Policy Briefing: Extending Existing and Planned Smoke-free Premises into Vape-free Public Spaces in Wales: Opportunities through the Tobacco and Vapes Act

Introduction

Wales has implemented some of the most comprehensive smoke-free legislation in the UK, extending protections from second-hand smoke (SHS) beyond enclosed public places and workplaces into settings used by children, families and the wider public. This reflects a broader shift towards creating environments where being smoke-free is the social norm and future generations can live free from tobacco. The Tobacco and Vapes Act enables consideration of extending vape-free requirements to additional outdoor public settings. This creates an opportunity for Wales to incorporate vaping into existing and future smoke-free restrictions, particularly in settings used by children, young people and other potentially vulnerable groups.

Welsh smoke-free legislation does not currently include vape-free requirements, leaving decisions about where vaping is permitted to individual organisations, landowners and service providers. While vaping can support smoking cessation and reduce harm among adults who smoke, concerns remain about youth uptake and nicotine dependence, second-hand aerosol exposure, the normalisation of nicotine use, and compliance with smoke-free policies. Future policy must therefore balance the role of vaping in harm reduction with protecting vulnerable groups and preventing nicotine uptake and normalisation among children and young people.

This briefing should be read alongside the Public Health Wales policy briefing (2026), Extending Smoke-free Outdoor Spaces in Wales: Opportunities through the Tobacco and Vapes Act. Whereas the accompanying briefing focuses on the rationale and evidence for extending smoke-free requirements to additional outdoor public settings, this briefing examines the case for incorporating vape-free requirements within existing and future smoke-free environments. It summarises the available evidence on public health impacts, implementation considerations, equity implications and policy options associated with extending vape-free requirements across indoor and outdoor public spaces in Wales. Its purpose is to support evidence-informed policy development that protects population health whilst maintaining support for smoking cessation and Wales's long-term ambition of achieving a smoke-free Wales by 2030.

Research overview

Public Health Wales has conducted a rapid review of the international evidence relating to vape-free indoor and outdoor public spaces during July and August 2026. The review assessed the public health rationale for extending current and future smoke-free measures to include vape-free requirements in Wales and identified key considerations for implementation. There is a rapidly evolving and growing evidence base due to the relatively recent popularisation of vaping. This review focused on synthesising the evidence from 63 primary studies including quantitative, qualitative and mixed-method components, providing a summary of the available evidence to inform future policy development. Where relevant throughout, examples of reviewed studies have been included as citations alongside wider supporting evidence.

Rationale and evidence

Smoke-free legislation is a core component of the WHO MPOWER framework and the WHO Framework Convention on Tobacco Control (FCTC). Although the FCTC does not explicitly cover

electronic cigarettes or other nicotine products, successive Conferences of the Parties have encouraged consideration of electronic nicotine delivery systems (ENDS), electronic non-nicotine delivery systems (ENNDS) and other novel nicotine products within wider tobacco-control policy. This includes measures to restrict use in indoor public places and workplaces, prevent youth uptake and reduce the potential renormalisation of nicotine use [1,2,3,4,5,6,7].

This direction is increasingly reflected across the UK through proposals for vape-free public spaces, Scotland's Tobacco and Vaping Framework, and positions adopted by public health and professional bodies [8,9,10]. Public Health Wales' (2026) Vapes (e-cigarettes) Position Statement similarly advocates a balanced population health approach, recognising vaping's role in smoking cessation while highlighting concerns about nicotine dependence, youth uptake, health inequalities and wider population impacts [11].

