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# Is the public ready for a tobacco-free Ireland? A national survey of public knowledge and attitudes to tobacco endgame in Ireland

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## ABSTRACT

**Aim** Ireland will not meet the tobacco endgame goal set in its 2013 Tobacco-Free Ireland (TFI) policy of reducing smoking prevalence to less than 5% by 2025. Public opinion on tobacco endgame, a key lever to realise this goal, is uncharted in Ireland. This study aimed to measure public knowledge and attitudes to tobacco endgame.

**Methods** A telephone-administered cross-sectional survey of 1000 randomly dialled members of the general public was conducted in 2022. Prevalence of awareness, perceived achievability and support for the TFI goal and tobacco endgame measures was calculated and compared across tobacco product use status. Logistic regression identified factors independently associated with goal support.

**Findings** Although TFI goal awareness was low (34.0%), support was high (74.6%), although most (60.2%) believed it achievable beyond 2025. Product-focused measures were popular while support for supply-focused measures was mixed: for example, 86.1% supported nicotine content reduction while 40.3% supported user licencing. Phasing out tobacco sales was highly supported (82.8%); for most, this was contingent on support for currently addicted users. TFI goal support was independently associated with female sex (adjusted odds ratio (aOR) 1.47, 95% CI 1.05 to 2.07), higher education (aOR 1.80, 95% CI 1.21 to 2.66) and non-tobacco product use (aOR 2.67, 95% CI 1.66 to 4.30).

**Conclusions** Despite low awareness, tobacco endgame support is strong in Ireland. Public appetite for radically reducing tobacco product appeal and availability combined with public views on endgame achievability subject to extended timelines should be used to re-invigorate tobacco endgame discussion and planning in countries at risk of failing to meet declared targets.

## WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ Public support is important when considering tobacco endgame policies and is generally high in countries where it has been measured.
- ⇒ Ireland was an early adopter of tobacco endgame, but unfortunately it will likely become one of the first countries to miss its own endgame target. As endgame deadlines approach, a number of other countries are likely to find themselves in a similar situation.

## WHAT THIS STUDY ADDS

- ⇒ This study identified timely evidence of strong public appetite among the Irish population for tobacco endgame, particularly for product, institutional structure and supply-side measures.
- ⇒ The findings reinforce how the public perceive tobacco endgame as being best achieved through system-level policy options which fundamentally tackle the structures and dynamics sustaining the tobacco epidemic as opposed to through measures targeting individual-level factors.
- ⇒ The suggestion of continuing support to pursue tobacco reduction goals beyond the current target has relevance for other countries at risk of failing to meet their own endgame targets.

## HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- ⇒ This study adds to the body of evidence regarding which tobacco endgame measures are most highly supported within a country at risk of failing to meet its declared endgame target.

## INTRODUCTION

Following strong progress in tobacco control, in 2013 Ireland was an early adopter of emerging tobacco endgame thinking, by setting a 2025 target for reducing smoking prevalence to less than 5% through government's 'Tobacco-Free Ireland' (TFI) policy.<sup>1</sup> Its bold tobacco endgame goal attracted media attention<sup>2</sup> however, its recommendations were largely grounded in strengthening established tobacco control tactics, underpinned by the WHO MPOWER model.<sup>3</sup> Since 2013, new measures introduced under TFI included graphic health warnings on cigarette packaging, plain packaging

and transposition of the European Union (EU) Tobacco Products Directive.<sup>4</sup>

Despite these actions, as of 2023, with smoking prevalence stalling at 18% and no current plans for policy review,<sup>5</sup> Ireland is on track to be the first country in the world to fail to meet its own endgame target. While precedents can have positive 'domino' effects in tobacco policy,<sup>6</sup> this inauspicious mantle may provide sceptics with evidence against tobacco endgame achievability and have wider global implications.

Public support is a key lever for tobacco policy change—it creates a low-risk political environment for policymakers and mediates policy



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implementation.<sup>6,7</sup> Support for tobacco endgame goals is high across international studies,<sup>8,9</sup> but support for specific tobacco endgame tactics varies. For example, while there is high support across different countries for reducing nicotine content in tobacco products and for Tobacco 21 laws, support for additive bans is lower.<sup>10–14</sup> Building and sharing evidence on public views can help identify gaps and priorities for tobacco endgame policymaking, and underpin successful negotiation of the complex policy process.

Given the likelihood that TFI will not be achieved by 2025, reinvigoration of endgame planning is much needed. This study aimed to assess public opinion on tobacco endgame and component measures in Ireland.

