TOBACCO FREE IRELAND: TIME FOR TOBACCO 21

It's time to raise the legal age to buy tobacco products from 18 to 21 years to achieve a Tobacco Free Ireland

Position paper from the Royal College of Physicians of Ireland (RCPI) Policy Group on Tobacco

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

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September 2022

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1 Executive Summary

1. Executive Summary

This position paper presents the evidence and feasibility for increasing the minimum legal age of sale of tobacco and nicotine products to 21 years of age. This is known as Tobacco 21 legislation.

The introduction of a Tobacco 21 policy will reduce accessibility of tobacco products to young people and further denormalise tobacco and nicotine products. This in turn, will reduce the number of children and young people who smoke, improving the current and future health and wellbeing of Ireland's teenagers.

Tobacco remains the single biggest contributor to early death in Ireland. Nearly 4,500 people die in Ireland each year from the effects of smoking and thousands of others suffer from smoking-related diseases[1]. We know that adults who become daily smokers start to smoke before the age of 18[2]. The earlier a person starts smoking, as with any addictive substance, the more likely they are to develop an addiction.

Ireland may be losing ground in reducing smoking prevalence among children. In 2019 the European Schools Project for Alcohol and Other Drugs (ESPAD) survey found that the decline in tobacco consumption among Irish teens has stalled for the first time in 25 years. A Tobacco 21 policy is a proportionate response to this situation and the gains are likely to be significant. International modelling evidence suggests that Tobacco 21 policies have the potential to reduce smoking rates by 25% among 15-17- year-olds and by 15% among 18–20-year-olds.

Where Tobacco 21 policies have been implemented, such as in Needham Massachusetts, smoking rates have been cut in half for 15–18-year-olds[3]. Since implementation of California's Tobacco 21 law in 2016, the smoking rate among 15–18-year-olds has decreased from 10% to 2%[4]. A California purchase survey also demonstrated a reduction in tobacco products sales among 15–18-year-olds[5].

Innovative policies in Ireland such as the ban on smoking in the workplace (2004) and standardised packaging (2018) have been very effective, however the Tobacco Free Ireland smoking prevalence target of 5% by 2025 will not be met. Ireland's tobacco endgame strategy needs more innovative and ambitious measures to save lives and in doing so, to re-assert Ireland's position as both a European and global leader in tobacco control. Public support for tobacco endgame policies is strong. 71% of those aged 15 years and older support the introduction of Tobacco 21 in Ireland[6].

Tobacco products are highly addictive and kill 1 in every 2 smokers when used exactly as they're intended. The only people who stand to lose under a Tobacco 21 policy are those who profit from the sale of tobacco products.

Tobacco 21 is one step on a path to tobacco endgame. While many tobacco control regulations are needed, Tobacco 21 is potentially an easy win requiring only small amendments to existing legislation.

2

What is Tobacco 21?

2. What is Tobacco 21?

Tobacco 21 refers to the introduction of a ban on the sale of tobacco products to those younger than 21 years of age[7].

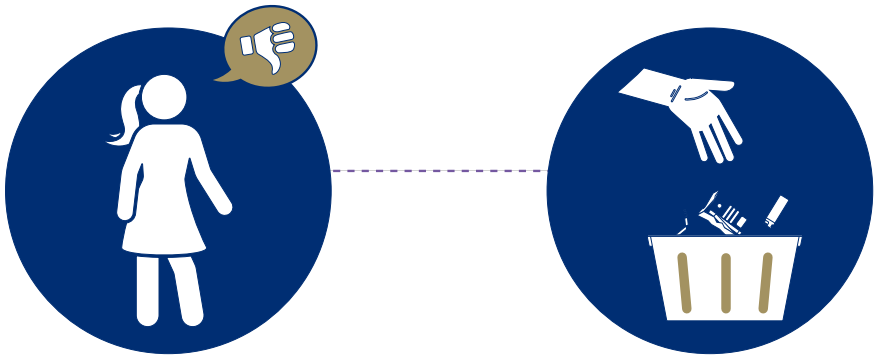
Tobacco 21 is a policy aimed at disrupting the availability, appeal, and normalisation of tobacco products. Importantly, Tobacco 21 legislation aligns with Part IV of the World Health Organisation (WHO) Framework Convention on Tobacco Control to which Ireland is a signatory since 2005. The WHO Framework Convention on Tobacco Control advises governments to act on supply side reduction provisions (Articles 15-17) for sales to and by minors[8].

Tobacco 21 aims to reduce the accessibility of tobacco to young people and to denormalise tobacco products, reinforcing the highly addictive and health-harming qualities of the product.

Tobacco is the single biggest contributor to early death in Ireland and its use causes illness, disability, and poverty on a massive scale. Nearly 4,500 people die in Ireland each year from the effects of smoking and thousands of others suffer from smoking-related diseases[1].

Most smokers in Ireland start to smoke before the age of 18. In the USA, almost 100% of smokers report first use before age 26[9]. The earlier a person starts smoking, as with any addictive substance, the more likely they are to develop an addiction[10].

Figure 1: Tobacco 21 - how it works



Reduces the accessibility of tobacco products to young people including both children under 18 and those in the 18 to 21 year old age group.

How?
By deterring young people from attempting a purchase and encouraging retailers to set their age verification at 21. By reducing the opportunity for older teens to buy cigarettes for younger teens.

Denormalises tobacco and nicotine products, reinforcing the highly addictive and health-harming qualities of the product.

How?
The higher age of sale delineates the products in the retail environment and signals to society at large that the product is harmful.

3 How does Tobacco 21 fit with Ireland's tobacco control policy?

3. How does Tobacco 21 fit with Ireland's tobacco control policy?

Ireland has a long track record of implementing tobacco control policies including the ban on smoking in the workplace (2004)[11] and standardised packaging (2018)[12].

Tobacco Free Ireland (TFI) was the first policy launched under Healthy Ireland: A Framework for Improved Health and Wellbeing 2013-2025. The policy commits to protect children and young people from tobacco harms and prevent young people from starting to smoke. Subsequently, the Healthy Ireland Strategic Action Plan 2021-2025 was published to refocus implementation in the pandemic and post-pandemic operating environment.

Tobacco Free Ireland included a commitment to a tobacco endgame strategy with a target to reduce the national smoking rate to 5% by the year 2025. However, it is clear now that this target will not be met, and more ambitious tobacco control measures are required. On 1 March 2022, the Royal College of Physicians of Ireland (RCPI) and the Institute of Public Health presented at the Joint Committee on Health on the pre-legislative scrutiny of the Public Health (Tobacco and Nicotine Inhaling Products) Bill 2019. During this presentation the recommendation was made to the committee to consider implementation of Tobacco 21 legislation within the current bill or within an update to the Public Health (Tobacco) Act[13].

