal smoking status of dentists in the survey, Ireland 2013

Response Categories	Female	Male	n	%
Current Smokers	7 (5.4%)	20 (12.7%)	27	9.4%
Ex-Smokers	38 (29.2%)	49 (31.2%)	87	30.3%
Never Smokers	85 (65.4%)	88 (56.1%)	173	60.3%
Total	130	157	287	100%

Table 2: Smoking cessation resources available to dentists, Ireland 2013

Resources	n	%
Stop Smoking Literature	116	40%
National Quitline Information	68	25.50%
Details of off-site Smoking cessation service	40	14%
On site referral to smoking cessation service	12	4%

by 24% of dentists. The majority of SHS exposure took place in pubs/clubs (11%), in the home (7%), and at work (2%). A total of 87% of dentists felt that smoking should be banned on all health care facility campuses. A total of 39.9% felt that smoking should be banned in cars at all times, while 55.7% felt that it should be banned in cars when children are present and 4.4 % felt there should not be any ban.

Experience with TTD Training

While a total of 67% of dentists felt that they should receive training in treatment of tobacco dependence (TTD), only 9% of dentists reported having received such training. This was received by 2% during their professional training, 2% in the workplace as part of specialist training in smoking cessation, 3% at conferences, and 2% at other unidentified places. There were 63% who believed that dentists were perceived as "role models" by the public with regards to health and behavioral choices and 69% felt that their smoking patients' chances of quitting would be increased if advised to do so by their dentist.

Attitudes and actions regarding TTD

A total of 90% of dentists believed they should routinely ask their patients about their smoking status, but only 69% routinely recorded it (Figure 1). A total of 94.7% felt they should advise patients to quit smoking, while 55% felt they should advise smokers to refrain from smoking around children and 63% of dentists reported that they do advise smokers to quit.

With regards to smoking cessation treatment, only 5% of dentists referred patients to specialist services, 11% refer to the National Quitline, and 27% recommend the use of Nicotine Replacement Therapy (NRT) as an aid to quitting smoking. Gender was statistically significant when looking at advising smokers to quit, with female dentists being significantly more likely to give advice than male dentists ($x2 = 4.542$, $P < 0.005$). Female dentists were also more likely to record the smoking status of their patients than male dentists ($x2 = 13.300$, $P < 0.001$).

Barriers to recommending TTD

The research found that limited resources were available to dentists with regards to smoking cessation treatments for their patients. Table 2 demonstrates that only 40% of dentists surveyed had smoking cessation literature available, with even fewer having information on national quit-services and on or off site services or clinics. Furthermore, dentists identified several perceived barriers with regards to recommending TD treatment to their patients (Figure 2). The most common perceived barrier was that patients had more immediate problems that needed to be dealt with. However, dentists also felt that limited experience, limited training, and a lack of time all largely factored into their low rate of TTD referrals.

Figure 1: Dentists' smoking cessation attitudes and actions, Ireland 2013

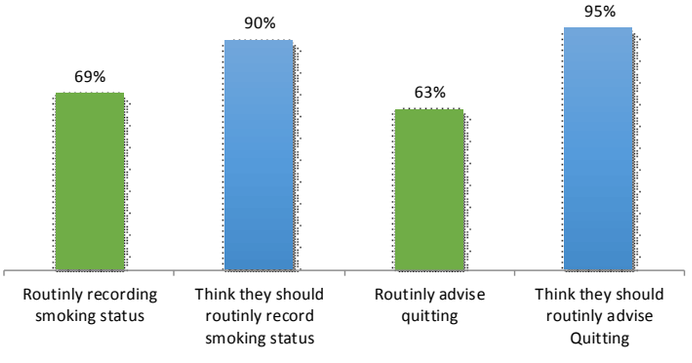
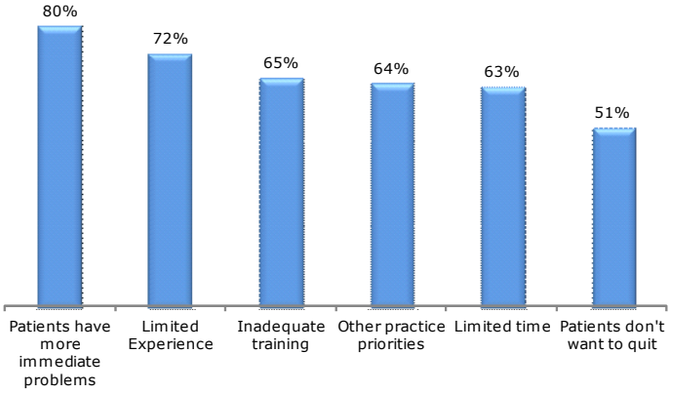