## MATERIALS AND METHODS

A nationally representative cross-sectional study was conducted to measure prevalence of public views on tobacco endgame using a literature-informed survey instrument refined through expert consultation (online supplemental appendix A).

### Sampling, recruitment and fieldwork

Sampling, recruitment and data collection were conducted by an Irish-based market research company (IPSOS MRBI) in February 2022. The target population was members of the Irish general public aged 15 years and older. Sample size was calculated based on the conservative assumption that 50% of the public reported support for TFI; 784 respondents was sufficient to measure this proportion with a 95% Confidence Interval (CI) of  $\pm 3.5\%$ .

Overall, 1000 participants were recruited for computer-aided telephone interviewing via random digit dialling using mobile and landline prefixes from the Commission for Communications Regulation. In total, 3386 individuals were contacted. Participants uncontactable by phone, non-fluent in English and who did not complete the survey in its entirety were excluded.

### Measures

The questionnaire assessed 29 primary outcome measures (online supplemental appendix B). Agreement with the TFI goal and component endgame tactics was elicited on a 5-point Likert scale, including a 'don't know' option. Responses were dichotomised ('support'/'no support'): 'support' was defined as agreement ('strongly agree'/'somewhat agree'); 'no support' was defined as absence of support ('neither agree nor disagree'/'somewhat disagree'/'strongly disagree'/'don't know').<sup>7,11</sup>

Sociodemographic characteristics and tobacco product use behaviours (online supplemental appendix C) were collected. Current tobacco and e-cigarette use status was combined into a new variable ('exclusive tobacco product use/exclusive e-cigarette use/dual use of tobacco and e-cigarettes/non-use'); respondents with current product use included those using cigarettes/e-cigarettes either regularly or occasionally. Those who responded 'don't know' (n=6) were excluded.

### Analysis

Data were analysed using IBM SPSS Statistics V.26.0. Frequency-based weights for age, sex, region and social grade were applied. Prevalence of knowledge and attitudes were calculated as weighted estimates with 95% CIs. Pearson's  $\chi^2$  test compared differences in responses between respondents using tobacco only, e-cigarettes only, both products or neither product. Multivariable logistic regression modelling was used to explore respondent factors associated with TFI goal support.

## RESULTS

In total, 1000 adults completed the survey (response rate 29.5%). Weighted sample characteristics are provided in online supplemental appendix D and online supplemental table 1. Overall, 11.0% currently used tobacco products only, 5.7% currently used e-cigarettes only and 2.6% currently used both products.

### Knowledge and attitudes to tobacco endgame

Most respondents (76.2%, 95% CI 73.6% to 78.8%) supported more government action tackling smoking-related harm. Participants were provided with a brief description of the TFI goal and asked about their support: 'The "Tobacco-Free Ireland" goal aims to reduce the proportion of Irish adults who smoke to less than 5% by 2025.' Although one-third (34.0%, 95% CI 31.1% to 36.9%) were aware of the goal, most (74.6%, 95% CI 71.9% to 77.3%) supported it and believed it was achievable (76.6%, 95% CI 74.0% to 79.2%). While few (16.5%) agreed the 2025 target achievable, most (60.2%) considered tobacco endgame achievable beyond the current target of 2025; however, a minority (16.3%) believed the tobacco endgame target was not achievable at all.

### Support for tobacco endgame measures

Overall, there was majority support for 19 of 22 specific tobacco endgame measures assessed (table 1). Support was generally higher among those who did not use tobacco products and there were significant differences in support among those who used tobacco products and those who did not for all but three measures. Two-thirds (66.7%) of those who supported a sales phase-out believed this should occur within 10 years. For most (85.0%), that support was contingent on measures for people currently addicted: increased government assistance for quitting (74.8%) or allowing smokers to buy tobacco products using a licence (40.8%).

### Factors associated with TFI support

Females (adjusted odds ratio (aOR) 1.47, 95% CI 1.05 to 2.07,  $p=0.025$ ), higher social grade members (aOR 1.47, 95% CI 1.00 to 2.15,  $p=0.049$ ), those of higher education (aOR 1.80, 95% CI 1.21 to 2.66,  $p=0.004$ ) and those who did not use tobacco products (aOR 2.67, 95% CI 1.66 to 4.30,  $p<0.001$ ) were significantly more likely to support the TFI goal than their comparative counterparts, as were older respondents (online supplemental appendix D; table 2).