4 What we know about young people smoking in Ireland

4. What we know about young people smoking in Ireland

Best available evidence suggests that continued measures to reduce the accessibility of tobacco to children and young people is critical for tobacco endgame[14]. This evidence emphasises the need to delay initiation of tobacco use. The parts of the brain responsible for decision making, impulse control, sensation seeking, and susceptibility to peer pressure continue to develop and change until the age of 21[9]. Adolescent brains are uniquely vulnerable to the effects of nicotine and nicotine addiction[15].

Overall children are less likely to smoke now than ever before. However, there is some evidence that declines in child smoking over the last 10 to 20 years are levelling off.

According to the Health Behaviour in School-aged Children (HBSC) survey, current tobacco use among 12-17-year-olds has decreased from 8% in 2014 to 5% in 2018. A 2019 analysis of European Schools Project for Alcohol and Other Drugs (ESPAD) data found that the previous decline in smoking has halted in Irish teens for the first time in 25 years (14%), and rates have significantly increased to 16% in boys while declining slightly to 13.6% in girls.

The average age at which children try their first cigarette is increasing over time.

The proportion of 15-17 years olds that tried their first cigarette before the age of 11 decreased from 26.7% in 2002 to 6.3% in 2018[16]. The proportion of 15–17-year-olds that reported trying their first cigarette before the age of 15 years also decreased but to a lesser extent, from 87.5% in 2002 to 79.1% in 2018.

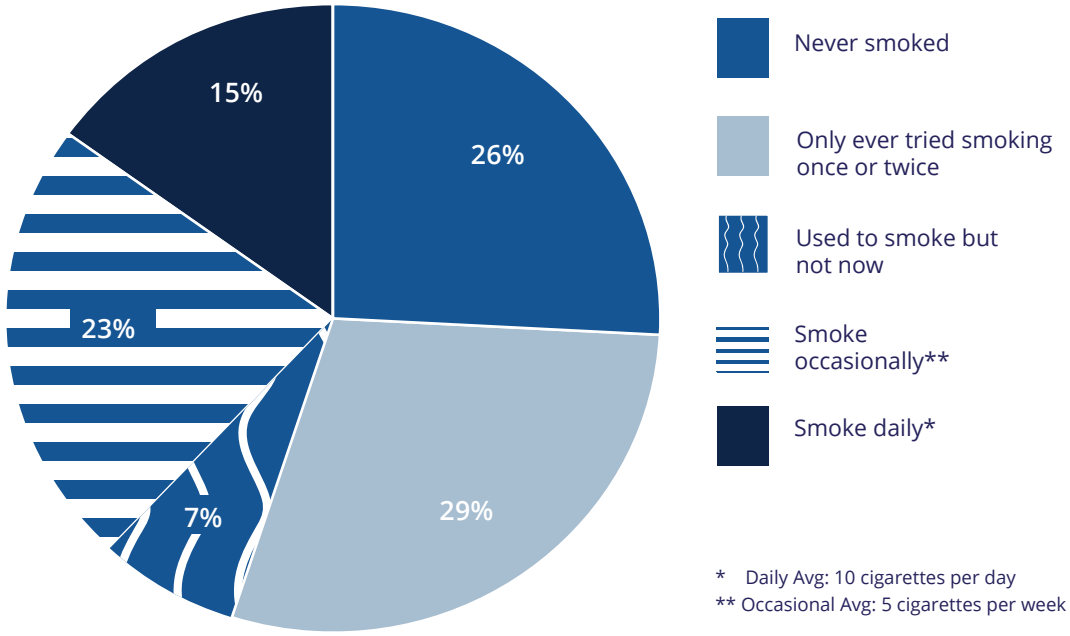
The 2019–20 Irish National Drug and Alcohol Survey also found that there has been an increase in age at first use of tobacco among those aged 15–24 years across survey time points; in 2002–03, the mean age of first use was 14.6 years and this has increased with each survey to 16.4 years in 2019–20[17].

While most start smoking as children, there are some who start between the ages of 18 to 21.

Smoking initiation in late teens and early twenties is not uncommon, even among higher socioeconomic groups. In 2019, an Irish study of 1,267 undergraduate and postgraduate students found that in total, 49.2% of all current and ex-smokers started smoking at the age of 18 years or older, 43.3% between the ages of 15 and 17 years and 7.4% under the age of 15 years[18].

Ireland's largest longitudinal and nationally representative study, Growing Up in Ireland (GUI) National Longitudinal Study of Children, also shows significant changes in smoking status in early adulthood. This study reports that the rate of never smoking decreased by almost half between the ages of 17/18 and 20 years of age from 51% to 26% (Figure 1.)[19, 20].

Figure 2. Smoking status among Irish 20-year-olds



Source: Growing Up in Ireland, The Lives of 20- Year-olds: Making the Transition to Adulthood

The study also found that rates of occasional and daily smoking almost doubled between the ages of 17/18 and 20 years of age. By the time the cohort had reached 20 years of age, almost three-quarters (74%) had ever smoked a cigarette.

On average, the young adults in the GUI study were 16 years old when they tried their first cigarette. Looking specifically at those who had their first cigarette by the age of 14 (30% of all smokers), they smoked an average of 34 cigarettes weekly. Those who started smoking at 15 years or later smoked significantly fewer, with an average of 18 cigarettes per week. An increase in age of smoking initiation is significantly associated with lower risk of lifelong smoking, nicotine dependence, as well as respiratory and cardiovascular health effects[21, 22].

Children tell us that they find it easy to get cigarettes even though it's illegal to sell tobacco to anyone under 18 years of age since 2001[23].

According to the 2019 ESPAD survey in Ireland, over 60% of 15- to 16-year-olds reported that they think it would be either fairly easy or very easy to obtain cigarettes[24]. Unpublished data on test purchases suggest that 93% of retailers are requesting identification prior to selling cigarettes[2]. The Youth Smoking in Ireland Report published in 2018 found that 59% of 2nd-5th class students reported it would be very easy or easy for them to get someone else to buy cigarettes for them. A larger proportion of smokers reported that they found it easy or very easy to get someone else to purchase cigarettes for them (77% versus 56% for non-smokers).

The 2019 Young Person's Behaviour and Attitudes Study found that schoolchildren in Northern Ireland aged 11 to 17 who smoked reported accessing cigarettes from friends (42%), followed by buying them in a shop (32.9%)[25].

There are now more e-cigarette users than tobacco users among children in Ireland.

The HBSC survey reported that e-cigarette use among 12-17-year-olds is around twice as common as cigarette use. The 2019 ESPAD survey also reported that among 15/16-year-olds, almost 4 in 10 teens (37%) had tried e-cigarettes and almost 1 in 5 (18%) were current users, making both ever use and current use of e-cigarettes higher than use of cigarettes (22).

