THE UNIVERSITY of EDINBURGH

Edinburgh Research Explorer

The tobacco endgame

Citation for published version:
Moon, G, Barnett, R, Pearce, J, Thompson, L & Twigg, L 2018, 'The tobacco endgame: The neglected role of place and environment', *Health & Place*. https://doi.org/10.1016/j.healthplace.2018.06.012

Digital Object Identifier (DOI):
10.1016/j.healthplace.2018.06.012

Link:
Link to publication record in Edinburgh Research Explorer

Document Version:
Peer reviewed version

Published In:
Health & Place

OPEN ACCESS

THE TOBACCO ENDGAME: THE NEGLECTED ROLE OF PLACE AND ENVIRONMENT

Professor Graham Moon (corresponding author)

School of Geography and Environmental Sciences, University of Southampton, Highfield, Southampton SO17 1BJ, England; email: g.moon@soton.ac.uk

Professor Ross Barnett

Department of Geography, University of Canterbury, Private Bag 4800, Christchurch 8020, New Zealand; email: ross.barnett@canterbury.ac.nz

Professor Jamie Pearce

School of GeoSciences, Drummond Street, University of Edinburgh, Edinburgh EH8 9XP Scotland; email: jamie.pearce@ed.ac.uk

Dr Lee Thompson

Department of Population Health, University of Otago Christchurch, PO Box 4345, Christchurch 8140 New Zealand; email: lee.thompson@otago.ac.nz

Professor Liz Twigg

Department of Geography, Buckingham Building, Lion Terrace, University of Portsmouth, PO1 3HE, England; email: liz.twigg@port.ac.uk

ABSTRACT

An increasing number of countries across the world are planning for the eradication of the tobacco epidemic. The actions necessary to realise this ambition have been termed the tobacco endgame. The focus of this paper is on the intersection between the tobacco endgame with place, a neglected theme in recent academic and policy debates. We begin with an overview of the key themes in the literature on endgame strategies before detailing the international landcape of engame initatives, paying particular attention to the opportunities and challenges of endgame strategies in low and middle income countries. Finally, we critically assess the current endgame debates and suggest a novel agenda for integrating geographical perspectives into research on the endgame that provides enhanced understanding of the challenges associated with this important global health vision.

INTRODUCTION

This paper is concerned with the tobacco endgame - the actions necessary for the realisation of a world free from tobacco smoking. Whilst there are differences in the precise definition of what constitutes an endgame there is a shared understanding that it involves a shift from controlling ongoing use of tobacco towards a tobacco-free future where commercial tobacco is no longer available or where there are significant restrictions on the use and availability of tobacco products. We focus specifically on the intersection of the endgame with place and argue that this theme has, to date, been neglected in debates about the endgame and is of significant importance.

There can be little doubt about the importance of the endgame. Tobacco consumption remains a major global public health challenge. Current data indicate that some 7.2 million deaths annually are attributable to smoking (WHO, 2017a). The number of smokers worldwide is predicted to remain stagnant at around 1 billion until 2025 (Bilano et al., 2015). The impact of tobacco smoking on mortality, morbidity and the costs of care will be sustained into the medium-term future, with the dynamics of global population growth refocussing the tobacco epidemic to transition economies and in many middle and low income countries (MICs and LICs). It is currently anticipated that tobacco will claim over one billion lives in the 21st century (Barnett et al., 2016; Ng et al., 2014). Nonetheless, in some places, over fifty years' awareness of the harms of tobacco smoke and, more recently, the impact of sustained offically-sanctioned tobacco control measures have resulted in prevalence levels and continued prevalence reductions that suggest the possibility of a tobacco endgame. Given the trajectory of the tobacco epidemic, such possibilities have, for the most part, been most distinct in high income countries (HICs). It was within this combination of challenge and possibility that endgame discourse gained traction in the early 2000s and, by 2010, Malone (2010) was able to talk of 'the growing endgame literature'.

Definitions of the endgame rest, at least quantitatively, on simple foundations linked to the association between tobacco and non-communicable diseases (NCDs). Beaglehole et al. (2011) suggested that a key milestone in combatting global NCD mortality and morbidity, and the associated care costs and societal toll, would be the creation of 'a world essentially free from tobacco where less than 5% of people use tobacco'. Reducing global tobacco smoking prevalence to below 5% has become the headline goal of the endgame. The origin of the 5% target is obscure but it is assumed to be the threshold at which the tobacco smoking epidemic would become unsustainable, limited to a negligible number of adolescent experimenters who do not proceed to regular smoking and a similarly low number of older addicted hard-to-reach or hard-to-engage

smokers who are unwilling or unable to give up. Alongside the 5% definition, the WHO have also offered a further quantitative goal: a 30% relative reduction in smoking prevalence between 2010 and 2025 (WHO, 2014). This second goal recognises that, while older addicts will remain a significant group, progress towards a world free of tobacco smoke is likely to rest most heavily on preventing initiation. This focus on reducing initiation links to a further hallmark of endgame discourse: the creation of a 'smoke-free generation' (Berrick, 2013; Khoo et al., 2010; Walters and Barnsley, 2015), a cohort of young people who will never partake in tobacco smoking.

Defining the endgame in relation to quantitative goals and generational ambitions belies a general recognition that the endgame will not simply result from continuing existing tobacco control measures (Warner, 2013). Rather, the endgame is likely to necessitate a step-change towards an explicit focus on ending all aspects of the smoking epidemic through a portfolio of integrated radical policy measures (Eriksen et al., 2015). This explicit focus on ending rather than controlling, and on visionary policy integration (Malone, 2013; McDaniel et al., 2016) has resulted in a number of proposals for hastening the endgame. Among the more novel are those focussed on supply-side interventions, curtailing access to tobacco through measures ranging from controls on tobacco growing, cigarette manufacture and tobacco retail (including age restrictions on sales), to limiting tobacco imports and exports (Borland, 2012; Callard and Collishaw, 2013; Proctor, 2013). These are only likely to occur with substantial coercive state intervention. More traditional demand-focussed policies centre on increasing the scope of bans on tobacco consumption to encompass a wider range of settings (WHO, 2013a) and strengthening the enforcement of existing control measures (Myers, 2013). A third group of measures is more controversial, involving technical fixes. On the one hand, these might see changes to cigarettes to make them unpleasant to smoke or less addictive (Benowitz and Henningfield, 2013). On the other hand lie harm-reduction strategies that seek to replace combustible cigarettes with heat-not-burn products or electronic vape devices.

Two comprehensive overlapping review papers summarise research on the endgame up to the middle of the current decade expanding on the themes identified above (Malone et al., 2014; McDaniel et al., 2016). These reviews highlight the need for policy learning from different national approaches to the endgame, the diversity of endgame strategies, the importance of integrated approaches and governmental commitment, and the growth of popular support for the endgame. Similar ground is covered in a well-argued blog post, favouring the harm-reduction perspective and advising against fiscal and prohibitionist measures (Bates, 2015). In February 2018, we searched titles, abstracts and keywords in Scopus for post 2016 references using the term 'endgame' in relation to tobacco or smoking. Limiting attention to research papers and review articles, we screened titles and abstracts, finding eight relevant papers. These are undoubtedly a subset of a larger number addressing broader smoke-free or tobacco-free agendas but they serve to highlight continued focussed engagement with the idea of the endgame. Three papers focussed on retail policy endgame strategies (Petrović-van der Deen and Wilson, 2018; Robertson et al., 2017; Smith et al., 2017), two on moral and ethical questions (Hoek et al., 2017; Verweij, 2017), while single papers considered links to e-cigarettes (Ruokolainen et al., 2017), reaching established smokers (Edwards et al., 2017) and creating smoke-free generations (David et al., 2017).

