

think

Clearing the air: the UK's plan
for a smoke free generation

by **Nicola Draper**

Independent thinking from the IFoA

Part of the IFoA's purpose is to promote debate within and beyond the profession, and to position our members as leading voices on the biggest public policy challenges of our time.

We aim to showcase the diverse range of expertise and critical thinking both within and outside the profession.

Our 'think' series seeks to promote debate on topics across the spectrum of actuarial work, providing a platform for members and stakeholders alike and sharing views that may differ from the IFoA's house view. In doing this, we hope to challenge the status quo, question the orthodoxy, and shine a light on complex or under-examined issues, thereby stimulating discussion and dialogue to help tackle issues in a different way.



Nicola Draper

Nicola Draper is a leading expert in Public Health and associated Mortality, Morbidity & Longevity risk. Since 2007, she has provided ongoing research and support to actuaries and the wider insurance industry.

In 2020, Nicola joined the Covid-19 Action Taskforce and also co-chaired the non-affiliated Covid-19 Actuaries Response Group. She has also co-chaired the Diabetes Working Party and the Antimicrobial Resistance Working Party. She sits on the Health and Care Board and is a member of the Lifelong Learning Sub-Committee. In 2021 Nicola was awarded the IFoA President's Award for her medical expertise, and in 2024 she was elected as an Honorary Fellow for her service to the profession.

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Photograph by Louise Haywood-Schiefer

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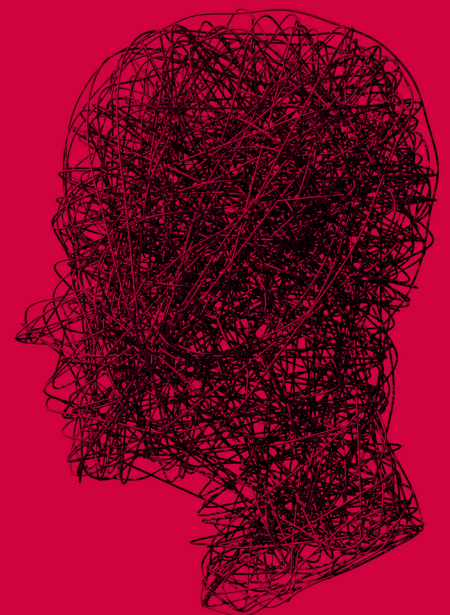
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Introduction

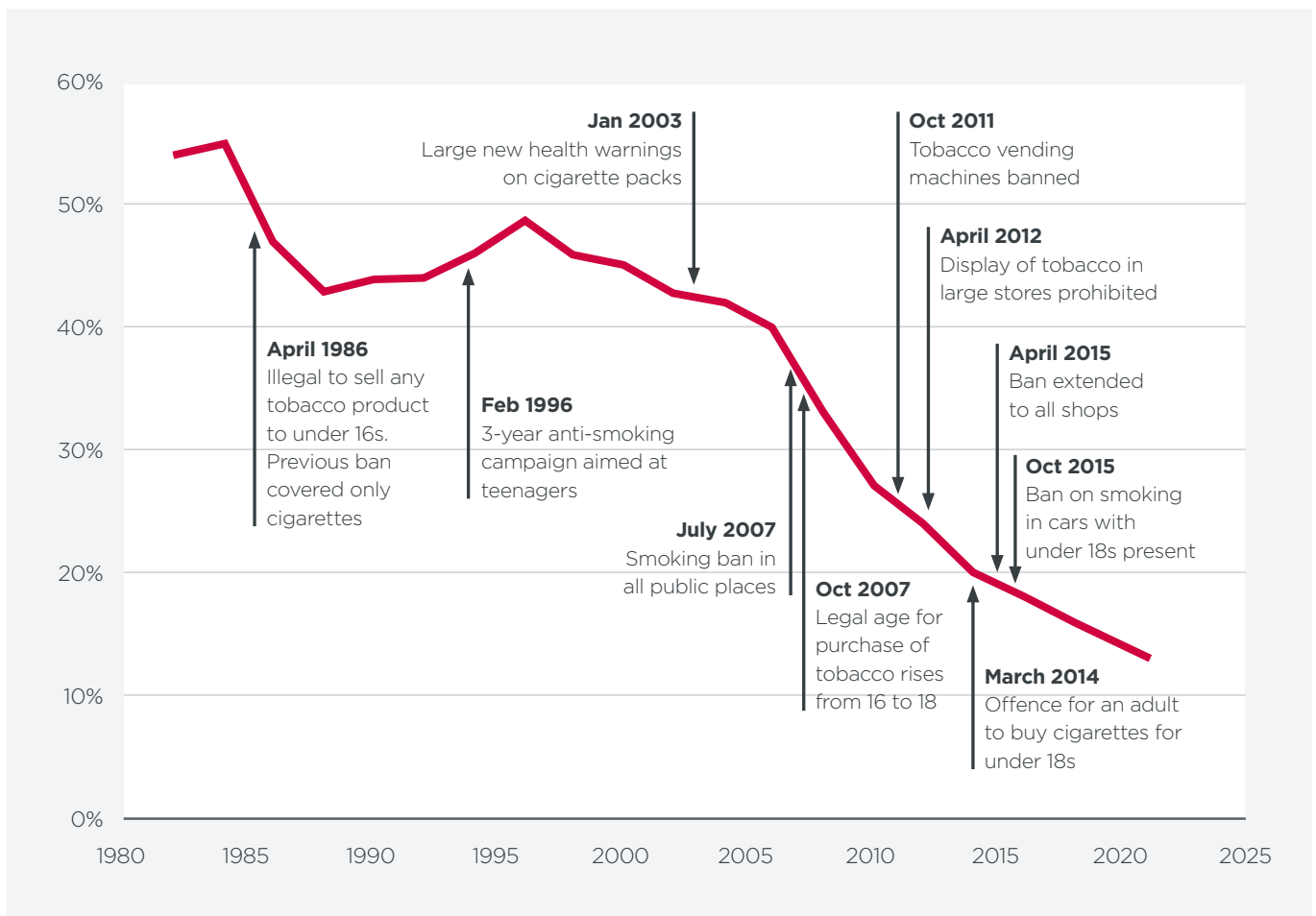
Prior to the 2024 General Election, the then Conservative Government planned to introduce legislation to raise the age of sale for tobacco, ensuring no one currently aged 14 or under can ever be legally sold cigarettes or other tobacco products. Starting January 1 2027, individuals born on or after January 1 2009 will be prohibited from legally purchasing **tobacco**.¹