Dual use, the use of both conventional cigarettes and e-cigarettes, is now a common pattern of use among teenagers in Ireland. The 2018 Planet Youth Survey of nicotine consumption behaviours of 15–16-year-olds in Galway, Mayo and Roscommon found that dual-use was the most common smoking behaviour. Dual use was more commonly reported than smoking either cigarettes or e-cigarettes alone[26].

Child e-cigarette users are more likely than non-users to become tobacco users.

An evidence review and meta-analysis conducted by the Health Research Board concluded that e-cigarette consumption was associated with an increased risk of becoming a regular tobacco user[27].

In 2021, the WHO published an updated report on the global tobacco epidemic. This report affirmed the HRB report results and concluded that for children and adolescents who use e-cigarettes, this can on average double their risk of smoking cigarettes[8].

5 Where have Tobacco 21 laws been introduced?

5. Where have Tobacco 21 laws been introduced?

Tobacco 21 laws have been introduced in 4 countries.

Tobacco 21 Legislation has been introduced in the United States. The implementation began at local and regional levels within state localities. National legislation followed in 2019[28]. Singapore has taken a phased implementation on increasing the legal age of sale to 21 years. The first increase from 19 to 20 years came in 2020 with an increase to 20 to 21 in 2021. Guam, Honduras, Kuawait Samoa, Sri Lanka, Uganda have raised the minimum age to 21. Japan has raised the age of sale to 20 years[29].

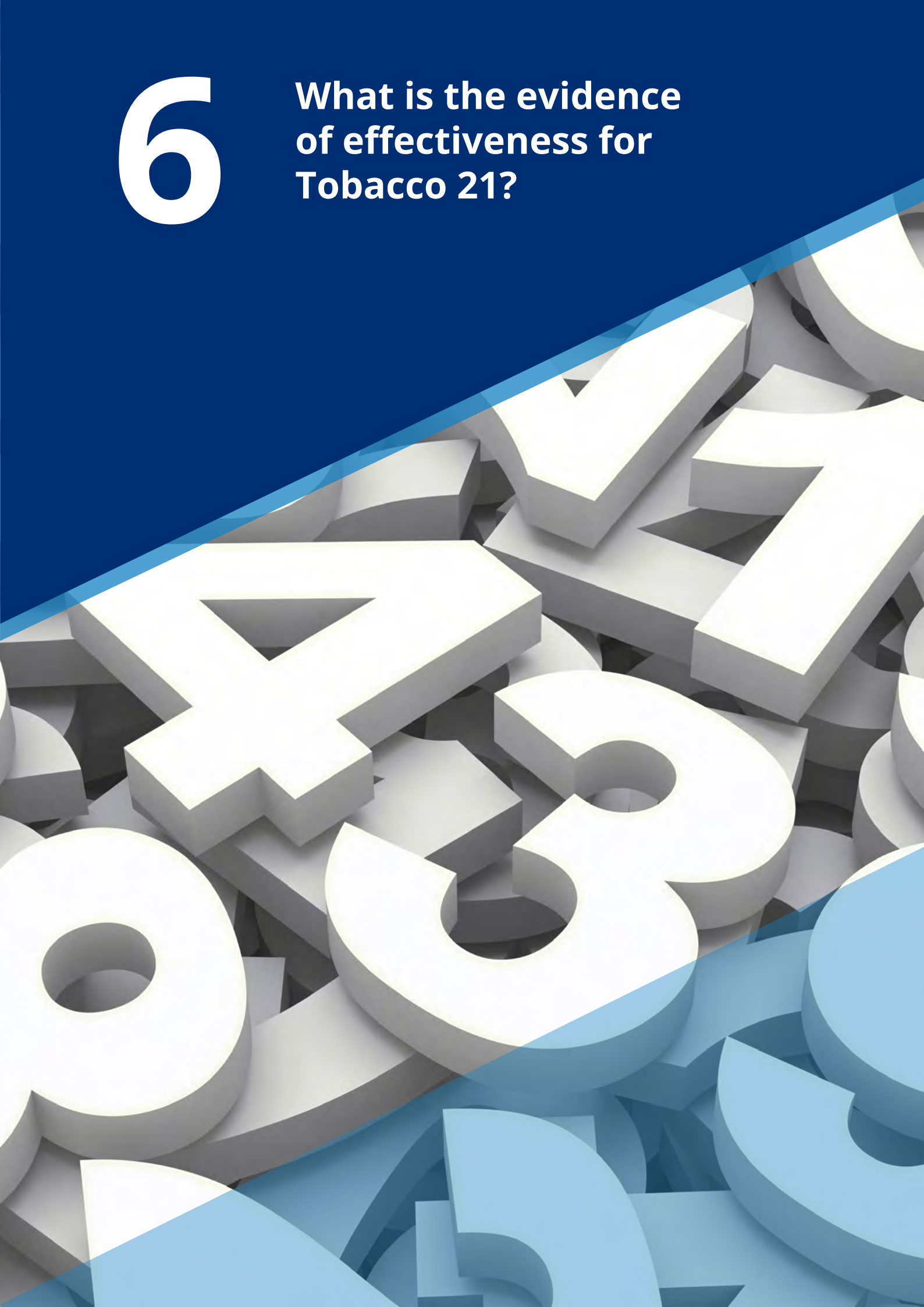
Parliamentary proceedings have explored the implementation of Tobacco 21 legislation in England. In June 2021, a debate at Westminster Hall discussed the All-Party Parliamentary Group on Smoking and Health recommendation on raising the minimum age of sale on tobacco products to 21 years[30].

In 2022 an independent review was published by Dr. Javed Khan to support England's smokefree 2030 goal. The review found that without the implementation of further ambitious tobacco policy, England will miss the national smokefree target by 7 years[31]. The report also found the most vulnerable in society will not meet the goal until 2044. Four critical recommendations were made to accelerate tobacco control progress, one of which relates to increasing the minimum legal age of tobacco products. The recommendation suggests increasing the legal age of sale from 18 by one year, every year, until tobacco is phased out of the market[31].

In December 2021, New Zealand introduced a Smokefree 2025 Action Plan to adopt ambitious new legislation to achieve a tobacco endgame and tobacco free society by 2025[32]. These include a suite of legislative developments including the introduction of a smoke free generation policy where it will be illegal to sell tobacco products to those born after 2008.

While no European member state has yet introduced the measure, there is no legal obstacle to individual member states in setting domestic policy on legal age of sale.