What is clear from the extant reviews and from our analysis of the literature is that the endgame is increasingly on the policy agenda but it remains contested, not only in terms of its definition and viability, but also in relation to the means by which it might be achieved. A less remarked theme that we highlight in this paper is the geographical unevenness of the endgame. In the remainder of the paper, we first. reflect on contemporary international policy, mapping the landscape of endgame initiatives and noting, in particular, the challenges to endgame discourse in low and middle income

countries. Secondly we offer a critical perspective on the notion of the endgame and finally we conclude with an agenda for novel place-sensitive research on the endgame.

AN INTERNATIONAL PERSPECTIVE

In recent years, major advances in tobacco control have been realised amongst the over 170 countries signing and ratifying the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC). FCTC implementation has included a range of measures such as: prohibiting the advertising, promotion or sponsorship of tobacco; raising the price of tobacco products; introducing smokefree policies to protect non-smokers; and, importantly, protecting policymaking against tobacco industry interference. Proponents of the endgame argue that whilst full implementation of FCTC is a necessary prerequiste, it is important to also prepare for the next suite of priorities, and set a target for when an endgame will be reached. Therefore, an increasing number of national and cross-national groups are beginning to detail their vision for achieving an endgame. For example, in the 2013 Ashgabat Declaration, European countries documented their ambition to fully implement the FCTC and work towards a tobacco-free Europe (WHO, 2013b). More recently, this stance was reinforced at a meeting of the 53 countries of WHO Europe in Vilnius, Lithuania where a "roadmap of actions" was agreed to strengthen the implementation of FCTC with an aim of "making tobacco a thing from the past" (WHO, 2015). Similarly, at the Tenth Pacific Health Ministers Meeting in July 2013 Pacific Ministers of Health declared their support for the adoption of Tobacco-Free Pacific Goal whereby tobacco use prevalance would fall to less than 5% in each Pacific country by 2025 (WHO, 2017b).

At the national-level, a number of countries have committed to ambitious targets for achieving the tobacco endgame. Table 1 provides an overview of where, to date, progress has been made in setting firm targets. The table emphasises differences between jurisdications in how endgame goals have been specified, although most countries have targetted the reduction of tobacco use and/or smoking prevalance to under 5% by a set date. There are also differences in the date by which the endgame target should be reached with the most ambitious countries such as New Zealand and Ireland looking to achieve the endgame by 2025 and other countries not aspiring to reach the target for another three decades. It is also apparent that, whilst some countries have targets that have been set and agreed by national governments, others' endgame targets do not have formalised status in national legislation. Although the number of countries with clearly specified plans for reaching a tobacco endgame remains modest, it is clear that the concept is having traction in many other jurisdications. For example, in the United States, the 2014 US Surgeon General's 50th Anniversary report on the toll of the tobacco epidemic recommended a series of policy priorities designed to bring smoking prevalence for the adult and youth population to under 10% within 10 years (US Department of Health and Human Services, 2014).

Table 1. Countries with set endgame targets

Country	Target date	Target smoking prevalence	Current adult cigarette smoking (%)	Whose target?
New Zealand	2025	5%	16.3	Government
Ireland	2025	<5%	23	Government
Scotland	2034	<5%	21	Government
Wales	2040	5%	19	NGO
Finland	2025	5%	21.4	Government
Malaysia	2045	15% 5%	22.8	Government
Canada	2035	5%	13.0*	NGO
Australia	2018	10%	16.0	Federal government
Japan	?	12%	18.2	Government
Singapore	2018	SF millennium generation	15.0#	NGO
Pacific Islands	2025	<5%	Range from 17.7 to 52.9	WHO
Hong Kong	2022	5%	10.5	NGO
Sweden	2025	<5%	20	NGO

*Current cigarette smoking; #Daily current smoking
Data collated from various sources:
www.who.int/fctc/reporting/2014globalprogressreport.pdf - *provides most recent smoking prevalence in 2014*
Canada: https://www.lung.ca/news/advocacy-tools/our-position-statements/position-statement-tobacco-endgame
http://tobacco.cleartheair.org.hk/wp-content/uploads/2017/03/2017-02-Endgame.-Columbia.-Mackay.pdf
WHO report on the global tobacco epidemic 2017
Scotland: http://www.gov.scot/About/Performance/scotPerforms/indicator/smoking
Hong Kong: http://smokefree.hk/en/content/web.do?page=news20160204

Malone (2016) proposes four sets of factors that will affect which places will be amongst the first to realise the ambitions of an endgame. First, a degree of consensus is required amongst public health practitioners about the strategies and targets required. Lack of accord will likely confuse the public and lead to divisions that will be readily exploited by the tobacco industry. Unity is not always the case in this field as evidenced by the divisions between public health practitioners created through recent debates about e-cigarettes (Green et al., 2018).

Second, sufficient public support for ending the tobacco epidemic is necessary before policymakers will be willing, or able, to develop and implement the strategies required. Backing for tobacco control polices tends to be strong amongst both smokers and non smokers (Winickoff et al., 2016), and the same is true of endgame strategies (Tobacco Control Playbook, 2017). For example, survey data in Hong Kong has demonstrated public support for a total ban on tobacco sales by 2022 (Wang et al., 2015). However evidence in Europe is more mixed with a study finding that in 2010, 35% of adults across 18 European countries supported a tobacco endgame but this support across countries varied from 20% to around 60% (Gallus et al., 2014). Research from New Zealand has shown firm support for a range of endgame-related measures such as greater regulation of the tobacco industry, more government action on tobacco, and banning sales of cigarettes in 10 years' time (Edwards et

al., 2013). Importantly, this support was consistent across social and ethnic groups, including those with high smoking prevalence.

Third, new and politically challenging legislation will require coordinated and courageous leadership. Countries with lower prevalence of smoking, longer histories of robust tobacco control measures, and economies less reliant on the tobacco economy can be expected to find the transition smoother. as smoking becomes increasingly denormalised and therefore easier to regulate against. An adult smoking prevalence of less than 15% has been suggested as the tipping point at which the situation will be sufficiently favourable for governments to plan for ending the use of tobaccco (Thomson et al., 2012). In Europe, although 94% of countries (50/53) ratified the FCTC, implementation has been highly variable (Bertollini et al., 2016). For example, just over half of countries have raised tobacco taxes and only eight percent have introduced a ban on all forms of direct and indirect advertising. One of the key reasons for the unevenness of effective action to enforce and implement international agreements and commitments to reduce tobaco consumption is the substantial lobbying and political strength of the tobacco industry. As we have recently shown, there is a geographical unevenness in the embeddedness and penetration of multinational tobacco companies, which shapes how governments go about reconciling revenue generation with public health goals (Barnett et al., 2016). Finally, successful models of co-production between public health protagonists and communities most affected by tobacco consumption will be required to ensure policies work across a range of social groups and places, and health inequalities are not exacerbated.

Endgame Strategies in Low and Middle Income Countries

In low and middle income countries (LMICs) the rhetoric of 'tobacco endgames' is having far less traction particularly in places where economic priorities are perceived to outweigh public health objectives. While many such countries have signed the FCTC the implementation of tobacco control policies is weak (Chow et al., 2017; Lencucha et al., 2018). This ambivalence to tobacco control is most evident in LMICs involved in tobacco production, where competing economic and social objectives, and the absence of a whole-of-government approach towards tobacco control, have created an institutional context of government ministries working at cross purposes and tobacco interests left unchecked. In Zambia, for instance, Labonté et al. (2018) report that lacklustre coordination and collaboration between institutional actors, both within and outside government, have resulted in a policy environment where the dominant 'pro-tobacco' lobby has gained legitimacy. This has occurred because an overarching economic development discourse has championed the economic necessity of tobacco for the economy. This norm, in turn, has infiltrated the perceptions of government and NGO health actors to a much greater extent than any tobacco/poor health norm. In a similar vein, Lencucha et al. (2018) in a comparison of three African countries, Kenya, Zambia and Malawi, the latter of which is not a signatory of the FCTC, found that commitments to tobacco control had yet to penetrate non-health sectors, who perceived such policies to be in conflict with international economic norms.

