# Vision for tobacco endgame in Korea: suggestions for countries with endgame aspirations

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**ABSTRACT** Tobacco endgame is a focal point of discussion at both national and international levels. We aimed to describe efforts related to achieving the tobacco endgame in the Republic of Korea, an exemplar of a country with endgame aspirations, and compare them with the efforts of other nations. We reviewed the tobacco endgame efforts of three nations considered tobacco control leaders: New Zealand (NZ), Australia and Finland. The efforts/attempts of each country were described using an endgame strategy category. The tobacco control leaders had explicit goals to achieve a smoking prevalence of <5% before a target date and had legislation and research centres for tobacco control and/or endgame. NZ is implementing a mixture of conventional and innovative endgame interventions; the others use incremental conventional approaches. In Korea, there has been an attempt to ban the sale and manufacture of combustible cigarettes. The attempt led to the filing of a petition, and a survey of adults showed 70% supported the legislation banning tobacco. The Korean government mentioned a tobacco endgame in a 2019 plan, yet a target and an end date were absent. The 2019 plan in Korea included incremental FCTC strategies. Practices in the leading countries show that legislation and research are key to ending the tobacco epidemic. The MPOWER measures must be strengthened, endgame objectives must be set and bold strategies must be adopted. Key endgame policies include those with evidence of effectiveness, such as retailer reductions.

# **BACKGROUND**

The best practices of leading tobacco control countries provide insights. Yet deriving endgame prerequisites and recommendations for those with endgame aspirations is also important, as many nations still have high smoking prevalences<sup>1</sup> and have not yet set endgame goals. The Republic of Korea (hereafter, Korea) aspires to prepare for the endgame for the following reasons. First, the prevalence of cigarette smoking is at an all-time low (figure 1).<sup>23</sup> Despite the marked disparity between sexes, the adult smoking prevalence is decreasing towards 15%, favourable for planning the tobacco endgame.<sup>4</sup> Second, there is a consistent political will to eliminate tobacco-related harm. Comprehensive tobacco control measures began in 1995 and have been strengthened since the ratification of the FCTC in 2005. The Fifth National Health Plan (2021–2030, HP2030), announced in 2021, aimed to reduce the male and female smoking prevalence to 25.0% and 4.0%, respectively, by 2030.6 Among

### WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ The tobacco endgame aims to end the tobacco epidemic.
- ⇒ Endgame encompasses an explicit goal of nearzero smoking prevalence within two decades.

#### WHAT THIS STUDY ADDS

- ⇒ Leading countries have set endgame goals and some are implementing innovative endgame policies.
- ⇒ Legislation and research are key elements for preparing to achieve the endgame.

## HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- ⇒ Strengthening MPOWER to reduce smoking prevalence substantially sets the stage for the endgame.
- ⇒ MPOWER and endgame approaches can be implemented simultaneously.
- ⇒ Preparing for the endgame should not be delayed and should include monitoring public support, developing communication strategies and identifying optimal implementation strategies.

the 28 topic areas, 'tobacco use' has the largest number of performance indicators (38 of a total of 400).6

We compared the endgame policy landscape in Korea with that of three nations considered leaders in tobacco control efforts: New Zealand (NZ), Australia and Finland.<sup>7 8</sup> Specifically, we looked at smoking prevalence, endgame goals/timeframe, legislation, research centres and implementation of endgame policies and MPOWER. We suggest strategies for adopting a 'real' tobacco endgame in Korea.

#### **TOBACCO ENDGAME ATTEMPTS IN KOREA**

In 2006, Park et al<sup>9 10</sup> suggested nicotine be regulated by the Korean Food and Drug Administration (now the Ministry of Food and Drug Safety) as a psychotropic drug, and called for a ban on the manufacture and sale of tobacco products. Their proposal suggested further lowering smoking prevalence by raising taxes, and developing schemes for alternate tax sources and income preservation for those in tobacco farming, retailing and manufacturing businesses.9 Once the prevalence is sufficiently low, the provision of cessation treatment for



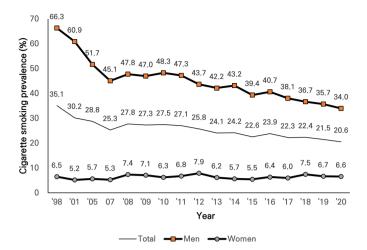
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# Special communication