6 What is the evidence of effectiveness for Tobacco 21?



6. What is the evidence of effectiveness for Tobacco 21?

Modelling Evidence

The U.S. National Academies of Sciences (formally known as the Institute of Medicine) conducted modelling studies on the potential effectiveness of Tobacco 21 legislation. These data were analysed using the SimSmoke and the Cancer Intervention and Surveillance Modelling Network (CISNET) smoking population models[9]. Both models simulate annual age-specific smoking prevalence and smoking-attributable mortality. The modelling evidence predicts that Tobacco 21 legislation can result in fewer tobacco attributable deaths, specifically 223,000 premature deaths prevented among people born between 2000 and 2019, including 50,000 fewer deaths from lung cancer. SimSmoke models projected that Tobacco 21 can have a reduction in adverse maternal and child health outcomes, including preterm births, low birth weight and Sudden Infant Death[9].

The Academies modelling evidence also suggests that 15- to 17-year-olds would benefit most from increasing the legal age of tobacco products to 21. The modelling suggests that Tobacco 21 policies have the potential to reduce smoking rates by 25% among this cohort of young people and 15% among 18–20-year-olds. One rationale for the greatest reduction of smoking rates for 15–17-year-olds is that they are least likely to have access to peer networks (friends and acquaintances) aged twenty-one years and older who may be able to complete proxy purchases[10]. This is important as according to 2018 Irish HBSC data, which suggests tobacco experimentation is greatest among the 15-17-year-old cohort.

Modelling evidence using the Open Science Framework in England predicted that Tobacco 21 legislation would result in a reduction in the total numbers of smokers by 95,000 and result in an additional 77,000 fewer 18-20 years taking up smoking up to 2030. The estimate suggests that Tobacco 21 legislation would reduce smoking prevalence from 16.2% in 2019 to 2% among 18- to 20-year-olds by 2030[29].

7 What has been learnt by implementing Tobacco 21 elsewhere?

7. What has been learnt by implementing Tobacco 21 elsewhere?

Evaluation data from Needham Massachusetts, the first community in the USA to implement Tobacco 21 in 2005, found that the smoking rates of secondary school students aged 15-18 years dropped by nearly 50%. Surrounding counties which had not adopted the policy had a much smaller decline in consumption rates of around 15-20%[3]. A nationwide rapid evaluation of the Tobacco 21 legislation in the USA found that 11–18-year-olds, were less likely to perceive that it was easy to purchase tobacco products from a shop following the introduction of the measure[33]. This study also found a decrease in the likelihood of 18-20 years reporting they were a current or daily smoker.

After implementation of California's Tobacco 21 law in 2016, a purchase survey demonstrated a reduction in tobacco products sales among 15–16-year-olds. The survey also found that there was a significant decline in underage tobacco sales among 15–16-year-olds. Prior to Tobacco 21, there had not been a change in underage tobacco sales since 2009 among this age group, suggesting that the Tobacco 21 legislation may have played a role in the reduction of underage tobacco sales at tobacco retail outlets[3]. An analysis of cigarette brand purchases following Tobacco 21 implementation found a reduction of sales of cigarette brands that are disproportionately used by smokers under the age of 21[34].

One study found that Tobacco 21 implementation in the United States has the potential to decrease smoking and tobacco related inequities. An analysis examined those living in jurisdictions where Tobacco 21 had been implemented and found that 17–18-year-olds had a lower likelihood of smoking participation and daily smoking initiation. Lower probabilities of smoking participation were observed among Latino respondents as well as those who indicated they did not have plans to attend college[35]. An analysis of LGBTQI+ adolescents in California found that the introduction of Tobacco 21 was associated with significant reductions in lifetime e-cigarette and tobacco use[36].

Evidence on the feasibility of Tobacco 21 implementation demonstrate some areas of challenge, particularly in the area of enforcement[37]. Data from jurisdictions where Tobacco 21 had been implemented showed that enforcement gaps can be attributed to multiple factors, including retailer awareness of the law, lack of retailer education and support for enforcement and regulation (e.g., monitoring retailer compliance)[38, 39].

Careful assessment and resourcing to fully implement a Tobacco 21 law will examine effective enforcement, access to online sources, as well as retailer compliance[40, 10]. The online retail environment for tobacco products brings into focus potential challenges regarding scope and reach of Tobacco 21 legislation. Evidence suggests that underage purchasers are able to access tobacco products from online vendors who can mail products to an individual residence or other location[40, 41]. Online sales present an immediate challenge to ensure a response under the EU Tobacco Products Directive to deliver protection for children and young people.

A summary of the evaluation evidence considered in this discussion paper can be found in Appendix 1.

8 What is the level of public support for Tobacco 21?

8. What is the level of public support for Tobacco 21?

There is public support for a tobacco endgame and Tobacco 21.

The Irish Heart Foundation conducted a public opinion poll which showed 73% of over 15-year-olds would support a ban on tobacco sales to purchasers under 21 years of age[42]. In May 2022, the HSE published a survey on public views on tobacco endgame policies in Ireland. This survey found that a majority (70.6%) aged 15 years and older supported raising the legal age of sale to 21 years (See Table 1).

A more detailed analysis of the data collected by the HSE Tobacco Free Ireland Programme on public views for tobacco endgame policies found that support for the Tobacco 21 measure varied by smoking status. Compared to current and ex-tobacco product users support for Tobacco 21 was significantly higher among those who had never used tobacco products. Similarly, compared to current and ex-smokers, never smokers were significantly more likely to support Tobacco 21. Compared to current or ex-e-cigarette users, support for Tobacco 21 was significantly higher among those who had never used e-cigarettes.

Table 1: Tobacco 21 Support by Tobacco Product Use Status (N=1,000)

	Tobacco 21 Support		
Variable	**Support** **n (%)**	**No Support** **n (%)**	**P value**
All participants	706 (70.6%)	294 (29.4%)	
Any Tobacco product use status			
• **Current tobacco product user**	124 (64.2%)	69 (35.8%)	
• **Ex-tobacco product user**	198 (67.6%)	95 (32.4%)	0.006
• **Never-tob**acco product user	383 (75.2%)	126 (24.8%)	
Smoking status			
• Current smoker	81 (59.1%)	56 (40.9%)	
• Ex-smoker	224 (68.9%)	101 (31.1%)	0.001
• Never-smoker	400 (74.6%) v	136 (25.4%)	
E-cigarette use status			
• Current e-cigarette user	58 (69.9%)	25 (30.1%)	
• Ex-e-cigarette user	89 (61.4%)	56 (38.6%)	0.022
• Never-e-cigarette user	558 (72.8%)	209 (27.2%)	

Source: HSE Tobacco Free Ireland Programme

Support for Tobacco 21 also varied by age group, with highest support seen among those aged 35- 44 years (75.8%). A high level of support was observed (66.1%) among 18 - 24-year-olds.