In LMICs not dependent on tobacco production the case is slightly different, but the outcome has often been the same. Weaker civil society and political structures have enabled tobacco industry interference in policy development and the framing of tobacco control objectives (Amul and Pang, 2018). Such interference has been aided by a wider international (WTO) neoliberal imperative of market liberalisation and the consequent penetration of domestic economies by transnational tobacco companies (TTCs) (Assunta and Dorotheo, 2016). In Turkey, for instance, TTCs have

reinforced their market power through a variety of strategies which have limited the effectiveness of tobacco control. Despite the enactment of stronger tobacco control policies, these have been counteracted by TTCs with the result that tobacco consumption has increased since the 1980s (Keklik and Gultekin-Karakas, 2018). In such circumstances, while there is a need for more effective tobacco control interventions, currently narratives of a tobacco endgame are irrelevant.

In countries, such as China, where TTC involvement is minimal, much the same situation prevails. Currently China is the largest global producer of tobacco and cigarettes and smoking prevalence has been highest in those regions where the industry has been strongest (T. Yang et al., 2015a). Because of the economic importance of tobacco these places are also those where the state owned tobacco company, the China National Tobacco Corporation (CNTC), which controls 98% domestic Chinese tobacco market (WHO, 2017a), has had the greatest influence on restricting tobacco control and where the legitimacy of this state owned company is greatest. At the provincial level community support and engagement by the industry has resulted in a pro-tobacco environment and an ambivalence to tobacco control among key political actors. Much the same is true at the national political level where, just as in other tobacco producing countries, government leaders have viewed the continued growth of the tobacco industry as integral to the political and economic well-being of the country (Hu et al., 2013).

Despite moves to increased tobacco control as a result of becoming a FCTC signatory in 2003 major gaps still exist with respect to tobacco control in China. Centrally directed changes have largely been cosmetic, such as the introduction of the stronger smoke free policies at the Beijing Olympics and the World Expo in Shanghai, which were designed to present a more positive image of China to the world and evidence commitment as a signatory of the FCTC (Li et al., 2013). Where city workplace and public smoking bans have been introduced they have often proved ineffective in reducing exposure to second hand smoke due to inadequate enforcement (T. Yang et al., 2015b). Not surprisingly, there is considerable sub-national variation in the implementation of tobacco control policies (Astell-Burt et al., 2018). Cigarette production and the number of smokers has continued to increase and smoking prevalence in 2015 (52.9% of men and 2.4% of women) was the same as five years previously (Li et al., 2016).   Tobacco outlets are ubiquitous, cigarette prices are low as a result of minimal tobacco taxation, and the culture of cigarette gifting remains strong. Despite these trends there is nevertheless strong support for tobacco control especially in more affluent areas (Astell-Burt et al., 2018) and in areas where air pollution is highest (Yang et al., 2017).

While the *China Tobacco Control Plan, 2012-2015* sets an overall goal of a 25% prevalence rate by 2015 (T. Yang et al., 2015a), there was no mention of endgame strategies. The publication of the *Healthy China 2030* report released in October, 2016 by the Central Committee of the Communist Party (Horton, 2017) offer more recent positive signs. Along with many other health goals, the *Healthy China* report has advocated that smoking rates be reduced to 20% by 2030 (Tan et al., 2018). This policy represents an ideological change away from focusing mostly on economic development to a co-ordinated development of economy and society. It also perhaps reflects an increased awareness of the health and economic costs of smoking and the false economy of tobacco profits (WHO, 2017c). However, substantial barriers remain, the main one being the need to separate the economic (the CNTC) and tobacco control functions which are currently carried out by one state organisation, the State Tobacco Monopoly Administration (STMA) (Hu et al., 2013). Until such a separation occurs then any discussion of tobacco endgame strategies is unlikely.

The experience of China and other LIC and MICs indicates that endgame strategies are not important features of tobacco control on a global scale. However, recent experience shows that China is perhaps becoming more attuned to the global health norms advocated by the FCTC. State control of tobacco production and distribution provides China with a tremendous opportunity for tobacco control (Hogg et al., 2016). However, this is less true of other MICs and LICs where the tobacco industry is dominated by TTCs rather than by state actors. As endgame strategies are intensified in HICs it is likely that TTCs will increase their activities in these countries. Here the challenges will intensify as governments are increasingly pressurised by TTCs and the constraints imposed by global trade policies. One challenge of endgame policies then is to consider the equity consequences of such policies which are likely to arise because of the intensification of TTC interventions in middle income and poorer countries. This challenge is one among many more general challenges that collectively underpin critiques of the endgame to which we now turn.

CRITIQUING THE ENDGAME.

This section provides a critical discussion of four points of tension regarding the tobacco endgame: the potential for unfulfilled promises and the exacerbation of global and local inequalities, the balance between human rights and state intervention, the challenge of harm reduction approaches- in particular e-cigarettes, and finally, concerns about enhanced stigmatization of smokers.

In some ways the endgame for tobacco seems more straightforward than proposing broad public health goals that involve many more sectors as was the case for *Health for All by 2000* (WHO, 1998) and *Closing the Gap in a Generation* (CSDH, 2008). But, the risk remains that the tobacco endgame will be just another aspirational but unrealised target. On current trends, many countries with a 5% or less smoking target are unlikely to achieve their goal. 'Successful' and rapid endgames in high-income countries, while positive in terms of health outcomes for the countries involved, are likely to exacerbate global inequity because of the difficulty low and middle-income countries will have implementing the recommendations of the FCTC due to lack of legislative and regulatory capacity (Chan, 2013). Within high-income countries in terms of equity, the 5% goal also has implications. This significant reduction would be, rightly, celebrated if achieved, but the aggregate figure is likely to conceal significant inequity. Thomas and Gostin (2013) suggest that if the smoking rate reduces to 1-2% amongst those who are better off, it could be that the prevalence for those who are materially disadvantaged, have less education or live with poor mental health could be in the double digits.

Thomas and Gostin (2013, p. i55) also argue that "endgames are not unjustified paternalism but the long-overdue closure of a cavernous gap in health and safety standards". But, approaches that rely on policy levers raise the issue of the balance between human rights and state controls on the consumption of what is still a legal product in most countries. Calls for a strong link to be made between basic human rights, including the right to health, and therefore the right to tobacco control (see for example Dresler et al., 2012) do not address this fundamental tension, although they may help justify government actions, including controls on the tobacco industry, in a court of law. Van der Eijk and Porter (2015) analysed the ethical tensions that states must negotiate. They were particularly concerned with the proposed introduction of a policy, in Tasmania, Australia. That sought to create a smoke-free generation of young people. They argued that the policy would be undemocratic on the grounds of age discrimination (Gogarty, 2016). They examined the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights; and the Convention on the Rights of

the Child. While none of these documents have direct legal application, it is expected that signatories incorporate their spirit into their own legal systems. They found that the proposal for a tobacco free generation did not "unduly violate the rights to liberty, self-determination, privacy or equality" (p.241) enshrined within these various documents. They argue this at least partially because the addictive nature of smoking makes it incompatible with liberty, an argument that makes the claim that smoking is an informed choice also highly problematic (Hoek et al., 2017). The philosopher Philip Pettit (1997) argues that we have come to see non-interference by government in industry practices as a way to protect freedoms, such as freedom of choice. Historically, he argues, protecting freedom meant shielding people from domination. Taking Pettit's argument seriously means seeing both the state and industry as having the potential to dominate – yet those who make 'nanny state' claims in relation to controls on tobacco ignore the role of industry as a 'nanny' (Moore et al., 2015). Nonetheless, it remains important not to dismiss the significant group of people who are not tobacco apologists, but who are highly critical of what they see as unjustified state intervention into their lives. Reframing debates to focus on the way the industry dominates freedom is already a feature of tobacco control and may help bridge this divide. But industries too have rights, which are enshrined in law (Bates, 2015). Citizens, states and industries have complex terrain to negotiate in balancing human rights and state intervention at global and local scales. They must also navigate the issues of freedom and addiction.