Vape-free indoor and outdoor policies: Examples of the most progressive policies can be found predominantly in the United States, with others including Canada, Australia, New Zealand, Greece, Norway, Malta, Hungary, Poland, and Spain. The policies reviewed cover some or all of the following locations: **Educational Settings** (including indoor spaces and outdoor grounds of university campuses and schools), **Healthcare settings and grounds** (including hospitals), **Hospitality Settings** (including bars and restaurants covered by e-cigarette-inclusive smoke-free indoor air laws), **Workplaces** (including public working environments covered by e-cigarette-inclusive smoke-free indoor air laws), **Retail Environments** (including shops and high streets), **Recreational and Community Spaces** (including sports grounds, parks and town centres), and **general indoor and outdoor public spaces** where settings were not further defined. Settings that were not publicly accessible, or where restrictions applied primarily within private or institutional living or non-public working environments, were excluded from this review (e.g., social housing, prisons and custodial settings, inpatient residential settings such as mental health wards, and staff-only workplace environments).

Public health benefits: There is strong and consistent evidence that smoke-free legislation reduces SHS exposure and improves population health outcomes, including lower risks of cardiovascular and respiratory disease, adverse birth outcomes, preterm births, lower respiratory tract infections and childhood asthma admissions [12,13,14]. In contrast, evidence for the impacts of vape-free legislation remains more preliminary and is often derived from wider smoke-free legislation (typically eliminates the combustion of products like cigarettes) or tobacco-free initiatives (typically eliminates use of any product including tobacco or nicotine). This makes it more difficult to determine the extent to which observed effects are specifically attributable to vape-free regulations within these policies. However, there are a growing number of studies that have assessed vaping-related outcomes following the inclusion of vaping products within existing smoke-free and tobacco-free restrictions. The impacts of these studies are outlined below in the following subsections.

Behavioural impacts: The most frequent evidence relates to smoking and vaping prevalence, although findings are mixed. Where several studies have been conducted on university campuses, particularly in the United States, some studies have shown that comprehensive, campus-wide policies towards vaping significantly reduce current smoking, tobacco and nicotine use, though measures tend to be based on self-report and perceived peer use [15,16]. Most studies in these settings report null or no behavioural effects of policies [17,18,19]. Effects of indoor vaping restrictions on adult use have also been less clear, with some studies reporting that regional policies have no significant effects on vaping, smoking, or quitting behaviours [20,21,22].

Importantly, several studies report extensive stealth vaping and potential displacement effects, with some crossover between the two [23,24,25,26,27] . In terms of the former, stealth vaping relates mostly to

potential policy violations, as individuals adapt their behaviour to conceal use or continue to vape in locations where vaping is restricted or no longer permitted. In one study, almost half of student e-cigarette users had ever stealth vaped on a tobacco-free university campus, with these students reporting use on an average of nine days in the previous month [23]. Greater likelihood and frequency of stealth vaping have been associated with higher nicotine dependence [24]. Students also reported adapting their behaviours to evade policy restrictions, for example, by using smaller devices and low-odour/low-visibility e-liquids [23].

In terms of the latter, displacement effects may be recognised as unintended consequences of policy compliance, as individuals continue to vape but do so at times and locations outside of defined policy restrictions or enforcement zones. Evidence suggests that these adaptations may undermine policy effectiveness by shifting use to locations where enforcement is less likely to occur, such as bathrooms, dormitories and libraries [23,24]. Similar displacement effects have been reported elsewhere, including the movement of smoking or vaping activity to areas immediately outside policy boundaries [25,26,27].

A small number of studies have reported potential negative outcomes of policies that restrict vaping alongside smoking. This includes one study where indoor vaping restrictions implemented through smoke-free laws in workplaces, restaurants, and bars were associated with increased smoking participation, increased cigarette consumption, and stronger effects among younger, lower-educated and Medicaid-insured pregnant women [28]. Some studies of tobacco-free campus policies that were also vape-free have reported increases in vape use despite otherwise positive or null effects on smoking cessation [19,29,30], though this may also reflect broader increases in vaping prevalence [31].

Smoking cessation effects: Most studies do not directly assess smoking cessation. According to the ASH Wales Annual Adult Population Survey, 51% of people who vape report doing so to stop or reduce their smoking [32]. Vaping is often considered to be a relatively safer option than smoking, as it reduces individual exposure to high levels of Tobacco-Specific Nitrosamines (including carcinogens) [33], may have fewer adverse effects on blood flow and blood pressure [34], and may lower the risk of experiencing respiratory symptoms compared to smoking [35]. Whilst clinical trials suggest that vapes provided through smoking cessation services can improve quit rates [39], evidence from real-world implementation remains limited, and the long-term patterns of vape use and smoking relapse relative to standard Nicotine Replacement Therapy (NRT) are not yet well understood.