Table 2: Tobacco 21 Support by Age Group (N= 1,000)

	Tobacco 21 Support		
Age	**Support n (%)**	**No Support n (%)**	**P value**
15-17 years	34 (72.3%)	13 (27.7%)	
18-24 years	74 (66.1%)	38 (33.9%)	
25-34 years	110 (71.9%)	43 (28.1%)	
35-44 years	147 (75.8%)	47 (24.2%)	0.598
45-54 years	116 (67.8%)	55 (32.2%)	
55-64 years	97 (69.3%)	43 (30.7%)	
65+ years	128 (69.9%)	55 (30.1%)	

Source: HSE Tobacco Free Ireland Programme

In England, the All-Party Parliamentary Group on Smoking and Health launched a report titled Delivering a Smokefree 2030: The All-Party Parliamentary Group on Smoking and Health recommendations for the Tobacco Control Plan 2021. This report highlighted YouGov Survey data that found that 54% of 18–24-year-olds supported the Tobacco 21 measure. Overall, 63% of adults supported increasing the age of tobacco from 18 to 21. In addition, retailers supported the measure with 53% in support of a new minimum age of sale. A 2022 ASH smokefree survey in England found that public support for Tobacco 21 had increased to 71% among 18–24-year-olds and that there was no significant difference broken down by political party affiliation (Conservative, Labour, Lib Dem)[43].

Public support for Tobacco 21 legislation has been studied using population level data in the United States. In a survey of 3000 respondents, 70.5% of adults supported raising the legal age of sale. The strongest support was found among never smokers, females, African Americans, and older adults[29].

A recent survey in Canada found that 80% of smokers would support Tobacco 21 and the policy has been supported by the Ontario Tobacco Research Unit since 2015[44].

9

What about the minimum legal age of sale for e-cigarettes within a Tobacco 21 agenda?

9. What about the minimum legal age of sale for e-cigarettes within a Tobacco 21 agenda?

An evidence review and meta-analysis published by the Health Research Board in 2020 addressed the efficacy and safety of e-cigarettes and explored evidence on the relationship between e-cigarette and tobacco use in youth. The review concluded that there was an association between adolescent e-cigarette use and subsequent use of tobacco products. The results of the meta-analysis found that the combined odds of trying a conventional cigarette were 4.06 times higher for those who had ever used e-cigarettes.

Emerging evidence exploring the association between Tobacco 21 policies and the effects on e-cigarette consumption behaviours among young people are limited. A 2019 analysis of 34 states in the U.S.A. demonstrated that prevalence of ever- and past 30-day e-cigarette use remained static following the introduction of Tobacco 21 legislation, suggesting a slow down on the uptake of e-cigarettes among high school students[45]. A study of secondary students in California found that Tobacco 21 was associated with a reduced prevalence of lifetime smokeless and e-cigarette use. This study revealed an equity dimension, with Tobacco 21 associated with reductions in lifetime and past 30-day use of all tobacco and nicotine products among Latino youth. However, this study also found that Tobacco 21 was associated with increases in prevalence of past month e-cigarette use among the general population, which may point to challenges related to access, enforcement, and online purchases of e-cigarettes[46].

Evidence from New York, where Tobacco 21 was implemented in 2014, found that among 12–18-year-olds willingness to try e-cigarettes among those who had never tried an e-cigarette was twice as high in 2018 as it was in 2014 after implementation of Tobacco 21[47]. These data reinforce the need for more ambitious e-cigarette product control, regulation, and enforcement.

10 How might Tobacco 21 be pursued within Irish law?

10. How might Tobacco 21 be pursued within Irish law?

Article 16 of the World Health Organization Framework Convention for Tobacco Control, which is legally binding and ratified by all European countries, requires countries to prohibit the sale of tobacco products to minors but does not specify an exact age limit.

In 2001, the minimum legal age of the sale for tobacco products changed from 16 years to 18 years. This restriction remains under Section 45 of the Public Health (Tobacco) Act, 2002[48].

There is opportunity to amend Section 45 (1) of the Public Health (Tobacco) Act, 2002 which states:

"Prohibition on sale of tobacco products to persons under 18 years of age", (1) It shall be an offence for a person to sell a tobacco product by retail, or supply a tobacco product, to, or invite an offer to purchase a tobacco product by, a person who has not attained the age of 18 years[23].

While no European member state has introduced Tobacco 21 legislation, there are minimal legal obstacles which would prohibit individual member states in setting domestic policy on minimum legal age of sale. Evidence from jurisdictions where Tobacco 21 legislation has been introduced suggest that robust engagement with stakeholders including children and young people will be required to achieve legislative change on the legal age of sale on tobacco and e-cigarettes in Ireland[49].

As stated in the 2022 HSE State of Tobacco Control in Ireland report, the HSE Environmental Health Services (EHS) have been effective in building and maintaining compliance with a broad suite of tobacco control legislation to protect the public from tobacco harms[50]. The EHS enforces a comprehensive set of tobacco control legislation which includes sale of tobacco products to persons under the age of 18 years, smoking in workplaces, registration of retailers, point of sale advertising, product labelling and presentation. It is also the competent authority for the recently transposed Tobacco Products Directive (TPD), which places a wide range of new responsibilities upon the EHS in relation to tobacco products, electronic cigarettes (e-cigarettes) and refill containers, cross-border distance sales, herbal products, and novel products[50].

The programme includes the National Register of Tobacco Retailers (NRTR). In 2021, 12,474 retail outlets were registered to sell tobacco including 5,739 licensed premises and 3,559 convenience stores. Approximately, 4,644 licensed premises operate a self-service vending machine. Crucially the next step will be to develop a robust age verification system to ensure compliance in relation to any underage purchasers[50].

11 Concluding statement

11. Concluding statement

Ireland has made a policy commitment to tobacco endgame, aiming for a smoking prevalence of less than 5% by 2025. The data are clear - this target will not be met. Further decisive action is needed.

There is sufficient evidence and public support to move forward with the Tobacco 21 agenda. This will signal an important modal shift towards further supply side regulation of tobacco. This follows the lead shown by other countries working towards tobacco endgame but also re-asserts Ireland's position as both a European and global leader in tobacco control.

Policy in Ireland needs to respond to the changes evidenced in survey data that describe children's earliest engagements with tobacco products and e-cigarettes. The data from the 2019 ESPAD study are concerning and suggests Ireland may be starting to lose ground in terms of reducing smoking prevalence among children in Ireland. Similarly, patterns of tobacco and e-cigarette dual- use among young people are a real concern for the health and wellbeing of teenagers themselves and in their future adult lives.

Tobacco 21 is a proportionate response to this situation. Tobacco products are highly addictive and kill 1 in every 2 smokers when used exactly as they are intended. Tobacco use remains the single largest preventable cause of early death in Ireland and the burden of tobacco harms fall most severely on the most vulnerable in society, most notably the socially disadvantaged and those with mental ill-health.