It is assumed that addiction to the nicotine in smoked tobacco is what keeps many people smoking and retards the endgame. Focusing on addiction inevitably involves a discussion of Nicotine Replacement Therapy (NRT). NRT has been available in the HICs for many years, but the more recent introduction of heat-not-burn nicotine-containing electronic cigarettes has presented a challenge to established thinking. Some have argued that e-cigarettes may make conventional cigarettes obsolete (Abrams, 2014) or are to be welcomed as a key tool in the endgame (Abrams et al., 2018; Arnott, 2013; Mcneill et al., 2018). However, Chapman & Wakefield (2013) point out that the vast majority of people who have quit smoking have done so unaided by NRT in whatever form. There is a growing consensus that e-cigarettes are far less harmful than smoked tobacco (Rigotti, 2018), but debate about whether they re-normalise smoking and function as a gateway to tobacco use (see Bauld et al., 2017; Chapman and Bareham, 2017; Etter, 2017; Fairchild et al., 2014; Glantz and Bareham, 2018; Green et al., 2018) and, as a result, have the potential to derail progress towards endgames. There are also suspicions about the motivations of tobacco companies who have bought into the alternative product market and are now, in some cases, pushing tobacco-free agendas (Malone, 2018; McDaniel et al., 2017). These and many other debates surrounding e-cigarettes and other novel products, such as reduced harm forms of tobacco, have created ferment in the world of tobacco control and resulted in different regulations in different parts of the world. This confusion is partially due to the lack of clarity around whether endgames mean tobacco-free, nicotine-free – or something else altogether. Importantly, there is also emerging evidence of inequalities, with ever-use and current use of e-cigarettes appearing to be higher amongst those who are younger, male and white. Hartwell et al., (2016) point to the importance of paying attention to patterns such as these because, if they persist, unevenness in uptake of e-cigarettes has the potential to widen existing tobacco-related health inequalities.

Continued de-normalisation, which is core to endgames, has the potential to exacerbate the stigma and associated inequalities already experienced by smokers. While some have argued that intentionally increasing stigma and shame is a prompt to smoking behavior change (Amonini et al.,

2015), those who have analysed the workings of stigma question the ethics of such an approach (Barnett et al., 2016; Bates, 2015; Bayer, 2008). The stigmatising marginalization of smokers, and presence and impacts of stigma, shame and blame on those with lung cancer, for instance, have been documented (Barnett et al., 2016; Cataldo et al., 2012; Chapple et al., 2004; Ritchie et al., 2010) and suggestions made regarding mitigation (Riley et al., 2017), but stigma is not easily assuaged. Even if endgames are effective, it will be many decades before smoking related lung cancers become equitably rare. Managing the ethics and impacts of stigmatisation will remain a challenge and may intensify if progress towards endgames is accelerated.

SPATIALISING THE ENDGAME: A RESEARCH AGENDA

As we have argued above, place has been a neglected theme in discussions of the endgame. This neglect spans both the nature and implementation of the endgame and its critique. While not in any way diminishing its importance as a goal, a perhaps simplistic assessment would see the endgame as a concept that is pushed by international agencies and tobacco control advocates and which relies for its implementation on the commitment of nation states. Though the focus on the nation state brings a geographical element into play, we seek in this final section to highlight research questions that foreground place as a key theme in understanding the endgame and identify research needs that are central to the development of this place-sensitive research agenda.

We see place as central to understanding the endgame for two reasons. First, on a macro scale, places are interconnected and tobacco control takes place within a global economy. This is widely known and recognised yet underplayed in the context of the endgame and indeed more widely with respect to geographical research on tobacco and smoking (Barnett et al., 2016). Put simply, endgame developments in one part of the world have consequences in other places. It is already clear that movements towards the endgame in HICs have led TTCs to move key operations to MICs and LICs. Equally it is evident that strategies for achieveing the endgame and ways to resist or delay the endgame are internationally transferrable. An understanding and acknowledgement of what happens in the HICs may have an effect in the LICs and *vice versa*. Strategies for achieving the endgame in the HICs must mitigate against the consequences for the economies and wellbeing of nations in LMICs. Second, while the endgame is certainly progressing unevenly on an international scale, its realisation is also uneven within nations. We see a pressing need to identify and understand the uneven consequences of the endgame, particularly in so far as groups and places are left behind or resist. These possibilities point towards the need to look beyond national policies and universalist objectives towards the evaluation of locally-sensitive endgame initiatives and interventions.

With this rationale in mind, Table 2 sets out a series of key place-sensitive research questions that, in our view, could usefully extend knowledge about endgame discourse and practice. We draw on the stages of tobacco regulation proposed by Eriksen et al. (2015) as an organising framework. Eriksen's model enables us to identify potential questions at each of the eight stages that he higlights within the product lifecycle of the cigarette from the growth of the raw material, tobacco, to the disposal of burnt-out stubs and empty packets. We supplement Eriksen's model by distinguishing between global and local questions.

Table 2: Potential place-sensitive endgame-relevant research questions

Stages of Regulation	Global	Local
Growing	How does tobacco growing fit with UN Sustainable Development Goals? How and why do nations differ in their strategies to reduce tobacco growing?	What are the local environmental conflicts and consequences associated with growing tobacco? What are the implications for local labour forces when tobacco growing economies restructure?
Manufacturing	How are TTCs restructuring their global manufacturing enterprise in response to the tobacco transition and the emergence of e-cigarettes and other new technologies?	To what extent does the withdrawal of tobacco manufacturers from a local economy affect the social and economic determinants of health and inequalites?
Packaging and Labelling	What are the health implications of variations in cigarette packaging and labelling between neighbouring states?	To what extent are there localised geographies of resistance to national policies on packaging and labelling?
Marketing	What are the health implications of variations in cigarette advertising, promotion and discounting between neighbouring states?	To what extent can enhanced local restrictions on advertising, promotions and discounting hasten the endgame? Can local tobacco control messaging, for example using social media, hasten the endgame?
Tax Policies	How is the international tobacco trade framed by global trade partnerships?	Can local tobacco sales taxes or higher business rates for tobacco retailers reduce tobacco consumption?
Point of Purchase	Why do some nations resist legislating for point of purchase interventions?	How far might geographical restrictions on tobacco retailing reduce smoking, for example by restricting tobacco sales near to schools?
Product Use	To what extent and why is tobacco consumption a right? In what circumstances can that right be removed and in what sorts of jurisdictions?	What are the consequences of the displacement of smoking to outdoor or private spaces? How effective are place-based voluntary restrictions on smoking? What sort of neighbourhoods are inimical to smoking, what neighbourhoods resist cessation initiatives?
Disposal	What global environmental signals can be associated with tobacco waste?	How effective are local tobacco clean-up campaigns in changing attitudes to smoking?