The Tobacco and Vapes Bill introduced at the 2023 King's Speech and included as part of His Majesty's speech in the newly formed Labour government, also includes measures to curb youth vaping, ties in with government plans to provide extra funding for local stop smoking services and invest in mass-media campaigns encouraging people to quit. The proposed legislation would raise the age of sale for tobacco in England by one year every year,

permanently banning the sale of cigarettes or other tobacco products to people born on or after January 1, 2009. It had its second reading in The House of Commons on April 16, 2024, was debated by committee in May 2024, but will need to be reintroduced by the new government in this Parliament.

The impact of historic interventions on smoking prevalence in England is set out in *Figure 1 below*.²

Figure 1. Smoking prevalence mapped against key interventions from 1982 to 2021, adapted from NHS Digital (2019)



The size of the problem

Smoking is a leading cause of preventable illness and death. There were 506,100 hospital admissions due to smoking in 2019/20, and in 2019, there were 74,800 deaths attributed to smoking among adults aged 35 and over in **England**.³ Smoking prevalence by age and gender is presented in *Figure 2*, showing how smoking is age- and sex-specific with the highest rates in 25-34-year-old males and the lowest rates in 65+ year old women. There is a clear socioeconomic gradient in **smoking**.⁴

The annual cost of smoking to individuals, public services, and the wider UK economy is £89.3 billion, equivalent to around 3.9% of GDP. The direct costs of smoking to public finances in England in 2023 are estimated to be £21 billion. The net cost, adjusting for tobacco taxes and the reduction in pension costs due to the premature death of smokers, is £9.4 billion. This comprises:

- £4.6 billion in social security payments
- £3.4 billion cost to the NHS, social care, and fire services
- £1.4 billion net tax loss

The Khan Review

A review, led by Dr. Javed Khan OBE, set out a roadmap the UK Government should follow to close the health inequality gap and end smoking in England. Dr. Khan posed a critical question during this review: *“If cigarettes had never existed and were invented tomorrow, what would happen?”* His stark answer was that they would not be legalised, reflecting the significant health risks associated with **smoking**.⁶

Figure 2: Smoking prevalence by age and gender England: Percentage of adults age 18 years and over who currently smoke