## DISCUSSION

Public support can translate bold tobacco endgame ambition into reality. This is especially important for early adopters, like Ireland, where fast-approaching declared endgame targets may be missed. Besides protecting national efforts, re-invigoration is needed to avoid setting a negative precedent for global efforts. Strong public support delineated in this study confirms how much success in tobacco control has changed social norms about tobacco use and helps consolidate tobacco endgame as a legitimate concept for viable policy discussion and action in Ireland.<sup>8,9,15</sup> This study indicates that the public see tobacco endgame as being achievable, but only beyond the current policy target of 2025. However, Irish public awareness of the TFI goal was lower than was found in recent New Zealand studies,<sup>10</sup> suggesting that public support coupled with awareness may add mandate for action.<sup>10,16</sup> This underscores the urgent need to raise the profile of tobacco endgame through public engagement

Table 1 Support for tobacco endgame measures\*

Type of measure	Measure	Total sample n (%; 95% CI)	Tobacco product use n (%)	E-cigarette use n (%)	Dual use n (%)	Non-use n (%)	p Value
Product focused	<b>Lowering the nicotine content in tobacco products</b>	(N=1000)	(N=110)	(N=57)	(N=25)	(N=802)	
	Support	861 (86.1, 84.0 to 88.2)	83 (75.5)	48 (84.2)	18 (69.2)	707 (88.2)	<0.001
	No support	139 (13.9, 11.8 to 16.0)	27 (24.5)	9 (15.8)	8 (30.8)	95 (11.8)	
	<b>Lowering the nicotine content in e-cigarettes</b>						
	Support	856 (85.6, 83.4 to 87.8)	85 (77.3)	44 (77.2)	15 (57.7)	708 (88.3)	<0.001
	No support	144 (14.4, 12.2 to 16.6)	25 (22.7)	13 (22.8)	11 (42.3)	94 (11.7)	
	<b>Tighter regulation of tobacco products</b>						
	Support	790 (79.0, 76.5 to 81.5)	66 (60.6)	42 (73.7)	13 (52.0)	666 (83.0)	<0.001
	No support	210 (21.0, 18.5 to 23.5)	43 (39.4)	15 (26.3)	12 (48.0)	136 (17.0)	
	<b>Ban on added chemicals that make cigarettes seem less harsh</b>						
	Support	692 (69.2, 66.3 to 72.1)	64 (58.2)	38 (66.7)	14 (56.0)	573 (71.4)	0.015
	No support	308 (30.8, 27.9 to 33.7)	46 (41.8)	19 (33.3)	11 (44.0)	229 (28.6)	
	<b>Requiring individual health warnings on all individual cigarette sticks</b>						
	Support	639 (63.9, 60.9 to 66.9)	50 (45.5)	34 (59.6)	13 (52.0)	540 (67.3)	<0.001
	No support	361 (36.1, 33.1 to 39.1)	60 (54.5)	23 (40.4)	12 (48.0)	262 (32.7)	
Institutional structure focused	<b>Banning filters on cigarettes and other combustible tobacco products</b>						
	Support	513 (51.3, 48.2 to 54.4)	39 (35.8)	19 (33.3)	9 (34.6)	445 (55.5)	<0.001
	No support	487 (48.7, 45.6 to 51.8)	70 (64.2)	38 (66.7)	17 (65.4)	357 (44.5)	
	<b>Requiring tobacco companies to pay the state for the health costs due to tobacco-related harm</b>						
	Support	784 (78.4, 75.9 to 81.0)	68 (62.4)	33 (57.9)	12 (46.2)	666 (83.0)	<0.001
User focused	<b>Banning tobacco industry representatives meeting with government</b>						
	Support	522 (52.2, 49.1 to 55.3)	51 (46.8)	27 (47.4)	12 (48.0)	429 (53.5)	0.471
	No support	478 (47.8, 44.7 to 50.9)	58 (53.2)	30 (52.6)	13 (52.0)	373 (46.5)	
	<b>Ban on smoking tobacco products in public places</b>						
	Support	643 (64.3, 61.3 to 67.3)	31 (28.2)	25 (43.1)	13 (50.0)	570 (71.1)	<0.001
Supply focused	<b>Complete phase-out of tobacco product sales</b>						
	Support	828 (82.8, 80.5 to 85.1)	73 (66.4)	46 (80.7)	21 (84.0)	686 (85.5)	<0.001
	No support	172 (17.2, 14.9 to 19.5)	37 (33.6)	11 (19.3)	4 (16.0)	116 (14.5)	
	<b>Requiring tobacco retailers to display information encouraging users to quit</b>						
	Support	819 (81.9, 79.5 to 84.3)	74 (67.3)	51 (89.5)	20 (76.9)	672 (83.8)	<0.001
	No support	181 (18.1, 15.7 to 20.5)	36 (32.7)	6 (10.5)	6 (23.1)	130 (16.2)	
	<b>Banning tobacco product sales near playgrounds, schools and universities</b>						
	Support	782 (78.2, 75.6 to 80.8)	76 (69.1)	43 (75.4)	17 (65.4)	645 (80.4)	0.015
	No support	218 (21.8, 19.2 to 24.4)	34 (30.9)	14 (24.6)	9 (34.6)	157 (19.6)	