Research on some of these topics is already underway. Using papers published in Health and Place as an example, recent years have seen a much-needed attention directed to supply-side factors which have influenced smoking initiation and prevalence rates in HICs. Particularly important has been an increased focus on the density of tobacco retailers, especially near schools, with recent papers extending consideration to e-cigarette retail and use (Bostean et al., 2018, 2016; Corsi and Lippert, 2016; Larsen et al., 2017; Lipperman-Kreda et al., 2015; Yu and Lippert, 2017). Other studies have examined youth smoking more broadly, seeking to understand the relevance of neighbourhood

effects (Frohlich et al., 2002) and disentangle the general impact of proximity to tobacco retail (Mennis et al., 2016). Collectively these studies offer pointers to local supply-side interventions to hasten the endgame; similar possibilities exist with work on bans on smoking in children's playgrounds (McIntosh et al., 2015). In adult populations, studies are uncovering associations with disadvantage, social capital and rurality that may point to communities where the endgame will be delayed (Rachele et al., 2016; Roberts et al., 2016). Qualitative work highlights these challenges (Poland, 2000; Stead et al., 2001; Tan, 2013), giving voice to the spatiality inherent in the smoker perspective, a viewpoint that will need to be better understood as the endgame progresses. Though there are exceptions (Gruenewald et al., 1996; Lozano et al., 2016; Reubi, 2016; G. Yang et al., 2015), a better understanding of the expression of these themes, in contexts other than in HICs, remains a key research gap

Some of our research questions are pertinent to broader debates about smoking or tobacco control rather than specific to the endgame. Each however offers potential insights that will contribute to understanding the challenges and consequences that are associated with the endgame. Each also points to the uneven progress that will inevitably accompany endgame interventions. By focussing on place, the questions prioritise geographical variation, recognising that endgames are complex. Coordination by national and international bodies will be essential in concluding the endgame but communities, localities and neighbourhoods are where collective will can contribute to overcoming crises of implementation, the interests of TTCs and the vagaries of human nature. In terms of research design, we would argue strongly that natural experiments and realist evaluation are needed test out the many novel initiatives that will bring about the small gains that are likely to characterise the conclusion of the endgame.

We see three further conditions that are needed to facilitate our agenda. First, we are arguing for a recognition of the recursive interplay between the global and the local. What happens in HICs will affect LMICs. We call for policy learning about different national approaches to the endgame and the diversity of endgame strategies. Second, we see context as an important framing for endgame initiatives. Though these may build on national or international leadership, they must acknowledge the socio-demographic context of local areas. It will not simply be a case of documenting geographical variations in endgame goals or progress; rather we commend the need to understand the contexts within which different forms of endgames operate. Moreover we need to recognise the relational dimensions associated with these contexts: context will impact differently across age, gender, race, sexual and other population groups, and TTCs will exploit this relationality for example through targeted advertising. Third, monitoring is essential. For this, we need better quality data. Current data are often years out of date, based on specific populations or poorly conducted surveys. We lack geographically-nuanced intelligence and need further exploration of new forms of data, their potential and their shortcomings.

CONCLUSIONS
This paper has examined the emergence and focus of the idea of an endgame to tobacco consumption. We have identified gaps in current knowledge, highlighted disparities between the HICs and other economies in progress towards the endgame, and set out a research agenda that emphasises the potential for place-sensitive inquiry as a way of understanding better the challenges associated with the endgame. Our agenda has not been about how to achieve the endgame but rather about understanding its unfolding and its spatial implications. Existing writing on the

endgame has already focussed extensively on interventions and policy prescriptions that are seen, by the authors, as essential to the realisation of the endgame or, alternatively, unlikely to assist the endgame. We are concerned more with understanding geographical impacts and consequences but we agree with the original vision for the endgame, that it will require a step-change beyond existing (largely demand focussed) tobacco control measures, and it will necessitate a portfolio of radical measures. For us a key word here is 'portfolio': a range of measures will be needed to operationalise the lead shown by the WHO, national governments and tobacco control agencies and address the messy complexity of local support and opposition to the endgame.

ACKNOWLEDGEMENT.

REFERENCES

Abrams, D.B., 2014. Promise and peril of e-cigarettes: Can disruptive technology make cigarettes obsolete? JAMA 311, 135–136. https://doi.org/10.1001/jama.2013.285347

Abrams, D.B., Glasser, A.M., Pearson, J.L., Villanti, A.C., Collins, L.K., Niaura, R.S., 2018. Harm Minimization and Tobacco Control: Reframing Societal Views of Nicotine Use to Rapidly Save Lives. Annu. Rev. Public Health 39, 193–213. https://doi.org/10.1146/annurev-publhealth-040617-013849

Amonini, C., Pettigrew, S., Clayforth, C., 2015. The potential of shame as a message appeal in antismoking television advertisements. Tob. Control 24, 436–441. https://doi.org/dx.doi.org/10.1136/tobaccocontrol-2014-051737

Amul, G.G.H., Pang, T.P., 2018. The State of Tobacco Control in ASEAN: Framing the Implementation of the FCTC from a Health Systems Perspective. Asia Pacific Policy Stud. 5, 47–64. https://doi.org/10.1002/app5.218

Arnott, D., 2013. There's no single endgame. Tob. Control 22, i38–i39. https://doi.org/10.1136/tobaccocontrol-2012-050823

Assunta, M., Dorotheo, E.U., 2016. SEATCA Tobacco Industry Interference Index: a tool for measuring implementation of WHO Framework Convention on Tobacco Control Article 5.3. Tob. Control 25, 313–8. https://doi.org/10.1136/tobaccocontrol-2014-051934

Astell-Burt, T., Zhang, M., Feng, X., Wang, L., Li, Y., Page, A., Zhou, M., Wang, L., 2018. Geographical Inequality in Tobacco Control in China: Multilevel Evidence From 98 058 Participants. Nicotine Tob. Res. 20, 755–765. https://doi.org/10.1093/ntr/ntx100

Barnett, J.R., Moon, G., Pearce, J., Thompson, L., Twigg, L., 2016. Smoking geographies : space, place and tobacco. Wiley-Blackwell, Chichester.

Bates, C., 2015. The tobacco endgame - a critical review of the policy ideas [WWW Document]. URL https://www.clivebates.com/the-tobacco-endgame-a-critical-review-of-the-policy-ideas/#4 (accessed 6.11.18).

Bauld, L., MacKintosh, A.M., Eastwood, B., Ford, A., Moore, G., Dockrell, M., Arnott, D., Cheeseman,

H., McNeill, A., 2017. Young people's use of e-cigarettes across the United Kingdom: findings from five surveys 2015–2017. Int. J. Environ. Res. Public Health 14, 973–984. https://doi.org//10.3390/ijerph14090973

Bayer, R., 2008. Stigma and the ethics of public health: not can we but should we. Soc. Sci. Med. 67, 463–472. https://doi.org//10.1016/j.socscimed.2008.03.017

Beaglehole, R., Bonita, R., Horton, R., Adams, C., Alleyne, G., Asaria, P., Baugh, V., Bekedam, H., Billo, N., Casswell, S., 2011. Priority actions for the non-communicable disease crisis. Lancet 377, 1438–1447. https://doi.org//10.1016/S0140-6736(11)60393-0

Benowitz, N.L., Henningfield, J.E., 2013. Reducing the nicotine content to make cigarettes less addictive. Tob. Control 22, i14–i17. https://doi.org/10.1136/tobaccocontrol-2012-050860

Berrick, A.J., 2013. The tobacco-free generation proposal. Tob. Control 22, i22–i26. https://doi.org/10.1136/tobaccocontrol-2012-050865

Bertollini, R., Ribeiro, S., Mauer-Stender, K., Galea, G., 2016. Tobacco control in Europe: a policy review. Eur. Respir. Rev. 25. https://doi.org/10.1183/16000617.0021-2016