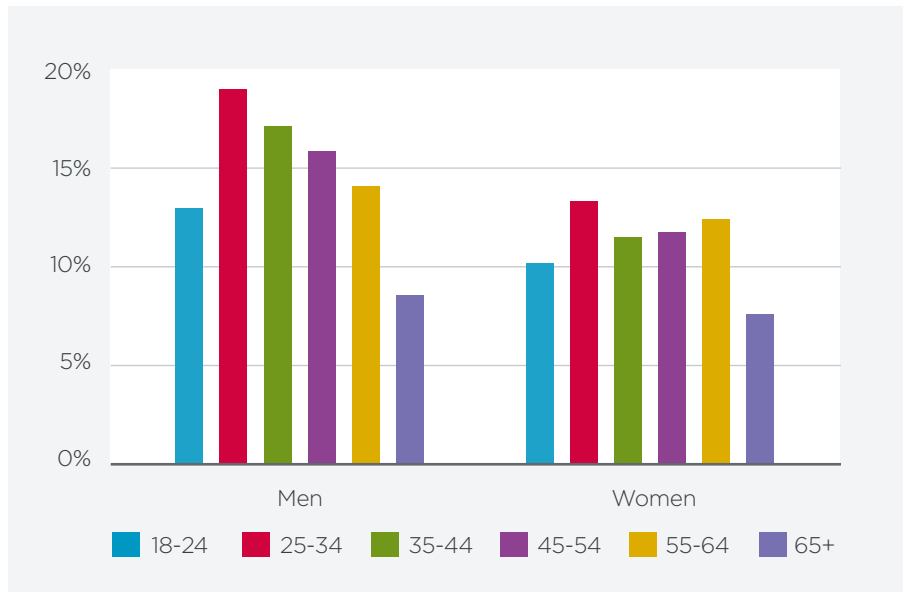
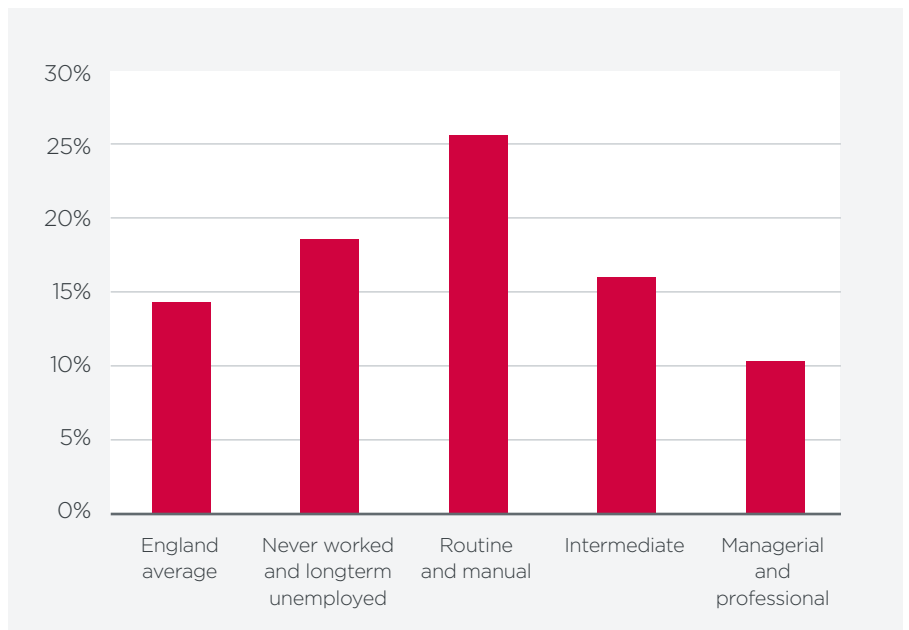


Figure 3: shows that smoking prevalence ranges from 10.2% to 25.4% depending upon socioeconomic group⁵



The Tobacco and Vapes Bill

In 2019, the government set an objective for England to be smokefree by 2030, meaning only 5% of the population would smoke by then. This review looked at the current smokefree policy in England to make recommendations that would enable the smokefree objectives to be met.

The Bill will make it an offense for anyone born on or after January 1, 2009, to be sold tobacco products, replacing the current age of sale (18) for tobacco products. This will prevent children turning 14 in 2023 or younger from ever being legally sold tobacco products. The Bill will also make it an offense for anyone to purchase tobacco products on behalf of anyone born on or after January 1, 2009, amending existing legislation prohibiting proxy purchases.

Additionally, the Bill will amend the text of warning notices that retail premises selling tobacco products are required to display to align with the new age of sale, requiring signs to read “it is an offense to sell tobacco products to anyone born on or after January 1, 2009.”