Continued

Table 1 Continued

Type of measure	Measure	Total sample n (%; 95% CI)	Tobacco product use n (%)	E-cigarette use n (%)	Dual use n (%)	Non-use n (%)	p Value
Supply focused	<b>Raising the minimum legal age for purchasing tobacco products to 21 years (Tobacco 21)</b>						
	Support	706 (70.6, 67.8 to 73.4)	66 (60.0)	43 (75.4)	15 (57.7)	581 (72.4)	0.018
	No support	294 (29.4, 26.6 to 32.2)	44 (40.0)	14 (24.6)	11 (42.3)	221 (27.6)	
	<b>Restricting e-cigarette sales to over-the-counter sales in pharmacies</b>						
	Support	643 (64.3, 61.3 to 67.3)	56 (51.4)	16 (28.1)	13 (50.0)	554 (69.1)	<0.001
	No support	357 (35.7, 32.7 to 38.7)	53 (48.6)	41 (71.9)	13 (50.0)	248 (30.9)	
	<b>Allowing tobacco sales in a limited number of specially licenced shops</b>						
	Support	630 (63.0, 60.0 to 66.0)	37 (33.6)	29 (50.9)	11 (42.3)	550 (68.6)	<0.001
	No Support	370 (37.0, 34.0 to 40.0)	73 (66.4)	28 (49.1)	15 (57.7)	252 (31.4)	
	<b>Tax increases of 20%+ per year until &lt;5% of the population smoke</b>						
	Support	596 (59.6, 56.6 to 62.6)	29 (26.6)	20 (34.5)	7 (26.9)	539 (67.2)	<0.001
	No support	404 (40.4, 37.4 to 43.4)	80 (73.4)	38 (65.5)	19 (73.1)	263 (32.8)	
	<b>Reducing the number of places selling tobacco products by 95%</b>						
	Support	589 (58.9, 55.9 to 62.0)	36 (33.0)	29 (50.9)	8 (32.0)	513 (64.0)	<0.001
	No support	411 (41.1, 38.1 to 44.2)	73 (67.0)	28 (49.1)	17 (68.0)	289 (36.0)	
	<b>'Tobacco-Free Generation' policy</b>						
	Support	560 (56.0, 52.9 to 59.1)	43 (39.1)	24 (42.1)	10 (40.0)	480 (59.9)	<0.001
	No support	440 (44.0, 40.9 to 47.1)	67 (60.9)	33 (57.9)	15 (60.0)	322 (40.1)	
	<b>Restricting tobacco product sales to restricted hours of the day</b>						
	Support	501 (50.1, 47.0 to 53.2)	30 (27.3)	24 (41.4)	7 (28.0)	437 (54.5)	<0.001
	No support	499 (49.9, 46.8 to 53.0)	80 (72.7)	34 (58.6)	18 (72.0)	365 (45.5)	
	<b>Requiring workers that sell tobacco to undergo training to provide quitting advice</b>						
	Support	459 (45.9, 42.8 to 49.0)	40 (36.4)	31 (54.4)	9 (34.6)	377 (47.1)	0.059
	No support	541 (54.1, 51.0 to 57.2)	70 (63.6)	26 (45.6)	17 (65.4)	424 (52.9)	
	<b>Restricting e-cigarette sales to prescription-only access</b>						
	Support	432 (43.2, 40.1 to 46.3)	38 (34.9)	15 (26.3)	8 (32.0)	368 (45.9)	0.004
	No support	568 (56.8, 53.7 to 59.9)	71 (65.1)	42 (73.7)	17 (68.0)	433 (54.1)	
	<b>Tobacco user-licence</b>						
	Support	403 (40.3, 37.3 to 43.4)	33 (30.0)	20 (35.1)	12 (48.0)	334 (41.6)	0.082
	No support	597 (59.7, 56.7 to 62.7)	77 (70.0)	37 (64.9)	13 (52.0)	468 (58.4)	

Use: includes daily and occasional use; Tobacco product use: currently used smoked tobacco products but not e-cigarettes; E-cigarette use: currently used e-cigarettes but not smoked tobacco products; Dual use: currently used both smoked tobacco products and e-cigarettes; Non-use: did not currently use smoked tobacco products or e-cigarettes.