#### A. Adult cigarette smoking prevalence



#### B. Adolescent cigarette smoking prevalence

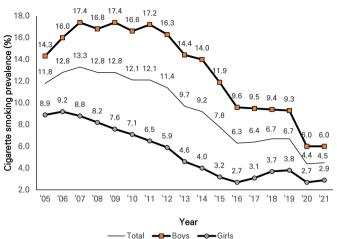


Figure 1 Adult (2008–2020, A) and adolescent (2005–2021, B) cigarette smoking prevalence in Korea.

those still smoking, and enforcing a ban on the manufacture and sales of tobacco were suggested. Taking radical approaches (eg, banning the manufacture and sales of cigarettes) after substantially lowering the prevalence with conventional measures aligns with the current endgame concept, which considers low prevalence a conducive factor for adopting endgame approaches. The proposal led to the filing of a legislative petition asking the Korean National Assembly to phase in the implementation of a ban on the manufacture and sales of cigarettes over the next decade. At that time, a survey of 1500 adults in Korea showed that 70% supported legislation banning tobacco. However, the petition was not debated and was abolished with the dissolution of the 17th National Assembly.

The first mention of the tobacco endgame by the Korean government was included in the Comprehensive Tobacco Control Plan for Eradication of Smoking Inducing Environment (hereafter, the Comprehensive Plan) announced by the Korean Ministry of Health and Welfare in May 2019. <sup>12</sup> Many media reports covered the news based on a press release that

ENDS, electronic nicotine delivery systems; HTP, heated tobacco product.

the government had declared for the tobacco endgame. <sup>13</sup> The appendix of the Comprehensive Plan described the definition of the endgame, examples of endgame approaches and endgame efforts in other nations. However, no endgame goal and target date were specified, as the goal and the timeframe to reach the goal was not agreed and decided.

The vision of the Comprehensive Plan was to 'create a non-smoking environment for a healthy and clean tobacco-free next generation'. The measures in the Comprehensive Plan were mostly incremental conventional approaches (table 1). The Comprehensive Plan set the timeframe for implementation to 5 years and listed organisations responsible for each measure. Most of these measures involved amending current acts (particularly the National Health Promotion Act (NHPA) and the Tobacco Business Act (TBA)), establishing research evidence, and building international coalitions. Some of the measures are being implemented as planned (eg, banning advertisements visible outside retailers), whereas others are being delayed (eg, phased prohibition of indoor smoking in public facilities).

Strategy	Action plan*
<ol> <li>Restrictions on tobacco advertising and promotion</li> </ol>	1. Increasing the size of graphical health warnings on packages (a) 2. Introduction of plain packaging that carries no advertising or promotion (a) 3. Mandatory antismoking advertisements in retailers, ban on using animals and cartoon characters for tobacco advertising, strengthen enforcement of bans on advertisements visible outside the retailers (a) 4. Introduction of voluntary prereview system on tobacco advertisements (a) 5. Enforcement of bans on tobacco promotion activities and strengthened monitoring of tobacco promotion activities (a) 6. Control for negative consequences from exposure to smoking scenes in the media (a)
Regulation of nicotine-containing products, and devices for consuming tobacco/nicotine	7. Phased prohibition of flavoured additives (a) 8. Stronger control for nicotine-containing products and devices for ENDS and HTPs (a) 9. Mandatory reporting and disclosure of constituents and emissions of tobacco products (a)
3. Prevention of secondhand smoke exposure for public health	<ul><li>10. Phased prohibition of indoor smoking in public facilities (a)</li><li>11. Designation of outdoor smoking area away from pedestrian paths to prevent secondhand smoke exposure on streets and sidewalks</li></ul>
4. Strengthening of smoking prevention education and cessation treatment	12. Enhanced smoking prevention education for children, adolescents and young adults (a) 13. Wider support for cessation treatment and tailored cessation treatments (a) 14. Reviewing of national health insurance coverage for cessation treatment (r)
5. Establishment of a scientific basis for tobacco control policies and strengthening international cooperation	15. Establishment of a scientific basis for tobacco control policies (r) 16. Ratification of the protocol to eliminate illicit trade in tobacco products and work to host the FCTC Conference of Parties (