Nevertheless, some studies have suggested that vape-free policies may undermine the use of vapes as an important smoking cessation tool for many adults, though this proposition appears to be primarily based on theoretical assumptions rather than direct evidence of impacts. Some authors have suggested that vape-free environments unfairly penalise or stigmatise smokers who vape, potentially reducing their readiness to quit and further contributing to health inequalities associated with continued smoking [36,37]. This may be particularly relevant in Wales, where adults living in the most deprived communities are almost three times as likely to smoke than those in the least deprived communities [38]. Similarly, pregnant women – who may be especially motivated to quit smoking – may use e-cigarettes to support smoking cessation during pregnancy, meaning restrictions on vaping could, in some circumstances, affect smoking cessation efforts for pregnant women, though findings were limited to one study [28].

Protecting children and young people: There are growing concerns that the rapid rise in prevalence of vaping has contributed to the re-normalisation of nicotine use, particularly among children and young people [40,41], thus posing a significant challenge for health, education, youth, and third-sector services across Wales [41]. Some studies suggest that young people who vape are more likely to initiate smoking, though the nature and direction

of this relationship remain debated [42]. Furthermore, concerns have been raised that children and young people may be particularly vulnerable to the physical effects of vaping, as evidence tentatively suggests that e-cigarette use may induce oxidative stress and impact the developing brain [43]. The literature also highlights the importance of social influences on youth vaping behaviours, including peer acceptance, social media exposure, and marketing messages, with some studies suggesting that vaping may be used as a coping mechanism for stress and anxiety [44,45].

In this context, some authors have proposed that vape-free policies may help to reduce the visibility and social acceptability of vaping among children and young people. Some studies of state or national smoke-free laws in workplaces, restaurants, bars and indoor public spaces have reported reductions in vaping prevalence, initiation and frequency, with some trends indicating declines in youth e-cigarette use over time [46,47,48,49,50]. Studies focused on comprehensive school-based vaping policies in secondary schools and high schools have also reported similar effects on e-cigarette use, particularly where policies were more actively enforced and visible to students [51,52]. Similarly, in outdoor recreational and community public spaces where children, young people and families are likely to be present, voluntary smoke-free and vape-free policies have been associated with reduced observable rates of smoking and vaping [53,54]. Local guidance in some areas of Wales already recommends that school policies prohibit vaping by pupils, staff, and visitors both on school premises and whilst travelling to and from school in surrounding communities [55].

Wider social norms and nicotine use: More than half of adults who vape are likely to be dual users of vapes and cigarettes: whilst this can support harm reduction efforts through cutting down smoking in the short-term, dual use over a longer period may unintentionally increase the frequency of nicotine use and maintain nicotine dependency [56] . Similarly, individuals with substance use disorders (SUD) are more likely to use nicotine, and as such, exposure to vaping in settings where substances (such as alcohol) are consumed may reinforce use through shared social and environmental cues [57]. Evidence from university and school settings suggests strong support for smoke-, tobacco- and vape- free environments, particularly among non-users, once implemented [17,58,59]. As such, policies may support the development of less favourable attitudes towards smoking and vaping over time [16,60,61]. They may also reduce perceived exposure to and the likelihood of vaping, though again, most evidence currently relates to children and young people rather than more general adult populations of smokers, vapers and non-users [15,24,62].