It's time for Tobacco 21.

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13 Appendix 1. Summary of Tobacco 21 evaluation evidence

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Authors	Year	Title	Key Measures	Findings
Agaku, I.T et al.	2022	A Rapid Evaluation of the US Federal Tobacco 21 (T21) Law and Lessons From State-wide T21 Policies: Findings From Population-Level Surveys	Tobacco accessibility & smoking participation	The study examined changes in tobacco access among 6th -12th graders. And found the overall percentage of 6th to 12th graders perceiving that it was easy to buy tobacco products from a store decreased from 2019 (67.2%) to 2020 (58.9%). In the 2019 BRFSS, those aged 18 to 20 years living in a state with Tobacco 21 policies had a lower likelihood of being a current cigarette smoker (adjusted prevalence ratio [APR], 0.58) or smoking cigarettes daily (APR, 0.41).
Colston, D. C., et al	2022	Tobacco 21 laws may reduce smoking and tobacco-related health disparities among youth in the U.S.	Smoking participation; SES Status	The analysis found that Tobacco 21 coverage was associated with a lower likelihood of smoking participation among 12th graders. Tobacco 21 coverage was most strongly associated with a lower likelihood of smoking participation among: Hispanic and NH (Non-Hispanic) Other/ Multiracial individuals; respondents with parents who had less than a college education; and respondents who were not definitely planning on attending college. Tobacco 21 laws were associated with a lower likelihood of smoking participation among 12th graders.
Debchoudhury, I., et al.	2022	E-cigarette Use Among Middle and High School Students in New York City Before and After Passage of Tobacco 21	E-cigarette use; Willingness to try	NYC high school students' current e-cigarette use increased from 2014 to 2018 (8.1% vs 23.5%, P < .001). Middle school students' use increased between 2014 (4.8%) and 2016 (9.0%) yet reversed by 2018 (5.7%) (2014 vs 2018, P = .576). ROS middle school (2.2% vs 7.4%, P < .001) and high school (12.0% vs 29.3%, (P < .001) use increased from 2014 to 2018. Willingness to try e-cigarettes among those who had never tried an e-cigarette was twice as high (AOR = 2.19, 95% CI = 1.15-3.17) among NYC high school students in 2018 compared with 2014.

García-Ramírez, G., et al.	2022	Associations of California's Tobacco 21 Minimum Sales Age Law with Tobacco Use among Sexual Minority Adolescents: A Trends Analysis.	30 day tobacco use; Lifetime tobacco use; LGBTQI+ Status	Multilevel mixed-effects logistic regression analyses showed that sexual minority students were more likely than non-SM students to report past-30-day and lifetime cigarette (OR=2.47; OR=2.37), e-cigarette (OR=1.21; OR=1.10), smokeless tobacco use (OR=1.95; OR=1.56), and use of any tobacco product (OR=1.94; OR=1.61). Among SM youth, Tobacco 21 was associated with significant reductions in lifetime e-cigarette use (OR=0.66), and lifetime use of any tobacco products (OR = 0.75). These decreases generally were greater than or equivalent to those observed for non-SM youth. For 30-day e-cigarette and any tobacco use, SM youth showed no significant increases, whereas non-SM youth showed significant increases (OR = 1.06; OR = 1.11) following Tobacco 21. Tobacco 21 was associated with smaller increases in lifetime cigarette use (OR = 1.34), and larger increases for past-30-day and lifetime smokeless tobacco use (OR=1.34; OR = 1.28) among SM students, to those observed for non-SM students.
Liber, A. C., et al.	2022	Tobacco 21 adoption decreased sales of cigarette brands purchased by young people: a translation of population health survey data to gain insight into market data for policy analysis.	Cigarette brand sales	Sales of disproportionately young brands declined after Tobacco 21 implementation. Tobacco 21 policy implementation dates fit disproportionately young brand sales trends better than 99% of adjusted randomised placebo models. Tobacco 21 implementation fit disproportionately old brand sales trends better than just 1% of adjusted randomised placebo models. This study adds compelling empirical evidence that Tobacco 21 decreased purchases of the cigarette brands consumed disproportionately by young people, the policy's target demographic.
Roberts, M. E., et al.	2022	Tobacco 21's Impact Amid the E-Cigarette Surge	Tobacco use, Sources for obtaining tobacco, and Attitudes surrounding Tobacco 21	Both cross-sectional (Cohort 1 vs Cohort 2) and prospective (pre-post Tobacco 21 in Cohort 1) analyses indicated a slight decline in most tobacco use from 2016 to 2018, but e-cigarette use more than doubled during the same period. Students enrolled throughout the transition to Tobacco 21 (Cohort 1) perceived little effect of Tobacco 21 on peer use. The largest proportions (35.3%-43.5%) of combustible tobacco were obtained outside Columbus; 61.8% of e-cigarette users reported obtaining e-cigarettes through borrowing. Tobacco 21 was associated with reductions in combustible and smokeless tobacco use, but its impact was not sufficient to curb the surge in e-cigarette use.

Wilhelm, A. K., et al.	2022	Local Tobacco 21 Policies are Associated With Lower Odds of Tobacco Use Among Adolescents	Tobacco use;	After adjusting for baseline tobacco use and other demographics, Tobacco 21 -exposed eighth and ninth-grade students had significantly lower odds of tobacco use than unexposed peers in five of eight models, i.e. any tobacco (aOR = 0.80, 95% CI: 0.74, 0.87), cigarettes (aOR = 0.81, 95% CI: 0.67, 0.99), e-cigarettes (aOR = 0.78, 95% CI: 0.71, 0.85), flavoured tobacco (aOR = 0.79, CI: 0.70, 0.89), and dual/poly tobacco (aOR = 0.77, 95% CI: 0.65, 0.92).
Juarez, R., et al.	2022	Practices and Perceptions of Local Health Officers/ Commissioners Regarding Tobacco 21 Policy Advocacy	Tobacco 21 Advocacy, Coalition building, lessons learned	Results show almost 70% of respondents had high interest in influencing public policy, more than 80% thought the public policy makers' actions regarding Tobacco 21 were highly important to the health and well-being of the public, and 89% had in some capacity acted to support a Tobacco 21 initiative. Involvement with legislative efforts was not high, despite evidence showing high popularity of the measure among the public. The top perceived benefits included a decrease in tobacco use among adolescents, improvements to community or state health, and delay in tobacco use initiation. Top barriers listed were issues with enforcement, lack of money or resources, competing health priorities, and policy makers' attitudes and values.
Roberts, M. E., et al.	2022	Tobacco 21's Impact Amid the E-Cigarette Surge	Tobacco us, smokeless tobacco use, e-cigarette use	Both cross-sectional (Cohort 1 vs Cohort 2) and prospective (pre-post Tobacco 21 in Cohort 1) analyses indicated a slight decline in most tobacco use from 2016 to 2018, but e-cigarette use more than doubled during the same period. Students enrolled throughout the transition to Tobacco 21 (Cohort 1) perceived little effect of Tobacco 21 on peer use. The largest proportions (35.3%-43.5%) of combustible tobacco were obtained outside Columbus; 61.8% of e-cigarette users reported obtaining e-cigarettes through borrowing. CONCLUSIONS: Tobacco 21 was associated with reductions in combustible and smokeless tobacco use, but its impact was not sufficient to curb the surge in e-cigarette use. Tobacco 21 should be contextualized as part of a broader network of tobacco control efforts, including additional youth-access regulations, that may be needed to address e-cigarette use among young people.