Table 2	Smoking prevalence, legislation, research centr es and tobacco endgame goals in NZ, Australia, Finland and Korea					
Countries	Adult daily tobacco smoking prevalence*14	Legislation (dedicated to comprehensive/ specific tobacco control)	Research centres for tobacco control and endgame	Endgame goals (a specific and measurable goal with a target date)		
NZ	13%	Smokefree Environments and Regulated Products Act	ASPIRE 2025	<5% daily smoking for all population groups by 2025		
Australia	12%	Tobacco Advertising Prohibition Act, Tobacco Plain Packaging Act	NHMRC Centre of Research Excellence on Achieving the Tobacco Endgame	<5% daily smoking for adults by 2030		
Finland	15%	Finland Tobacco Act	Finnish Institute of Health and Welfare	<5% for all nicotine-containing product use on a daily basis among adults by 2030		
Korea	20%	_	_	_		

<sup>\*</sup>Adult daily tobacco smoking prevalence: daily smoking of any form of tobacco, including cigarettes, cigars, pipes, hookah, shisha, water pipe, heated tobacco products and excluding smokeless tobacco.

NHMRC, National Health and Medical Research Council; NZ, New Zealand.

### LANDSCAPES FOR THE TOBACCO ENDGAME

The tobacco endgame landscape of each country, represented by smoking prevalence, legislation and research centres for tobacco control and/or endgame, are described in table 2. The adult daily tobacco smoking prevalence in NZ, Australia and Finland were all below 15% and lower than that of Korea (20.0% overall).<sup>14</sup>

Tobacco control in NZ and Finland is based on single primary acts: the Smokefree Environment and Regulated Products Act in NZ and the Tobacco Act in Finland (table 2). These two laws address various areas of tobacco control and have been amended several times to strengthen tobacco-control measures. Finland was the first country to enact a law (the 2010 Tobacco Act) with the goal of ending tobacco use. The goal was strengthened to address the use of all nicotine-containing products in 2016. Australia has implemented two issue-specific laws: the Tobacco Advertising Prohibition Act and the Tobacco Plain Packaging Act. In Korea, most tobacco control is covered by the NHPA and TBA, which are not specific for tobacco control.

Research centres for tobacco control and/or tobacco endgame were identified for the leader countries (table 2). ASPIRE2025 (established in 2011) in NZ and the National Health and Medical Research Council Centre of Research Excellence on Achieving the Tobacco Endgame (established in 2020) in Australia aim to help the government achieve the endgame goal by building research evidence. These groups primarily consist of university academics. The tobacco control research centre in Finland is the Finnish Institute for Health and Welfare (THL). The THL is a state-owned research institute and also functions as the WHO FCTC Knowledge Hub on Surveillance. The THL produces and monitors information and statistics regarding tobacco use and conducts research to prevent and reduce the health risks of tobacco. <sup>17</sup>

#### **ENDGAME GOALS AND THE NATURE OF THE ACTIONS**

NZ, <sup>18</sup> Australia<sup>19</sup> and Finland<sup>20</sup> have all declared time-bound endgame goals in their government plans (table 2). In comparison, the Comprehensive Plan in Korea included no endgame goal or target date, <sup>12</sup> failing to meet the requisites of a tobacco endgame.

The NZ Plan includes a mixture of innovative endgame policy measures and conventional approaches, established through legislation. <sup>18</sup> The strategies in the national plans of Australia, Finland and Korea mainly include incremental conventional approaches. Some of the policy goals in the Australian National Preventive Health Strategy (NPHS) were consistent with endgame policies, although there were no specific measures or timelines (eg, 'the supply, availability and accessibility of tobacco products is reduced through stronger regulation'). <sup>19</sup>

Several groups have recommended stronger commitments for the National Tobacco Strategy (NTS) 2022–2030 (currently a draft),<sup>21</sup> as the NTS took a conservative stance to endgame approaches, using phrases such as 'consider feasibility'. It is not known whether the NTS will be amended. All endgame plans from the leading countries have stated the importance of complying with FCTC Article 5.3.<sup>18–20</sup>

#### **ENDGAME POLICY IMPLEMENTATION**

Below, we describe endgame measures by category: product, user and market/supply.<sup>8</sup> No institutional structure-focused measures were identified in the selected countries (table 3).