\*Results are weighted and may not sum to totals.

and discussion in order to advance policy action as a political priority.

This study consolidates the emerging conceptual framework for tobacco endgame.<sup>17</sup> Levels of support for many of the endgame measures assessed in this study are well above levels of support observed both before and after implementation of Ireland's 2004 smoke-free law, where, contrary to prevailing narrative, a dramatic increase in support (from 13% to 46%) was seen for a total ban on smoking in bars/pubs.<sup>18</sup> This reference point underscores the significance for policymakers of the public's current support for tobacco action in Ireland.

Similar to other studies, product-focused measures were popular,<sup>11 12</sup> making tactics targeting nicotine content, for example, early policy options. There is already strong evidence to guide policymakers on implementation of a very low nicotine standard for cigarettes.<sup>17</sup> Both institutional structure-focused measures had majority support. Recent plans in Ireland through implementation of the EU Single-Use Plastics Directive to make the tobacco industry pay for

its waste should be used to set the stage for discussion on extending industry accountability to healthcare costs.<sup>19 20</sup>

Support for banning smoking in public places (the single user-focused measure assessed) was high, although lower among those who used tobacco products. Support for supply-focused measures varied—a tobacco retail phase-out had higher support than international findings,<sup>16 21 22</sup> and previous Irish studies,<sup>23</sup> underlining rapidly changing norms. New legislative plans for tobacco retail licencing announced in Ireland present a window of opportunity to better regulate tobacco retail in a way which is more proportionate to harm.<sup>24</sup> To date, TFI policy has been characterised by strengthening 'business-as-usual' tobacco control. High support identified in this study for specific endgame measures, especially for a tobacco retail phase-out, presents an opportunity in Ireland to critically review, augment and truly orient planning to TFI's endgame goal.

Conversely, less supported measures included prescription-only e-cigarette sales and tobacco-user licencing. In general,



support for most measures was lower among those who used tobacco products, particularly for filter bans, substantial tax increases and restricting tobacco sales hours (online supplemental appendix E). While reasons for this were not explored, measures which were less popular with those who used tobacco had an individual-level focus. Measure support across product-use categories varied. High support for measures targeting system-level factors, and the contingency of support for a tobacco retail phase-out on supports for people who currently smoke, suggests that public opinion in Ireland aligns with endgame principles emphasising action on systems-factors perpetuating the tobacco epidemic over individual-level factors.<sup>25</sup> Those leading tobacco endgame discussion seeking to leverage public support should carefully consider this important feature. New Zealand's endgame plan which translates these principles into action should be a key reference for Ireland, and other countries where progress towards endgame targets is faltering. Lower tobacco endgame support in this study among social groups bearing the heaviest burden of smoking-related disease is also an important consideration since it emphasises a need to lead equity-responsive and inclusive tobacco endgame discussions.

### Limitations

While this cross-sectional study provided a timely and efficient assessment of public views, interviewer administration potentially introduced social desirability bias and the low response rate (29.5%) means that non-response bias may affect representativeness. There was low tobacco endgame awareness, and the information provided about each policy was very brief. Lack of information on rationale and effectiveness of specific measures, particularly for less straightforward policies such as nicotine reduction or increased tobacco product regulation, may have impacted respondent's interpretation of questions and views on acceptability.<sup>26</sup> Lastly, small numbers of participants reported that they exclusively used e-cigarettes or used both tobacco products and e-cigarettes limiting analytical power to examine differences between subgroups.

### CONCLUSIONS

As global momentum gathers, this study exemplifies how involving the public in tobacco endgame discourse can inform priority-setting and help design an approach which sustains support. There is high public support in Ireland for measures that radically and finally address tobacco product design and availability rather than just increasing incremental focus on people who smoke. This demonstrates a public vision for tobacco endgame based on policies targeting systemic factors underpinning the tobacco epidemic. For early endgame adopters like Ireland, now at risk of missing declared targets, strong public support should encourage policymakers to translate aspirational goals into urgent, comprehensive planning to deliver tobacco endgame. Findings on public opinion should be shared to re-inforce international collaboration to realise collective tobacco endgame ambition.

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**Contributors** EJC and PK conceptualised and designed the study; led the acquisition, analysis and interpretation of data; and drafted the manuscript based on the work. EJC conducted the background literature research and conducted the analyses and PK provided oversight of data analyses. AS, EM and MB made substantial contributions to the acquisition of data and analysis of the work. FD made substantial contributions to the conception, design and interpretation of the work. All authors provided final review and edits of the manuscript.

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