Choi, K., et al.	2021	E-cigarette-inclusive smoke-free policies, excise taxes, tobacco 21 and changes in youth e-cigarette use: 2017-2019	30 day e-cigarette use	Prevalence of ever and past 30-day youth e-cigarette use in states with ESF policies decreased during 2017-2019, while the prevalence of these measures in states without ESF policies increased. States with Tobacco 21 policies showed non-significant changes in prevalence of ever and past 30-day youth e-cigarette use, whereas states without Tobacco 21 policies showed significant increases in ever and past 30-day youth e-cigarette use. States with ESF and Tobacco 21 policies showed slower increases in youth frequent e-cigarette use. E-cigarette excise taxes were not associated with decreasing prevalence of youth e-cigarette use.
Dove, M. S., et al.	2021	Smoking behaviour in 18-20 year-olds after tobacco 21 policy implementation in California: A difference-in-differences analysis with other states	Ever smoked, current smoker status	Before California's Tobacco 21 policy, there was an 11% annual decrease in the odds of ever smoking among 18-20 year-olds in California and a 6% decrease in the referent states. After the policy, these trends did not change significantly. Results for current smoking were similar. For daily smoking, there was an 8% annual decrease before the policy and a 26% annual decrease after the policy among 18-20 year-olds in California; D-I-D estimates were 0.80 (95% CI: 0.57, 1.14) using referent states as the comparison and 0.62 (95% CI: 0.41, 0.95) using 21-23 year-olds in California as the comparison. There was an association between California's Tobacco 21 policy and a decrease in daily smoking among 18-20 year-olds, compared with 21-23 year-olds, more than three years post-implementation.
Glover-Kudon, R., et al.	2021	Cigarette and cigar sales in Hawaii before and after implementation of a Tobacco 21 Law	Sales of cigarettes, menthol cigarettes & cigars	Following Tobacco 21 in Hawaii, average monthly cigarette unit sales dropped significantly (-4.4%, $p<0.01$) coupled with a significant decrease in menthol market share (-0.8, $p<0.01$). This combination of effects was not observed in comparison areas. Unit sales of large cigars/ cigarillos decreased significantly in each region following Tobacco 21 implementation. Tobacco 21 policies in Hawaii and California showed no association with flavoured/menthol cigar sales share, but there was a significant increase in flavoured/menthol cigar sales share in the USA (7.1%, $p<0.01$) relative to Hawaii's implementation date, suggesting Tobacco 21 may have attenuated an otherwise upward trend.

Grube, J. W., et al.	2021	California's tobacco 21 minimum sales age law and adolescents' tobacco and nicotine use: differential associations among racial and ethnic groups	Lifetime e-cigarette use; past month e-cigarette use	Multilevel mixed effects logistic regression analyses showed that Tobacco 21 was associated with reduced prevalence of lifetime smokeless tobacco and e-cigarette use and past month smokeless tobacco use in the overall student population. Tobacco 21 was associated with increases in prevalence of past month e-cigarette use. Moderation analyses indicated differences by racial and ethnic groups. Notably, Tobacco 21 was associated with reductions in lifetime and past 30-day use of all tobacco and nicotine products among Latinx youth. The findings were more mixed for other racial and ethnic groups. Slopes analyses indicated that Tobacco 21 was associated with accelerated downward trends for 30-day cigarette and smokeless use; moderated trends for lifetime cigarette smoking such that downward slopes became less steep; and reversed downward trends for e-cigarette use. Changes in slopes varied across racial and ethnic groups.
Roberts, M. E., et al.	2021	Beyond Strong Enforcement: Understanding the Factors Related to Retailer Compliance With Tobacco 21	Location of retailer, scanners for IDs	Study 1 found that, after controlling for race- and age-based factors, retailers located in high (vs. low)-poverty neighbourhoods had a lower likelihood of conducting identification (ID) checks. Study 2 found that ID checks were related to whether retailers displayed signage about Tobacco 21, as required by the city law. Study 3 found that, among cashiers, Tobacco 21 awareness (which was high) and perceptions about Tobacco 21 (which were moderate) were not generally related to their retailer's compliance; having (vs. not having) scanners for ID checks was related to a higher likelihood of compliance
Schiff, S., et al.	2021	E-cigarette and cigarette purchasing among young adults before and after implementation of California's tobacco 21 policy	Past month e-cigarette users; Past month tobacco users	Negligible changes in cigarette and e-cigarette use were observed pre-Tobacco 21 versus post-Tobacco 21. At both time points, the majority of past 30-day users purchased cigarettes from gas stations and e-cigarettes from vape shops. Post-Tobacco 21, the proportion of participants who reported purchasing cigarettes at gas stations decreased. Post-Tobacco 21, most past 30-day cigarette or e-cigarette users were not refused purchase of cigarettes (65.4%) or e-cigarettes (82.0%) in the past 30 days, despite being under 21; half of the participants felt it was harder to purchase cigarettes (54.3%) and e-cigarettes (43.6%) post-Tobacco 21.