#### **Product-focused measures**

Product-focused measures include those that make cigarettes less addictive or appealing. NZ<sup>18 22</sup> is pursuing very-low-nicotinecontent standards, and Australia has mentioned this option as something to consider pursuing in the future. 19 23 Based on the proposal in Smokefree Aotearoa 2025, 18 the Smokefree Environments and Regulated Products Amendment Bill (hereafter the Amendment Bill) has passed into law and includes denicotinisation of all smoked tobacco products.<sup>22</sup> The Australian NPHS and draft NTS discuss how to regulate the contents of tobacco products, mentioning putting further regulations on the contents 19 23 and monitoring international developments regarding limiting nicotine content to assess the feasibility of implementing similar measures in Australia<sup>23</sup>; however, no firm commitments were identified. In Korea, a partial amendment to the NHPA to ban flavoured additives in tobacco products was introduced in February 2021, based on the Comprehensive Plan.

Although somewhat controversial, the replacement of cigarettes with electronic nicotine delivery systems (ENDS) is also considered a product-focused measure. The selected countries had different views on such substitution. In NZ, ENDS are available commercially and substitution is encouraged for those not ready to quit. In Australia, substitution is not encouraged as a policy approach. However, ENDS are available by prescription for those who cannot quit using approved pharmacotherapies, yet are still motivated. The endgame goal in Finland covers nicotine-containing products, such as ENDS, as well as tobacco products. ENDS are available, although they are not approved as products to support smoking cessation, and healthcare professionals are recommended to advise users to stop ENDS use. In Korea, ENDS are widely available, yet the use of non-cigarette products is discouraged.

# **Special communication**

**Table 3** Endgame policy implementation in NZ, Australia, Finland and Korea

			Countries				
Categories	#	Endgame strategies	NZ	Australia	Finland	Korea	
Product focused	1	Regulation of nicotine levels to make cigarettes less or non-addictive (very low nicotine content standards)	(Mandating reduced nicotine levels)	Δ (Monitor international developments for reducing nicotine content)	-	-	
	2	Making cigarettes less appealing (increasing the pH levels, banning particular constituents, such as menthol)	<ul> <li>(Restrict design features that aim to increase appeal)</li> </ul>	-	-	<ul> <li>(Phasing out flavoured additives)</li> </ul>	
	3	Substitution to non-cigarette products (ENDS)	<ul> <li>(ENDS available and substitution encouraged for those not ready to quit)</li> </ul>	<ul> <li>(ENDS available with a medical prescription, but substitution is not encouraged as a policy approach)</li> </ul>	(ENDS widely available, substitution not encouraged as a policy approach)	<ul> <li>(ENDS widely available substitution not encouraged as a policy approach)</li> </ul>	
User focused	4	Issuing a smoker's license	_	_	_	_	
	5	Prescriptions to purchase tobacco	_	<ul> <li>(Prescriptions required to possess and use nicotine for vaping)</li> </ul>	-	-	
	6	Restrict sales and supplies by birth year (tobacco-free generation)	o (Prohibit sale, delivery and supply of <i>smoked</i> tobacco products born after a certain date)	<ul><li>(Discussions to introduce the TFG bill in some regions)</li></ul>	Δ (Discussions to introduce tobacco-free generation)	-	
Market/Supply focused	7	Restrictions on retailers (licensing, barring location, density and types, display and advertising bans)	<ul> <li>(Allow smoked tobacco products to be only sold by authorised retailers)</li> </ul>	Δ (Discussions of achieving nationally consistent retailer licensing and regulating the location, type and number of tobacco retailers)	<ul> <li>O (License required to sell tobacco and nicotine products; annual supervision fee of €500/cash register charged)</li> </ul>	<ul> <li>(Negative licensing applied, no permits required but can be banned from selling if a breach of law is reported</li> </ul>	
	8	Prohibition of commercial cigarette sales	-	-	-	Δ (Filing of a petition to the National Assembly by 158 individuals to ban th manufacture and sale of tobacco)	
	9	Place regulatory or market disadvantage on cigarettes	-	-	-	-	
	10	Reduce quota on tobacco products manufactured or imported (sinking lid)	-	-	-	-	
	11	Set price caps (maximum wholesale price) for cigarettes to reduce industry profits	_	-	-	_	
Institutional structure focused	12	Establish a tobacco control agency responsible to manage products, marketing, developing less harmful products, prices, sales and monitoring	-	-	-	-	
	13	A not-for-profit agency as both regulator and sole purchaser of tobacco (regulated market model)	-	-	-	-	
	14	State-run tobacco companies	-	-	-	-	
	15	Set prevalence goals tobacco companies are required to meet (or be fined)	_	-	-	-	
		· ' '					

For each tobacco endgame policy category, 'o': firm nationwide governmental commitments (eg, tabling of a bill, implementation plans with timeline, responsibilities, current implementations), '\(\Delta'\): proposals in governmental plans, discussions among policymakers or considerations by governments (eg, petitions) and '-': no evidence of attempts/ efforts or attempts/efforts only in particular regions of a country.