Bilano, V., Gilmour, S., Moffi, T., Tursan, E., Stevens, G.A., Commar, A., Tuyl, F., Hudson, I., 2015. Global trends and projections for tobacco use, 1990 – 2025: an analysis of smoking indicators from the WHO Comprehensive Information Systems for Tobacco Control. Lancet 385, 966–976. https://doi.org/10.1016/S0140-6736(15)60264-1

Borland, R., 2012. The need for new strategies to combat the epidemic of smoking-related harm. Tob. Control 21, 287–288. https://doi.org/http://dx.doi.org/10.1136/tc.2010.040865

Bostean, G., Crespi, C.M., Vorapharuek, P., McCarthy, W.J., 2016. E-cigarette use among students and e-cigarette specialty retailer presence near schools. Health Place 42, 129–136. https://doi.org/10.1016/J.HEALTHPLACE.2016.09.012

Bostean, G., Sanchez, L., Lippert, A.M., 2018. Sociodemographic disparities in e-cigarette retail environment: Vape stores and census tract characteristics in Orange County, CA. Health Place 50, 65–72. https://doi.org/10.1016/J.HEALTHPLACE.2017.12.004

Callard, C.D., Collishaw, N.E., 2013. Supply-side options for an endgame for the tobacco industry. Tob. Control 22, i10–i13. https://doi.org/10.1136/tobaccocontrol-2012-050863

Cataldo, J.K., Jahan, T.M., Pongquan, V.L., 2012. Lung cancer stigma, depression, and quality of life among ever and never smokers. Eur. J. Oncol. Nurs. 16, 264–269. https://doi.org//10.1016/j.ejon.2011.06.008

Chan, M., 2013. WHO Director-General considers the tobacco endgame [WWW Document]. URL http://www.who.int/dg/speeches/2013/tobacco_endgame_20130911/en/ (accessed 6.11.18).

Chapman, S., Bareham, D., 2017. Gateway effects and electronic cigarettes: a response to JF Etter [WWW Document]. URL https://ses.library.usyd.edu.au/bitstream/2123/17579/2/Etter response.pdf (accessed 6.11.18).

Chapman, S., Wakefield, M.A., 2013. Large-scale unassisted smoking cessation over 50 years: lessons from history for endgame planning in tobacco control. Tob. Control 22 Suppl 1, i33-5. https://doi.org/10.1136/tobaccocontrol-2012-050767

Chapple, A., Ziebland, S., McPherson, A., 2004. Stigma, shame, and blame experienced by patients with lung cancer: qualitative study. BMJ 328, 1470. https://doi.org/doi.org/10.1136/bmj.38111.639734.7C

Chow, C.K., Corsi, D.J., Gilmore, A.B., Kruger, A., Igumbor, E., Chifamba, J., Yang, W., Wei, L., Iqbal, R., Mony, P., Gupta, R., Vijayakumar, K., Mohan, V., Kumar, R., Rahman, O., Yusoff, K., Ismail, N., Zatonska, K., Altuntas, Y., Rosengren, A., Bahonar, A., Yusufali, A., Dagenais, G., Lear, S., Diaz, R., Avezum, A., Lopez-Jaramillo, P., Lanas, F., Rangarajan, S., Teo, K., McKee, M., Yusuf, S., 2017. Tobacco control environment: cross-sectional survey of policy implementation, social unacceptability, knowledge of tobacco health harms and relationship to quit ratio in 17 low-income, middle-income and high-income countries. BMJ Open 7, e013817. https://doi.org/10.1136/bmjopen-2016-013817

Corsi, D.J., Lippert, A.M., 2016. An examination of the shift in school-level clustering of US adolescent electronic cigarette use and its multilevel correlates, 2011–2013. Health Place 38, 30–38. https://doi.org/10.1016/J.HEALTHPLACE.2015.12.007

CSDH, 2008. Closing the gap in a generation: health equity through action on the social determinants of health . Final Report of the Commission on Social Determinants of Health. WHO, Geneva.

David, A.M., Mercado, S.P., Klein, J.D., Kaundan, M.S.O.K., Koong, H.N., Garcia, E., 2017. Protecting children and families from tobacco and tobacco-related NCDs in the Western Pacific: good practice examples from Malaysia, Philippines and Singapore. Child. Care. Health Dev. 43, 774–778. https://doi.org/10.1111/cch.12472

Dresler, C., Lando, H., Schneider, N., Sehgal, H., 2012. Human rights-based approach to tobacco control. Tob. Control 21, 208–211. https://doi.org//10.1136/tobaccocontrol-2011-050206

Edwards, R., Tu, D., Newcombe, R., Holland, K., Walton, D., 2017. Achieving the tobacco endgame: Evidence on the hardening hypothesis from repeated cross-sectional studies in New Zealand 2008-2014. Tob. Control 26, 399–405. https://doi.org/10.1136/tobaccocontrol-2015-052860

Edwards, R., Wilson, N., Peace, J., Weerasekera, D., Thomson, G.W., Gifford, H., 2013. Support for a tobacco endgame and increased regulation of the tobacco industry among New Zealand smokers: results from a National Survey. Tob. Control 22, e86-93. https://doi.org/http://dx.doi.org/10.1136/tobaccocontrol-2011-050324

Eriksen, M., Mackay, J., Schluger, N., 2015. The Tobacco Atlas., 5th ed. The American Cancer Society, Atlanta, Georgia.

Etter, J.-F., 2017. Gateway effects and electronic cigarettes. Addiction. https://doi.org/10.1111/add.13924

Fairchild, A.L., Bayer, R., Colgrove, J., 2014. The renormalization of smoking? E-cigarettes and the tobacco "endgame." N. Engl. J. Med. 370, 293–295. https://doi.org/10.1056/NEJMp1313940

Frohlich, K.L., Potvin, L., Gauvin, L., Chabot, P., 2002. Youth smoking initiation: disentangling context from composition. Health Place 8, 155–166. https://doi.org/10.1016/S1353-8292(02)00003-5

Gallus, S., Lugo, A., Fernandez, E., Gilmore, A.B., Leon, M.E., Clancy, L., La Vecchia, C., 2014. Support for a tobacco endgame strategy in 18 European countries. Prev. Med. (Baltim). 67, 255–258. https://doi.org/10.1016/j.ypmed.2014.08.001

Glantz, S.A., Bareham, D.W., 2018. E-Cigarettes: Use, Effects on Smoking, Risks, and Policy Implications. Annu. Rev. Public Health 39, 215–235. https://doi.org/10.1146/annurev-publhealth-040617-013757

Gogarty, B., 2016. Tasmania's 'smoke-free generation' is undemocratic age discrimination [WWW Document]. Conversat. URL https://theconversation.com/tasmanias-smoke-free-generation-is-undemocratic-age-discrimination-57049 (accessed 6.11.18).

