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Balancing the risks and benefits of e-cigarettes through regulations

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How best to regulate e-cigarettes is a hot topic and growing science. In line with successful harm reduction approaches in HIV/AIDS and illicit drugs in the UK [1], and Professor Michael Russell's legacy of nicotine harm reduction [2], the UK government adopted an approach to e-cigarette regulations which managed the risks (e.g. of youth never smoker uptake) whilst maximizing the benefits (smokers using e-cigarettes to stop smoking). This approach has now been implemented within the framework of the European Union Tobacco Products Directive (EU TPD) [3], the pros and cons of which were described very ably and comprehensively by Gruszczynski [4]. I disagree with Gruszczynski however that UK is a notable exception in the case of marketing. In line with other EU Member States, the UK prohibits print and broadcast advertising, and in common with at least a few other Member States, it allows domestic e-cigarette advertising (e.g. billboards, point of sale). In addition, in the UK, an advertising code restricts, inter alia, the ability of any advertisements to attract adolescents and be confused with smoking [5]. The UK government has also prohibited e-cigarette sales to under 18 year olds [6], on a par with tobacco. So, whereas critics suggest that the UK position is unique, a more objective assessment puts UK regulations in line with the majority of OECD countries towards the centre of the regulatory spectrum, eschewing both prohibition and unconstrained market forces. Indeed, among OECD states, de facto prohibition is the exception. Both New Zealand [7] and Canada [8] have abandoned their previous 'medicines only' approach in favour of a policy more closely aligned with the UK.

Importantly, the UK is a leader in tobacco control, as evidenced by topping the European Tobacco Control Scale [9] and having one of the lowest smoking prevalence in the European Union [10]. We have implemented most tobacco control interventions, and whilst we should enhance these and add more, there is a broad consensus [11] recognizing the additional contribution that harm reduction approaches make within the tobacco control armoury. Most of the allure of tobacco smoking is due to the cigarette's ability to deliver shots of nicotine to the brain faster than by intravenous injection, along with a cocktail of other substances that enhance the effect and/or do a vast amount of damage. Hence, finding alternative, less harmful, sources of nicotine which can satisfy smokers, is an important strategy in tobacco control in order to be able to help smokers who struggle to stop (and in the UK, this, sadly, is mainly the poor and disadvantaged).

England monitors e-cigarette use, uptake, attitudes, perceptions, safety, impact on cessation and smoking and the impact of regulations closely in order to get the regulatory balance right. So far, the data on youth uptake are reassuring [12] and there is some convergence internationally on relative harms supported by the science [13-15]. In relation to cessation, NICE recently updated their advice [16] indicating that health professionals should give advice on e-cigarettes to allow an informed discussion on using them to stop smoking. A new trial in England showing clear effectiveness may lead to further strengthening of this advice [17].

There is evidence that some vapers are circumventing the regulations around constraints on volume and size (e.g. 'shake and vape [15]) but our research also suggests that early implementation of the EU regulations had not increased smoking [18]. However, that 37% of smokers have still not tried vaping [19] is of concern. We need therefore to understand whether regulations may be acting as a deterrent for some smokers. Indeed, regulations which go further such as by prohibiting flavours will be a deterrent, given the importance of flavours in masking the taste of e-liquids [20]. Another concern is

that increasing the burden of regulations for e-cigarettes favours the tobacco industry and we would all agree, that a diversity of manufacturers for e-cigarettes is likely to ensure that the market continues to evolve to best support more smokers to stop. On the other hand, there are concerns that some of the newer products on the market may differentially appeal to adolescents [21].

For me, therefore, the 'right' regulatory approach is still unclear, but I agree with Gruszczynski that countries could do worse than adopting the broad EU TPD regulatory framework, as they should reassure smokers, health professionals and advocates alike that there are controls around the product and how it is marketed. I differ from Gruszczynski concerning the nicotine health warning which should be reconsidered [22], given this is likely to accentuate existing widespread misperceptions about nicotine, perhaps in line with Canada [8]. However, it is a testament to the EU TPD that it attracts a wide variety of supporters (as much as it does those against) as in so doing it undermines the simplistic dichotomy of 'for and against'. Perhaps the greatest regulatory virtue of the EU TPD is not that it permits this or prohibits that, but that it expressly commits to post implementation review, acknowledging that regulations made on limited evidence may later require adjustment. Our government is committed to this review process.

It's important however to remember that in most countries, the most deadly product, the tobacco cigarette, is still the least regulated nicotine product on the market. This may have been an accident of history, but is likely to perpetuate the tobacco epidemic and postpone the obsolescence of the combustible cigarette, more than any other action within our control.

DISCLOSURE

The author reports no conflict of interests.

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