ENDS, electronic nicotine delivery systems; NZ, New Zealand; TFG, tobacco-free generation.

# **User-focused measures**

Among the user-focused measures, ending sales by birth year, also known as the tobacco-free generation proposal (TFG), is planned in NZ as part of the set of endgame policy measures. Under this policy, smoked tobacco products cannot be legally sold to anyone born on or after 1 January 2009. Only region-specific (Tasmania) attempts to legislate the TFG were found in Australia. The attempts were vigorously opposed by the tobacco industry and eventually failed. Finnish policymakers have discussed introducing the TFG, but we found no evidence

it has been passed. 16 No user-focused measure was identified in Korea.

#### Market/Supply-focused measures

Restrictions on retailers, particularly licensing, were among the market/supply-focused measures. Only a positive licensing scheme requiring retailers to pay an annual fee<sup>27</sup> was considered an endgame effort. NZ and Finland are planning or implementing retailer licensing through legislation. The NZ Amendment Bill gives specifications for granting approval to

Table 4 The strengths of MPOWER implementations in NZ, Australia, Finland and Korea

		Countries				
#	MPOWER strategies	NZ	Australia	Finland	Korea	
1	Monitor tobacco use and prevention policies	Fully implemented	Fully implemented	Fully implemented	Fully implemented	
2	Protect people from tobacco smoke	Fully implemented	Fully implemented	Not implemented*	Not implemented*	
3	Offer help to quit tobacco use	Fully implemented	Partially implemented	Partially implemented	Fully implemented	
4	Warn about the dangers—health warnings	Fully implemented	Fully implemented	Fully implemented	Partially implemented	
5	Warn about the dangers—mass media	Fully implemented	Not implemented*	Partially implemented	Fully implemented	
6	Enforce bans on TAPS	Partially implemented	Partially implemented	Fully implemented	Not implemented*	
7	Raise taxes on tobacco (excise tax as a percentage of retail price)	Fully implemented (82.0%)	Partially implemented (73.9%)	Fully implemented (88.2%)	Partially implemented (73.9%)	

The strengths of MPOWER implementations are based on the WHO Report on the Global Tobacco Epidemic (RGTE). <sup>14</sup> In the RGTE, each MPOWER measure is classified as 'complete measure', 'moderate measure', 'minimal measure', 'no policy or weak measure' or 'not categorised/no data'. In this table, we reclassified 'complete measure' as 'fully implemented', 'moderate measure' and 'minimal measure' as 'partially implemented', 'no policy or weak measure' as 'not implemented' and 'not categorised/no data' as 'no data'.

retail smoked tobacco and vaping products to reduce retail outlets. Finland has a longer history of retailer licensing (since 2009). Licensing was adopted to reach the goal of being tobacco and nicotine-free, and was framed as preventing adolescents from smoking.<sup>28</sup> Under the Tobacco Act, all tobacco and nicotine product retailers are subject to licensing.<sup>28</sup> Applicants for retail licenses must submit an annual self-monitoring plan and pay a supervision fee of €500 per cash register (€1000 for both tobacco and nicotine products). <sup>28</sup> <sup>29</sup> Increasing the supervision fee to €500 in 2017 resulted in a 28% reduction in the number of outlets, from 10 000 to 7250 licenses. <sup>28</sup> In Australia, different states apply different licensing systems.<sup>30</sup> A discussion to achieve a nationwide retailer licensing system was included in the draft NTS.<sup>23</sup> Korea adopted a negative licensing scheme<sup>30</sup> in which retailers do not need a license to sell, yet the right to sell is withdrawn if regulation violations occur. Therefore, retailers would only be subject to fines or bans if an external party reports a breach.30