Figure 2: Dentists perceived barriers to helping patients quit smoking, Ireland 2013



DISCUSSION

While the prevalence of smoking among Irish dentists was relatively low at 9%, we found that recommending treatment for tobacco dependence to patients remained an uncommon practice. It has been argued in the literature that non-smoking healthcare professionals are more likely to express positive attitudes towards offering cessation assistance to smokers[10]. However, due to the low number of smokers in the sample, we were unable to test for the relationship between personal tobacco use and willingness to recommend treatment.

The majority of dentists were interested in receiving formal training on TTD yet very few had received such training. These findings are very similar to those recently released in Australia, which also found a wide discrepancy between acknowledgments of the benefits of smoking cessation and providing active smoking cessation treatment[11]. The lack of knowledge and formal training was compounded by a number of additional perceived barriers to recommending treatment including a lack of time, resources, and perceived importance of quitting smoking. In a previous study, it was reported that 63.6% of Health Service Executive (HSE) staff were aware of HSE Quit services[10], whereas in this survey we found that only a quarter of dentists had details of the National Quitline available to them.

Overwhelmingly, dentists reported that they felt a duty to help smokers to quit but only 5% referred smokers to specialist services due to lack of resources, knowledge and time. This figure is even lower than that reported recently, which indicated that 11% of smokers receive cessation information from their dentists[11]. In the USA, where smoking cessation services in dental practices are much more established, the rate of referral to specialist services and/or offering cessation prescriptions can be as high as 35% [12]. Higher figures such as these indicate that implementing a smoking cessation referral system among the dental community in Ireland is a worthwhile and achievable goal. The lack of referrals among dentists in Ireland is a missed opportunity, as dental services provide an ideal setting for advising and referring smokers to specialist smoking cessation services. Dentists are key members of the broader public health community and as such, play a vital role in helping individual quit smoking. Therefore, it is imperative that enhanced training and resources regarding the treatment of tobacco dependence be provided for the dental community. A more streamlined process for the referral pathway for smokers attending dental practices in Ireland would play a substantial role in improving smoking cessation in Ireland and contributing to the national goal of a tobacco free country by 2025.

Limitations

As an online survey, the study, unfortunately, suffered from a relatively low response rate and a lack of generalisability to the broader population of dentists in Ireland. Furthermore, the low numbers led us to conducting a largely descriptive analysis. We are unable to make broader inferences about the relationship between sociodemographic factors and smoking cessation attitudes and behavior among dentists in Ireland.

CONCLUSION

Finding low smoking rates among dentists is encouraging for smoking cessation efforts. As such, low participation rates in smoking cessation activities should be seen as an opportunity, rather than an obstacle, particularly since findings indicate that dentists are conscious of, and eager to, become involved in smoking cessation treatment. However, it is unlikely that this will be actualized without a formal structured training in treatment of tobacco dependence in undergraduate dental education. Furthermore, dentists who received prior training should also receive follow-up training so as not to miss the clear benefits of dental involvement in a national policy objective. Finally, dental premises may be an ideal venue for displaying smoking cessation information, as well as the National Quitline telephone number.

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CONFLICT OF INTEREST
The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.

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