Exposure to second-hand aerosols: Evidence relating to health outcomes of vape-free policies remains limited. Though the potential harms of vaping itself are debated, vaping liquids often contain nicotine in addition to harmful constituents including toxicants and carcinogens, which may equal or occasionally exceed absorbed levels from cigarettes [63]. In addition, second-hand inhalation of aerosol pollutants is associated with sensory irritation and adverse respiratory outcomes, such as bronchitis symptoms, wheezing, shortness of breath, and asthma [64]. Of the few studies reporting exposure outcomes, most indicate that second-hand aerosol exposure persists following policy implementation, although exposure appears to be lower where comprehensive restrictions are in place [65,66]. Whilst exposure is typically highest among those who smoke and vape [58], measures are largely self-reported and long-term evaluation evidence remains scarce. No measures of potential health effects of exposure in the context of policy implementation have been reported.

Environmental benefits: Two studies of tobacco-free policies on college campuses (that were also vape-free) reported significant reductions in smoking-related litter, including cigarette butts, after policy implementation [67,68]. Otherwise, evidence on vaping-related litter remains absent, and few studies have examined potential environmental benefits of policy implementation. Whilst evaluations of the Disposable Vapes Ban in the UK – which was introduced partly to reduce electronic waste – are also at an early stage, initial reports have highlighted potential benefits in decreasing the number of littered vapes [69]. At the same time, concerns have been raised regarding enforcement challenges and possible market displacement effects, including shifts towards alternative products and informal supply channels [70]. Overall, available evidence suggests that, despite recent policy restrictions, vaping-related waste remains high, with around six million vapes and pods disposed of every week [71].

Delivery and implementation considerations

Evidence suggests that vape-free policies can be implemented through a range of complementary approaches, including communication and education campaigns, organisational policies, local authority bylaws, and national legislation. These approaches are outlined below, with reference to conclusions drawn across studies.

Policy acceptability and stakeholder engagement: Evidence consistently suggests that support for vape-free policies is often high among non-users but tends to be lower among people who smoke or vape, posing a potential risk to policy compliance [17,66,72]. Individuals were also often unaware of vaping policies or misunderstood what was covered [17,58,66], highlighting potential issues around policy awareness. Early engagement with staff, students, community members, businesses and service users may therefore be important for building understanding of policy objectives, identifying implementation barriers, and supporting wider policy acceptability.

Smoking cessation, support and education: Several studies highlight the importance of ensuring that vape-free policies are accompanied by cessation support, behavioural interventions, and education. Study conclusions often note that restrictions alone are unlikely to promote lower prevalence rates of use, and policies may be less effective without accessible support, motivational interventions and public education [24,25,62,73]. Perceptions of the harms associated with vaping may also vary across populations, with evidence suggesting that health risks can be underestimated, misunderstood, or subject to considerable uncertainty [74,75]. This consideration may be particularly important where policies affect populations with higher smoking prevalence or individuals using e-cigarettes as a smoking cessation aid.

Compliance, enforcement and unintended consequences: Evidence suggests that current enforcement strategies, particularly for institutional policies, are weak. Most policies appear to rely on community- and peer-led enforcement rather than formal enforcement mechanisms. For example, warnings, penalties and disciplinary procedures were often inconsistently applied or rarely observed across study populations [25,66,76,77]. Several studies identified this as a barrier to implementation, noting that students, staff and community members frequently lacked the confidence or felt unable to approach individuals who were smoking or vaping in restricted areas [78,79]. Studies also highlight the importance of ensuring that staff and policy implementers have sufficient knowledge of vaping products and policy requirements, as difficulties recognising devices and limited training may hinder effective implementation and enforcement [62,80,81]. A range of enforcement mechanisms should therefore form part of the wider implementation package and may strengthen compliance when combined with other implementation measures.

Monitoring, evaluation and adaptation: As policies continue to develop, monitoring and evaluation will be important components of future implementation given the relatively early stages of the evidence base. Studies often highlight uncertainties around compliance, unintended consequences such as displacement or stealth vaping, and longer-term impacts on smoking and vaping behaviours [23,26,27]. Routine monitoring could help identify implementation challenges and inform future policy refinement. It is also important to recognise that nicotine use behaviours are likely to continue to evolve alongside devices [80.81.82]. Where smoke- or vapour-producing products are restricted, individuals may increasingly turn to alternative nicotine products that can be used discreetly and may not be subject to the same practical limitations as smoking or vaping. As such, implementation should continue to consider how emerging products may fit within the scope of expanding policy and regulatory approaches.