Filing a petition to ban the manufacture and sales of cigarettes<sup>31</sup> was noted as a market/supply-focused measure in Korea. A legislative petition calling for a ban on cigarette manufacturing and sales was submitted in 2006 by a group of 158 individuals, which included Jae-Gahb Park, the president of the National Cancer Center, former President of Korea, Dae-jung Kim and former Speaker of the National Assembly, Kwan-yong Park. <sup>10</sup>

# **MPOWER IMPLEMENTATION**

The overall MPOWER measures in NZ, Australia and Finland were stronger than in Korea (table 4). <sup>14</sup> NZ, which has the strongest MPOWER implementation, has set the boldest goal and is adopting endgame strategies. However, no country has achieved the highest levels of all MPOWER measures. The key difference between the leading countries and Korea was the strength of the *Enforce* measure.

# SUGGESTIONS FOR THE TOBACCO ENDGAME IN KOREA AND BEYOND

The tobacco control leader countries were characterised by relatively low smoking prevalence, dedicated legislation and research centres addressing tobacco control and/or the endgame, an explicit endgame goal and timeframe and strong MPOWER implementation. In Korea, there have been explicit and implicit attempts related to advancing the tobacco endgame. However, these have not encompassed the key elements of the endgame, achieving a prevalence goal of near-zero within a defined

timeframe. Smoking prevalence in Korea remains higher than that of the leader countries, probably attributable to weaker MPOWER implementation. No dedicated legislation and research centres were identified in Korea.

Some leader countries are implementing bold endgame interventions with FCTC approaches, whereas others retain incremental FCTC approaches. No country has achieved the highest levels of all MPOWER measures. However, NZ, which has the strongest MPOWER implementation, has set the boldest goal and is adopting endgame strategies. This suggests that not all MPOWER measures must be implemented at the highest level to adopt a tobacco endgame goal; yet, achieving high levels of MPOWER implementation is a springboard for endgame progress.

The first effort regarding the tobacco endgame in Korea was the proposal to prohibit tobacco manufacturing and sales, and its submission as a legislative petition. 9 10 An important implication of this attempt is the need for a legislative measure dedicated to tobacco control and/or endgame. In countries with endgame aspirations, progress towards the tobacco endgame is hampered by legislative processes. As legislation needs to be adapted to each country's circumstances, tobacco control may be pursued by a single comprehensive law or a patchwork of laws. However, legislation in a single, comprehensive form has proven important for effective tobacco control.<sup>32</sup> Laws for tobacco control in Korea are divided into two acts, hampering comprehensive and coherent policy implementation. These laws do not fully reflect the FCTC guidelines.<sup>33</sup> Legislation dedicated to tobacco control that fully reflects the FCTC guidelines and envisions the tobacco endgame is required. As in Finland, such a law should state the national endgame goal in its legislation.

The 2019 Comprehensive Plan of the Korean government aspired for a tobacco endgame, yet it lacked an endgame goal and a target date. The strategies suggested in the Comprehensive Plan were mostly incremental FCTC approaches, but some were related to the endgame strategies. However, the absence of a target with a date, the weakness of the policies proposed and the general context of the Comprehensive Plan indicate a lack of in-depth consideration or political will to implement bold endgame strategies. Plans or intentions for a tobacco endgame must provide a measurable goal and a target date, together with tobacco endgame strategies, including policies with the strongest evidence base.<sup>34</sup> These include, for example, reducing retail availability through various policy measures.<sup>35</sup> Evidence summarising endgame-oriented policies, including each policy's

<sup>\*&#</sup>x27;Not implemented' category indicates weak measures according to the RGTE criteria rather than no measure at all.

# Special communication

purposes, potential or actual impact, as well as their pros and cons, has been provided elsewhere. Furthermore, policies effectively implemented in other countries may be considered high-priority as they demonstrate their methodology and feasibility to the public and policymakers.