Green, L.W., Fielding, J.E., Brownson, R.C., 2018. The Debate About Electronic Cigarettes: Harm Minimization or the Precautionary Principle. Annu. Rev. Public Health 39, 189–191. https://doi.org/10.1146/annurev-publhealth-102417-124810

Gruenewald, P.J., Millar, A.B., Treno, A.J., Yang, Z., Ponicki, W.R., Roeper, P., 1996. The geography of availability and driving after drinking. Addiction 91, 967–984. https://doi.org/10.1046/j.1360-0443.1996.9179674.x

Hartwell, G., Thomas, S., Egan, M., Gilmore, A., Petticrew, M., 2016. E-cigarettes and equity: a systematic review of differences in awareness and use between sociodemographic groups. Tob. Control 26, e85–e91. https://doi.org/http://dx.doi.org/10.1136/tobaccocontrol-2016-053222

Hoek, J., Ball, J., Gray, R., Tautolo, E.S., 2017. Smoking as an 'informed choice': Implications for endgame strategies. Tob. Control 26, 669–673. https://doi.org/10.1136/tobaccocontrol-2016-053267

Hogg, S.L., Hill, S.E., Collin, J., 2016. State-ownership of tobacco industry: A 'fundamental conflict of interest' or a 'tremendous opportunity' for tobacco control? Tob. Control 25, 367–372. https://doi.org/10.1136/tobaccocontrol-2014-052114

Horton, R., 2017. Offline: China's rejuvenation in health. Lancet 389, 1086. https://doi.org/10.1016/S0140-6736(17)30761-4

Hu, T.-W., Lee, A.H., Mao, Z., 2013. WHO Framework Convention on Tobacco Control in China: barriers, challenges and recommendations. Glob. Health Promot. 20, 13–22. https://doi.org/10.1177/1757975913501910

Keklik, S., Gultekin-Karakas, D., 2018. Anti-tobacco control industry strategies in Turkey. BMC Public Health 18, 282. https://doi.org/10.1186/s12889-018-5071-z

Khoo, D., Chiam, Y., Ng, P., Berrick, A.J., Koong, H.N., 2010. Phasing-out tobacco: proposal to deny access to tobacco for those born from 2000. Tob. Control 19, 355–360. https://doi.org/http://dx.doi.org/10.1136/tc.2009.031153

Labonté, R., Lencucha, R., Drope, J., Packer, C., Goma, F.M., Zulu, R., 2018. The institutional context of tobacco production in Zambia. Global. Health 14, 5. https://doi.org/10.1186/s12992-018-0328-y

Larsen, K., To, T., Irving, H.M., Boak, A., Hamilton, H.A., Mann, R.E., Schwartz, R., Faulkner, G.E.J., 2017. Smoking and binge-drinking among adolescents, Ontario, Canada: Does the school neighbourhood matter? Health Place 47, 108–114. https://doi.org/10.1016/J.HEALTHPLACE.2017.08.003

Lencucha, R., Reddy, S.K., Labonte, R., Drope, J., Magati, P., Goma, F., Zulu, R., Makoka, D., 2018. Global tobacco control and economic norms: an analysis of normative commitments in Kenya, Malawi and Zambia. Health Policy Plan. 33, 420–428. https://doi.org/10.1093/heapol/czy005

Li, S., Meng, L., Chiolero, A., Ma, C., Xi, B., 2016. Trends in smoking prevalence and attributable mortality in China, 1991–2011. Prev. Med. (Baltim). 93, 82–87. https://doi.org/10.1016/J.YPMED.2016.09.027

Li, X., Zheng, P., Fu, H., Berg, C., Kegler, M., 2013. Results from an evaluation of tobacco control policies at the 2010 Shanghai World Expo. Tob. Control 22 Suppl 2, ii21-6. https://doi.org/10.1136/tobaccocontrol-2012-050816

Lipperman-Kreda, S., Morrison, C., Grube, J.W., Gaidus, A., 2015. Youth activity spaces and daily exposure to tobacco outlets. Health Place 34, 30–33.

https://doi.org/10.1016/J.HEALTHPLACE.2015.03.013

Lozano, P., Fleischer, N.L., Moore, S., Shigematsu, L.M.R., Santillán, E.A., Thrasher, J.F., 2016. Does neighborhood social cohesion modify the relationship between neighborhood social norms and smoking behaviors in Mexico? Health Place 40, 145–152. https://doi.org/10.1016/J.HEALTHPLACE.2016.05.011

Malone, R., McDaniel, P.A., Smith, E.A., 2014. Tobacco control endgames: global initiatives and implications for the UK. Cancer Research UK, London.

Malone, R.E., 2018. "Stop me before I kill again": why Philip Morris International needs governments' help to quit smoking, and why governments need more pressure to do so. Tob. Control 27, 121–122. https://doi.org/10.1136/tobaccocontrol-2018-054294

Malone, R.E., 2016. The race to a tobacco endgame. Tob. Control 25, 607–608. https://doi.org/10.1136/tobaccocontrol-2016-053466

Malone, R.E., 2013. Tobacco endgames: What they are and are not, issues for tobacco control strategic planning and a possible US scenario. Tob. Control 22, i42–i44. https://doi.org/10.1136/tobaccocontrol-2012-050820

Malone, R.E., 2010. Imagining things otherwise: New endgame ideas for tobacco control. Tob. Control 19, 349–350. https://doi.org/10.1136/tc.2010.039727

McDaniel, P., Lown, E.A., Malone, R.E., 2017. "It doesn't seem to make sense for a company that sells cigarettes to help smokers stop using them": A case study of Philip Morris's involvement in smoking cessation. PLoS One 12, e0183961. https://doi.org/https://doi.org/10.1371/journal.pone.0183961

McDaniel, P.A., Smith, E.A., Malone, R.E., 2016. The tobacco endgame: A qualitative review and synthesis. Tob. Control 25, 594–604. https://doi.org/10.1136/tobaccocontrol-2015-052356

McIntosh, A.H., Collins, D., Parsons, M., 2015. 'A place for healthy activity': Parent and caregiver perspectives on smokefree playgrounds. Health Place 31, 146–153. https://doi.org/10.1016/J.HEALTHPLACE.2014.11.011

Mcneill, A., Brose, L.S., Calder, R., Bauld, L., Robson, D., 2018. Evidence review of e-cigarettes and heated tobacco products 2018. A report commissioned by Public Health England. Public Health England, London.

Mennis, J., Mason, M., Way, T., Zaharakis, N., 2016. The role of tobacco outlet density in a smoking cessation intervention for urban youth. Health Place 38, 39–47. https://doi.org/10.1016/j.healthplace.2015.12.008

Moore, M., Yeatman, H., Davey, R., 2015. Which nanny–the state or industry? Wowsers, teetotallers and the fun police in public health advocacy. Public Health 129, 1030–1037. https://doi.org/https://doi.org/10.1016/j.puhe.2015.01.031

Myers, M.L., 2013. The FCTC's evidence-based policies remain a key to ending the tobacco epidemic. Tob. Control 22, i45–i46. https://doi.org/10.1136/tobaccocontrol-2012-050891

Ng, M., Freeman, M.K., Fleming, T.D., Robinson, M., Dwyer-Lindgren, L., Thomson, B., Wollum, A., Sanman, E., Wulf, S., Lopez, A.D., Murray, C.J.L., Gakidou, E., 2014. Smoking prevalence and cigarette consumption in 187 countries, 1980-2012. JAMA 311, 183–92. https://doi.org/10.1001/jama.2013.284692

Petrović-van der Deen, F.S., Wilson, N., 2018. Restricting tobacco sales to only pharmacies as an

endgame strategy: are pharmacies likely to opt in? Aust. N. Z. J. Public Health 42, 219–220. https://doi.org/10.1111/1753-6405.12764

Pettit, P., 1997. Republicanism: a theory of freedom and government. OUP Oxford.