Hudson, S. V., et al. (	2021	Adoption of Tobacco 21: A Cross-Case Analysis of Ten US States	Facilitators to Tobacco 21 legislation	Three primary factors emerged as facilitators to the passage of state Tobacco 21 laws: (1) increased attention on e-cigarettes as the product driving an overall increase in youth tobacco use and depiction of an "e-cigarette epidemic", (2) having at least one influential policy entrepreneur or champion, and (3) traction from other states or local municipalities passing Tobacco 21 legislation. Challenges to Tobacco 21's success included (1) influence of the tobacco industry, (2) the bill's low ranking among legislative priorities, and (3) controversy among advocates and policymakers over bill language. As e-cigarette rates spiked, Tobacco 21 bills became legislative priorities, traction from other successful efforts mounted, and ultimately, the tobacco industry flipped from opposing to supporting Tobacco 21 laws. Despite these favourable headwinds, advocates struggled increasingly to pass bills with ideal policy language
Ali, F. R. M., et al.	2020	Tobacco 21 policies in California and Hawaii and sales of cigarette packs: a difference-in-differences analysis	Cigarette pack sales	Implementation of Tobacco 21 state-wide was associated with a reduction of 9.41 (95% CI=-15.52 to -3.30) million monthly packs sold in California and 0.57 (95% CI=-0.83 to -0.30) million monthly packs sold in Hawaii, compared to regional states. These translate to a reduction of 13.1%-18.2%, respectively, in monthly packs sold relative to mean values before the implementation of Tobacco 21.
Boettiger, D. C. and J. S. White	2020	Cigarette Pack Prices and Sales Following Policy Changes in California, 2011-2018	Cigarette pack sales	Compared with the synthetic control in 2018, cigarette prices in California were $1.89 higher ($7.86 vs $5.97; P < .001), and cigarette sales were 16.6% lower (19.9 vs 16.6 packs per capita; P < .001). This reduction in sales equates to 153.9 million fewer packs being sold between 2017 and 2018.
Ferrell, A., et al.	2020	Perceptions and Use of Electronic Nicotine Delivery Systems Among Floridian Middle and High School Students: Secondary Analysis of Cross-sectional Survey Results	Ever -e-cigarette use; current use	Compared to the data from spring of 2014, the minimum-age policy enacted on ENDS products enacted on July 1, 2014 did not lead to a significant decrease in Florida's high school and middle school students' ever ENDS use (14.9% in 2014 vs 25.8% in 2015) and current ENDS use (7.5% in 2014 vs 12.4% in 2015). There was some ambiguity among students regarding the ENDS harm-more students in 2015 thought of ENDS as both equally (11.0% vs 7.7%) and less (32.4% vs 28%) harmful than cigarettes. There was a decrease in the proportion of students who were unsure about their answer to this question (51.5% vs 59.2%).

Friedman, A. S. and R. J. Wu	2020	Do Local Tobacco-21 Laws Reduce Smoking Among 18 to 20 Year-Olds?	Current smoking status	Current smoking rates fell from 16.5% in 2011 to 8.9% in 2016 among 18- 20-year-olds in these data. Regressions indicate that a tobacco-21 policy covering one's entire Metropolitan/micropolitan statistical areas yields an approximately 3.1 percentage point reduction in 18- to 20-year-olds' likelihoods of smoking (confidence interval [CI] = -0.0548 to -0.0063). Accounting for partial policy exposure-tobacco-21 laws implemented in some but not all jurisdictions within an MMSA-this estimate implies that the average exposed 18- to 20-year-old experienced a 1.2 percentage point drop in their likelihood of being a smoker at interview relative to unexposed respondents of the same age, all else equal.
Dobbs et al.	2020	Development of a tobacco 21 policy assessment tool and state-level analysis in the USA, 2015-201	Retail compliance methods	While all 16 states raised the MLSA to 21, the laws varied widely. Two laws omitted purchaser identification requirements. Fifteen laws mentioned enforcement would include inspections, but only three provided justification for conducting inspections. All 16 states provided a penalty structure for retailer/clerk violations, but penalties ranged considerably. Fourteen states required a tobacco retail licence, nine renewed annually. Six laws contained a military exemption, five were phased-in and 10 contained purchase, use or possession laws, which penalised youth. Four states introduced or expanded pre-emption of local tobacco control.
Irvin, L. H., et al.	2019	Insights in Public Health: Formative Factors for a State-wide Tobacco Control Advocacy Infrastructure: Insights from Hawai'i	Tobacco 21 Advocacy, Coalition building, lessons learned	Seven months after the Tobacco 21 effective date, 98.6% of retailers were aware of the law and 60.6% supported the law. Furthermore, 66.2% of retailers agreed that people who start smoking before 21 would become addicted to tobacco products. The RVR using youth decoys under age 18 statistically decreased from 10.3% before Tobacco 21 to 5.7% after Tobacco 21 (P=0.002). Furthermore, the RVR using young adult decoys ages 18–19 was 14.2% (95% CI 9.3% to 19.1%) for traditional tobacco and 13.1% (95% CI 10.2% to 16.1%) for electronic smoking devices. Conclusions Survey findings suggest that the high awareness and support for the law may have contributed to reducing illegal tobacco sales to youth under 18 and achieving widespread retailer conformity with the new law disallowing sales to young adults under 21.

Zhang, X., et al.	2018	Evaluation of California's 'Tobacco 21' law	Retailer awareness, test purchasing for e-cig and cigarettes	Seven months after the Tobacco 21 effective date, 98.6% of retailers were aware of the law and 60.6% supported the law. Furthermore, 66.2% of retailers agreed that people who start smoking before 21 would become addicted to tobacco products. The RVR using youth decoys under age 18 statistically decreased from 10.3% before Tobacco 21 to 5.7% after Tobacco 21 (P=0.002). Furthermore, the RVR using young adult decoys ages 18–19 was 14.2% (95% CI 9.3% to 19.1%) for traditional tobacco and 13.1% (95% CI 10.2% to 16.1%) for electronic smoking devices. Conclusions Survey findings suggest that the high awareness and support for the law may have contributed to reducing illegal tobacco sales to youth under 18 and achieving widespread retailer conformity with the new law disallowing sales to young adults under 21.
Everett, K. D., et al.	2018	Tobacco Control Policy Adoption Dynamics: A Case Study of Missouri Communities.	Coalition building	Findings show compared to smokefree policy, Tobacco 21 requires a considerably shorter timeframe and fewer resources for adoption. Tobacco 21 coalitions target a small group of stakeholders compared to smokefree coalitions' emphasis on broad community engagement.
Kessel Schneider, S., et al.	2016	Community reductions in youth smoking after raising the minimum tobacco sales age to 21.	30 day smoking	From 2006 to 2010, the decrease in 30-day smoking in Needham (from 13% to 7%) was significantly greater than in the comparison communities (from 15% to 12%; p<.001). This larger decline was consistent for both genders, Caucasian and non-Caucasian youth, and grades 10, 11 and 12. Cigarette purchases among current smokers also declined significantly more in Needham than in the comparison communities during this time. In contrast, there were no comparable differences for current alcohol use.
Silver, D., et al.	2016	Retailer compliance with tobacco control laws in New York City before and after raising the minimum legal purchase age to 21	Retailer compliance with ID checks	Retailer compliance with ID checks declined from 71% to 62% (p<0.004) between periods, and holding constant other factors, compliance with ID checks and sales at legal prices declined significantly after the laws changed. Compared to chain stores, independent retailers had significantly lower compliance rates (p<0.01).

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