Research centres engaged in creating, synthesising and disseminating research evidence are important for the tobacco endgame. However, empirical evidence on some of these strategies is scarce.<sup>34</sup> Furthermore, the preferred endgame strategies and their impacts, public support and ethical considerations may differ by context. Therefore, establishment of a national research centre is strongly recommended. Furthermore, international cooperation with endgame research centres in other nations (eg, Australia and NZ) is recommended. The strategy in the Korean Comprehensive Plan to establish a scientific basis for tobacco control policies and strengthen international cooperation aligns with this recommendation. Potential research topics include modelling the impacts of different endgame strategies, analysing their limitations, practical considerations and communications research aimed at developing support among policymakers and the public.<sup>34</sup>

Successful adoption of the MPOWER measures is a roadmap to achieve an endgame.<sup>37</sup> Before adopting endgame strategies, Korea must strive to reach the HP2030 smoking prevalence goal of 15% (25% in males and 4% in females approximates to a 15% of prevalence) by strengthening the MPOWER measures considered not or partially implemented: *Protect*, *Warn* (health warnings), *Enforce* and *Raise*.<sup>14</sup> Thus, countermeasures for tobacco industry activities are needed. The tobacco industry is a clear impediment to tobacco control efforts, which is particularly true for Korea, which has a domestic tobacco company (KT&G). As an example, the industry aimed to dilute the legislative process for graphic health warnings in Korea.<sup>38</sup> The industry is also strongly opposed to one endgame approach (TFG policy).<sup>39</sup>

The leading countries have all discussed measures to reduce industry influence by implementing FCTC Article 5.3 in their endgame plans. Stronger denormalisation of the tobacco industry in the era of tobacco endgame is essential, and national governments can start by integrating the guidelines of Article 5.3<sup>40</sup> into their policy planning and communication. Tackling the commercial determinants of health (CDoH)<sup>41</sup> is critical for advancing global health, and the tobacco industry is one of the biggest CDoH.

If the Korean national health objective (HP2030) for tobacco use is to be achieved by 2030, <8 years are left to reach a situation favourable to adoption of endgame strategies. Required are a low and/or rapid reduction in smoking prevalence; public support; political will; legislation and scientific evidence. Formulating a public health policy is a time-consuming and complex process, thus preparation for the tobacco endgame should be initiated without delay. Actions to be implemented during endgame preparations include monitoring public support, developing communication strategies to increase understanding and support and producing research on the optimal implementation pathways with its barriers and enablers.

The tobacco endgame embraces both the goal of ending the tobacco epidemic and the process of planning and implementing its strategies. This comparison between the three leader nations and Korea, a country with endgame aspirations, offers insights for fellow nations preparing to adopt the tobacco endgame. The first step may be describing the landscape and efforts related to the tobacco endgame, and the tables used here for country comparisons are provided as helpful templates. The evaluations will serve as a roadmap to guide where the end point is and how

to get there. The suggestions made for Korea, including setting an explicit endgame goal and a timeframe, stronger MPOWER implementations and establishment of legislations and research centres, are also applicable to other countries planning the endgame and implementing its strategies.

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#### **REFERENCES**

- 1 Dai X, Gakidou E, Lopez AD. Evolution of the global smoking epidemic over the past half century: strengthening the evidence base for policy action. *Tob Control* 2022;31:129–37.
- 2 Ministry of Health and Welfare. Korea health statistics 2020: Korea National Health and Nutrition Examination Survey (KNHANES V-8). Osong: Korea Disease Control and Prevention Agency, 2022.
- 3 Ministry of Education. Ministry of Health and Welfare, Korea Disease Control and Prevention Agency. The Seventeenth (2021) Korea Youth Risk Behavior Survey. Osong: Korea Disease Control and Prevention Agency, 2022.
- 4 Thomson G, Edwards R, Wilson N, *et al*. What are the elements of the tobacco endgame? *Tob Control* 2012;21:293–5.
- 5 Kang H, Cho S-I. Cohort effects of tobacco control policy: evidence to support a tobacco-free norm through smoke-free policy. *Tob Control* 2020;29:96–102.
- 5 Korea Health Promotion Institute. The National health plan. Seoul Korea Health Promotion Institute; 2021. Available: https://www.khealth.or.kr/healthplaneng#
- 7 Malone RE, McDaniel PA, Smith EA. Tobacco control endgames: global initiatives and implications for the UK. London Cancer Research UK; 2014. Available: https://www. cancerresearchuk.org/sites/default/files/policy\_july2014\_fullendgame\_report.pdf [Accessed 26 Mar 2023].
- 8 McDaniel PA, Smith EA, Malone RE. The tobacco endgame: a qualitative review and synthesis. *Tob Control* 2016;25:594–604.
- 9 Park J-G, Seo H-G, Jee S-H. Banning tobacco. Seoul: Seoul National University Press; 2008.
- 10 Enactment of a law prohibiting cigarette manufacturing, sales, and other related activities [petition submitted to the National assembly of Korea on 22 Feb 2006]. 2006. Available: https://likms.assembly.go.kr/bill/billDetail.do?billId=16931
- 11 Park J-G, Park JW, Kim D-W, et al. Factors influencing attitudes to legislation banning the manufacture and sale of tobacco products. *Tob Control* 2008;17:142–3.
- 12 Korean Ministry of Health and Welfare. Comprehensive tobacco control plan for eradication of smoking inducing environment. Sejong [Ministry of Health and Welfare]. 2019. Available: http://www.mohw.go.kr/react/al/sal0301vw.jsp?PAR\_ MENU\_ID=04&MENU\_ID=0403&CONT\_SEQ=349504&page=4
- 13 Yonhap News Agency. S. Korea unveils 'tobacco endgame' plan to get people to quit smoking. 2019. Available: https://en.yna.co.kr/view/AEN20190521008400320 [Accessed 20 Mar 2023].
- 14 World Health Organization. WHO report on the global tobacco epidemic, 2021: addressing new and emerging products. 2021. Available: https://www.who.int/teams/health-promotion/tobacco-control/global-tobacco-report-2021
- 15 Tobacco control laws. Campaign for tobacco free kids. Available: http://www.tobaccocontrollaws.org/ [Accessed 30 Oct 2022].
- 16 Timberlake DS, Laitinen U, Kinnunen JM, et al. Strategies and barriers to achieving the goal of Finland's tobacco endgame. Tob Control 2020;29:398–404.
- 17 Finnish Institute for health and welfare [Tobacco-THL]. Available: https://thl.fi/en/web/alcohol-tobacco-and-addictions/tobacco [Accessed 15 Feb 2023].