Poland, B.D., 2000. The 'considerate' smoker in public space: the micro-politics and political economy of 'doing the right thing.' Health Place 6, 1–14. https://doi.org/10.1016/S1353-8292(99)00025-8

Proctor, R.N., 2013. Why ban the sale of cigarettes? The case for abolition. Tob. Control 22. https://doi.org/10.1136/tobaccocontrol-2012-050811

Rachele, J.N., Wood, L., Nathan, A., Giskes, K., Turrell, G., 2016. Neighbourhood disadvantage and smoking: Examining the role of neighbourhood-level psychosocial characteristics. Health Place 40, 98–105. https://doi.org/10.1016/J.HEALTHPLACE.2016.04.012

Reubi, D., 2016. Modernisation, smoking and chronic disease: Of temporality and spatiality in global health. Health Place 39, 188–195. https://doi.org/10.1016/J.HEALTHPLACE.2015.04.004

Rigotti, N.A., 2018. Balancing the Benefits and Harms of Electronic Cigarettes: A National Academies of Science, Engineering, and Medicine Report. Ann. Intern. Med. 1–3. https://doi.org/10.7326/M18-0251

Riley, K.E., Ulrich, M.R., Hamann, H.A., Ostroff, J.S., 2017. Decreasing Smoking but Increasing Stigma? Anti-tobacco Campaigns, Public Health, and Cancer Care. AMA J. Ethics 19, 475–485. https://doi.org/10.1001/journalofethics.2017.19.5.msoc1-1705

Ritchie, D., Amos, A., Martin, C., 2010. Public places after smoke-free--a qualitative exploration of the changes in smoking behaviour. Health Place 16, 461–9. https://doi.org/10.1016/j.healthplace.2009.12.003

Roberts, M.E., Doogan, N.J., Kurti, A.N., Redner, R., Gaalema, D.E., Stanton, C.A., White, T.J., Higgins, S.T., 2016. Rural tobacco use across the United States: How rural and urban areas differ, broken down by census regions and divisions. Health Place 39, 153–159. https://doi.org/10.1016/J.HEALTHPLACE.2016.04.001

Robertson, L., Gendall, P., Hoek, J., Cameron, C., Marsh, L., McGee, R., 2017. Smokers' perceptions of the relative effectiveness of five tobacco retail reduction policies. Nicotine Tob. Res. 19, 245–252. https://doi.org/10.1093/ntr/ntw193

Ruokolainen, O., Ollila, H., Karjalainen, K., 2017. Determinants of electronic cigarette use among Finnish adults: Results from a population-based survey. Nord. Stud. Alcohol Drugs 34, 471–480. https://doi.org/10.1177/1455072517736618

Smith, E.A., McDaniel, P.A., Hiilamo, H., Malone, R.E., 2017. Policy coherence, integration, and proportionality in tobacco control: Should tobacco sales be limited to government outlets? J. Public Health Policy 38, 345–358. https://doi.org/10.1057/s41271-017-0074-z

Stead, M., MacAskill, S., MacKintosh, A.-M., Reece, J., Eadie, D., 2001. "It's as if you're locked in": qualitative explanations for area effects on smoking in disadvantaged communities. Health Place 7, 333–343. https://doi.org/10.1016/S1353-8292(01)00025-9

Tan, Q.H., 2013. Smoking spaces as enabling spaces of wellbeing. Health Place 24, 173–82. https://doi.org/10.1016/j.healthplace.2013.08.003

Tan, X., Zhang, Y., Shao, H., 2018. Healthy China 2030, a breakthrough for improving health. Glob. Health Promot. 175797591774353. https://doi.org/10.1177/1757975917743533

Thomas, B.P., Gostin, L.O., 2013. Tobacco endgame strategies: Challenges in ethics and law. Tob. Control 22, i55–i57. https://doi.org/10.1136/tobaccocontrol-2012-050839

Thomson, G., Edwards, R., Wilson, N., Blakely, T., 2012. What are the elements of the tobacco endgame? Tob. Control 21, 293–5. https://doi.org/10.1136/tc.2010.040881

Tobacco Control Playbook, 2017. Is there public support for tobacco control measures? [WWW Document]. URL https://tobaccoplaybook.net/en/011-public-support.html (accessed 6.4.18).

US Department of Health and Human Services, 2014. The health consequences of smoking—50 years of progress: A report of the surgeon general, for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center, Atlanta.

van der Eijk, Y., Porter, G., 2015. Human rights and ethical considerations for a tobacco-free generation. Tob. Control 24, 238–242. https://doi.org/10.1136/tobaccocontrol-2013-051125

Verweij, M., 2017. Active anti-smoking policy is a moral duty of government; Responsibility for reducing smoking lies with both the individual and society. Ned. Tijdschr. Geneeskd. 161.

Walters, E.H., Barnsley, K., 2015. Tobacco-free generation legislation. Med. J. Aust. 202, 509–510. https://doi.org/doi: 10.5694/mja15.00416

Wang, M.P., Wang, X., Lam, T.H., Viswanath, K., Chan, S.S., 2015. The tobacco endgame in Hong Kong: public support for a total ban on tobacco sales. Tob. Control 24, 162–167. https://doi.org/10.1136/tobaccocontrol-2013-051092

Warner, K.E., 2013. An endgame for tobacco? Tob. Control 22, i3-5. https://doi.org/10.1136/tobaccocontrol-2013-050989

WHO, 2017a. WHO report on the global tobacco epidemic, 2017: monitoring tobacco use and prevention policies: executive summary. WHO, Geneva.

WHO, 2017b. Tobacco free for a healthy Pacific. WHO Western Pacific Region, Manilla.

WHO, 2017c. The Bill China Cannot Afford. Health, Economic and Social Costs of China's Tobacco Epidemic. World Health Organisation Regional Office for the Western Pacific, Manilla.

WHO, 2015. Resolution: Roadmap of actions to strengthen the implementation of the WHO Framework Convention on Tobacco Control in the European Region 2015–2025 Recalling the Global Action Plan for the Prevention and Control of. World Health Organisaton Regional Committee for Europe, Vilnius, Lithuania.

WHO, 2014. Noncommunicable diseases global monitoring framework: indicator definitions and specifications. World Health Organisation, Geneva.

WHO, 2013a. Global action plan for the prevention and control of noncommunicable diseases 2013-2020. World Health Organization, Geneva.

WHO, 2013b. Ashgabat Declaration on the Prevention and Control of Noncommunicable Diseases in the Context of Health 2020. WHO, Ashgabat.

WHO, 1998. The world health report 1998: life in the 21st century A vision for all. World Health Organisation, Geneva.

Winickoff, J.P., McMillen, R., Tanski, S., Wilson, K., Gottlieb, M., Crane, R., 2016. Public support for raising the age of sale for tobacco to 21 in the United States. Tob. Control 25, 284–288. https://doi.org/10.1136/tobaccocontrol-2014-052126

Yang, G., Wang, Y., Wu, Y., Yang, J., Wan, X., 2015. The road to effective tobacco control in China. Lancet 385, 1019–1028. https://doi.org/10.1016/S0140-6736(15)60174-X

Yang, T., Barnett, R., Rockett, I.R.H., Yang, X.Y., Wu, D., Zheng, W., Li, L., 2015a. The impact of regional economic reliance on the tobacco industry on current smoking in China. Health Place 33, 159–171. https://doi.org/10.1016/j.healthplace.2014.12.015

Yang, T., Jiang, S., Barnett, R., Peng, S., Yu, L., 2015b. Individual and city-level determinants of secondhand smoke exposure in China. Int. J. Health Geogr. 14, 36. https://doi.org/10.1186/s12942-015-0029-1

Yang, X.Y., Yang, T., Nie, F., 2017. Air pollution as a catalyst for supporting tobacco control policies? Evidence from a nationwide study on Chinese medical students. Tob. Control tobaccocontrol-2017-053684. https://doi.org/10.1136/tobaccocontrol-2017-053684

Yu, E., Lippert, A.M., 2017. Race/ethnicity modifies the association between school prevalence of e-cigarette use and student-level use: Results from the 2014 US National Youth Tobacco Survey. Health Place 46, 114–120. https://doi.org/10.1016/J.HEALTHPLACE.2017.05.003