The measures of the Bill and their territorial extent are set out in **Table 1**.⁷

Table 1: Territorial extent of powers in the Bill

Policy	Territorial Extent
Tobacco	
Change the legal age of sale so it is an offence to sell tobacco products to anyone born on or after 1 January 2009	United Kingdom
Amend proxy sale legislation to align with the new age of sale	United Kingdom
Amend warning notice requirements in retail premises to align with the new age of sale	United Kingdom
Vaping	
Power to restrict the flavours of nicotine and non-nicotine vapes and other nicotine products	United Kingdom. UK wide powers
Power to regulate point of sale displays for nicotine and non-nicotine vapes and other nicotine products	United Kingdom. Includes powers for each UK nation to regulate independently
Power to regulate the packaging and product presentation of nicotine and non-nicotine vapes and other nicotine products	United Kingdom. UK wide powers
Stop the free distribution of nicotine and non-nicotine vapes to children	England and Wales.* Includes a power for Northern Ireland to implement via secondary legislation
Introduce age of sale restrictions for non-nicotine vapes	England and Wales.** Includes a power for Northern Ireland to implement via secondary legislation

Policy	Territorial Extent
Enforcement	
Create fixed penalty notices (FPNs) for underage sales of tobacco and vaping product offenses	England and Wales***
Notification requirements etc for vaping and other nicotine products	
Extension of notification requirements	United Kingdom
Power to amend information to be notified	United Kingdom
Exceptions to publication	United Kingdom

* These powers already exist in Scotland, but are being amended to include other nicotine products.

** These restrictions already apply in Scotland.

*** The Scottish and Northern Irish Governments already have these powers.

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Department for Health and Social Care (DHSC) modelling

Modelling work by the DHSC is displayed in *Figure 4*, showing the smoking prevalence rates under four smokefree generation **scenarios**.⁸ The model forecasts change in smoking prevalence on the uptake or ‘instigation’ rate of smoking in the 14–30-year age group. The baseline assumption is that prevalence in this age group will continue to fall irrespective of any new policy.

The model does not assume any changes to quit or relapse rates as a result of the policy change. In addition, only four main diagnoses are considered; evidence tells us that smoking is implicit in a number of other diseases. The impact of passive smoking and smoking during pregnancy and its effect on the unborn are also not considered.

The four scenarios are shown in *Table 2*.