Policy design and implementation: Overall, evidence suggests that smoke-free policies should be extended to also include vape-free requirements, particularly in educational settings [25,58,66]. Whole-site or whole-space policies provide greater clarity, support implementation, and are associated with lower exposure, less observed smoking and vaping, and stronger policy outcomes than approaches that rely on designated smoking areas or limited restrictions [15,50,65]. Some concerns around stealth vaping and displacement of smoking and vaping behaviours persist across policy approaches, highlighting important considerations around unintended consequences of implementation [26,27]. Reflecting evidence around smoke-free policies, successful implementation is typically supported by:

- Clear and consistent communication
- Visible signage and clearly defined smoke-free and vape-free boundaries
- Ongoing awareness-raising and engagement (e.g., prevention and educational interventions)
- Access to smoking cessation support
- Compliance monitoring and feedback mechanisms (e.g., supporting effective data infrastructures and reporting templates
- Appropriate enforcement arrangements
- Staff training and capacity building, particularly in educational settings
- Leadership, organisational commitment, and policy champions
- Using feedback mechanisms to support routine review and adaptation of policies as products and behaviours evolve

What does this mean for Wales?

Overall, it should be acknowledged that evidence for vape-free spaces often sits within existing or extended policies for smoke-free spaces. As such, the **strongest evidence for effective vape-free policies** relates to: reducing the visibility and social acceptability of vaping, shaping social norms around nicotine use, protecting against potential involuntary exposure to vaping and second-hand aerosols, and supporting youth prevention objectives around reducing the appeal and uptake of vaping.

The recommendations set out in the Public Health Wales policy briefing (2026), *Extending Smoke-free Outdoor Spaces in Wales: Opportunities through the Tobacco and Vapes Act*, remain relevant to extending smoke-free spaces to vape-free spaces. Taken together, the evidence suggests the following considerations for future policy development:

1. Prioritise settings where the rationale is strongest for vape-free spaces, particularly educational settings and recreational and community spaces used by children, young people and families. This could include schools, colleges and university campuses, as well as sports venues and grounds, parks, town centres, transport waiting areas, outdoor events, hospitality settings, beaches, and other recreational spaces(e.g., funfairs, petting zoos and farms).

2. Use institutional settings to inform wider implementation of vape-free spaces when extending smoke-free policies, as evidence suggests vape-free policies can reduce exposure to vaping and support healthier social norms among young adults in educational settings, whilst providing valuable learning on policy delivery and compliance.

3. Focus on reducing opportunities for visible vaping, “stealth vaping” and potential involuntary exposure to second-hand aerosols, especially in settings where people are in close proximity to one another (e.g., indoor settings) or where children and young people are likely to be present.

4. Favour comprehensive smoke-free approaches that are extended to vape-free spaces over partial restrictions to minimise displacement effects for vaping, as whole-site or whole-space policies may be associated with stronger and more consistent health and policy outcomes, particularly where these are further supported by national legislation around vaping. Partial approaches (e.g., where policies only apply to smoking, or where vaping is permitted in some areas/ zones) may contribute to uncertainty regarding policy coverage and potential displacement effects for vaping.

5. Embed implementation planning for vape-free spaces as early as possible where smoke-free policies are to be extended, including clear communication, public awareness activity, visible signage, clearly defined boundaries, stakeholder engagement and access to smoking cessation support.

6. Tailor implementation approaches for vape-free spaces to different settings, recognising that there is no single delivery model appropriate for all indoor and outdoor environments.

7. Ensure compliance and enforcement arrangements are clearly defined for vape-free spaces, recognising that communication and social norms play an important role, but that legal and regulatory powers provide an important framework for supporting policy implementation where required.

8. Build monitoring and evaluation into future policy developments for vaping, enabling Wales to generate setting-specific evidence on implementation, compliance, effectiveness and public acceptability.

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