Figure 4. Forecast smoking prevalence for ages 14 to 30

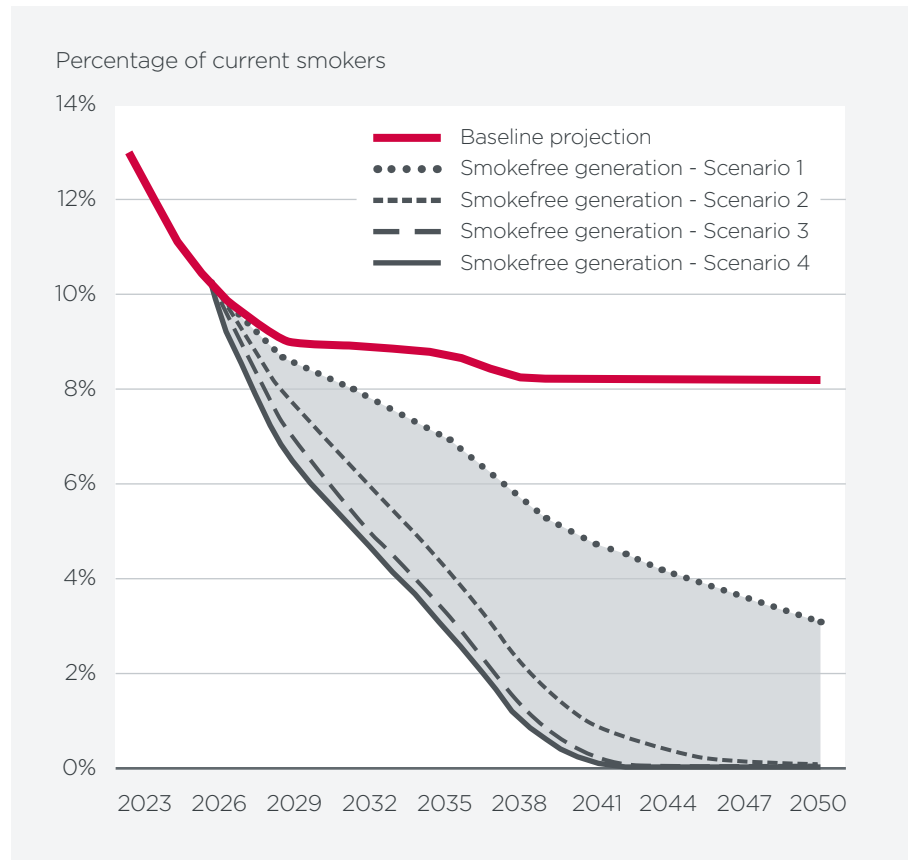


Table 2. Scenarios considered

Scenarios considered	
Scenario One	10% reduction in instigation rates per year for those below the age of sale
Scenario Two	30% reduction in instigation rates per year for those below the age of sale
Scenario Three	60% reduction in instigation rates per year for those below the age of sale
Scenario Four	90% reduction in instigation rates per year for those below the age of sale



Table 3. Cumulative smoking-related deaths avoided.

	2050	2075	2100
Scenario One	128	11,466	70,205
Scenario Two	359	23,925	118,447
Scenario Three	539	27,399	126,829
Scenario Four	634	28,688	129,593

Table 4. Cumulative cases of selected smoking-related disease avoided by 2075

	Lung cancer	Stroke	CHD	COPD
Scenario One	2331	1507	15,445	28,415
Scenario Two	5082	2958	31,978	57,854
Scenario Three	5979	3293	36,294	65,142
Scenario Four	6328	3409	37,828	67,757

Table 3 shows cumulative smoking-related deaths avoided, and Table 4 shows cumulative cases of selected smoking-related disease avoided by 2075.

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New Zealand analysis

The UK government's goal of being smokefree by 2030, essentially meaning that smoking prevalence is <5%, is similar to the goal set by the New Zealand **government**.⁹ However, the New Zealand proposed legislation on permanently banning the sale of cigarettes to anyone born in 2009 or after has now been scrapped. New Zealand modelling aimed to inform planning to achieve the Smokefree 2025 goal by estimating the numbers of people required to quit smoking to achieve the smokefree goal and to compare these with current levels of quitting in **New Zealand**.¹⁰

This useful analysis, published in 2018, could provide insight into how similar legislation could impact smoking prevalence in the UK. This paper used the established BODE3 tobacco forecasting **model**¹¹ to project smoking prevalence separately for Maori and non-Maori to 2025 under a business-as-usual (BAU) scenario; BAU assumes that trends in smoking uptake and quitting rates remained the same, with the addition of the 10% annual tax increase to 2020.

The analysis suggests that the BAU scenario is not sufficient to achieve the smoke-free goal of <5% smoking prevalence, particularly in the Maori population. Quitting rates would have to double in the non-Maori population and increase more than five times in the Maori population.

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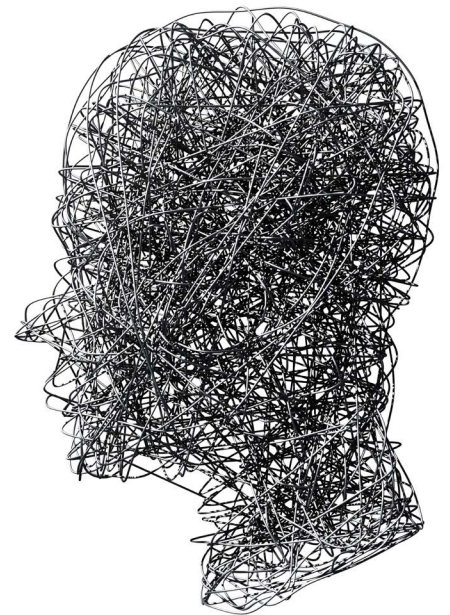
Conclusion

The proposed Tobacco and Vapes Bill represents a significant step towards achieving a smokefree generation in England. By incrementally raising the legal age for tobacco sales and implementing stringent measures to curb youth vaping, the Bill aims to reduce smoking prevalence and associated health risks.

The historical data and DHSC modelling indicate substantial potential benefits in terms of reduced smoking-related deaths and diseases. While the experience from New Zealand highlights the challenges and the need for robust support measures, the UK's comprehensive approach, including investment in stop smoking services and public awareness campaigns, positions it well to meet its 2030 smokefree target.

Actuarial analysis will play a crucial role in monitoring the effectiveness of these policies and ensuring they deliver the projected health and economic benefits.

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11. The BODE 3 model is a proportional multi-state life-table model designed to evaluate the effectiveness of interventions aimed at reducing tobacco smoking and related diseases.

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