- 18 New Zealand Ministry of Health. Smokefree aotearoa 2025 action plan. Wellington: Ministry of Health; 2021. Available: https://www.health.govt.nz/system/files/documents/publications/hp7801\_- \_smoke\_free\_action\_plan\_v15\_web.pdf
- 19 Australia Department of Health. National preventive health strategy 2021-2030. Canberra: Department of Health; 2021. Available: https://www.health.gov.au/resources/publications/national-preventive-health-strategy-2021-2030
- 20 Finland Ministry of Social Affairs and Health. Development of tobacco and nicotine policy: proposals for action by the working group. Helskinki: Ministry of Social Affairs and Health; 2018. Available: https://julkaisut.valtioneuvosto.fi/handle/10024/161214
- 21 Australian Government Department of Health and Aged Care. Published responses submitted for the consultation of the National tobacco strategy 2022-2030. Available: https://consultations.health.gov.au/atodb/national-tobacco-strategy-initial-consultation/consultation/published\_select\_respondent [Accessed 31 Oct 2022].
- 22 New Zealand Ministry of Health. Smokefree environments and regulated products act. Available: https://www.health.govt.nz/our-work/regulation-health-and-disabilitysystem/smoked-tobacco-products/smokefree-environments-and-regulated-productsact [Accessed 11 Apr 2023].
- 23 Australia Department of Health. Draft national tobacco strategy 2022-2030. Canberra: Department of Health; Available: https://consultations.health.gov.au/atodb/national-tobacco-strategy-2022-2030/supporting\_documents/Draft%20NTS% 2020222030%20for%20consultaion%20hub.pdf [Accessed 31 Oct 2022].
- 24 New Zealand Ministry of Health. Vaping products: information for health care workers and stop-smoking services. Available: https://www.health.govt.nz/our-work/preventative-health-wellness/tobacco-control/tobacco-control-information-practitioners/vaping-products-information-health-care-workers-and-stop-smoking-services [Accessed 18 Nov 2022].
- 25 Australian Government Department of Health and Aged Care. About e-cigarettes. Available: https://www.health.gov.au/health-topics/smoking-and-tobacco/about-smoking-and-tobacco/about-e-cigarettes [Accessed 18 Nov 2022].
- 26 Greenhalgh E, Hanley-Jones S, Grace C, et al. 5.21 reducing tobacco access and supply. Melbourne: Cancer Council Victoria; 2020. Available: http://www. tobaccoinaustralia.org.au/chapter-5-uptake/5-21-reducing-tobacco-access-and-supply [Accessed 25 Mar 2023].
- 27 Brennan E, Ilchenko E, Scollo M, et al. Public support for policies to phase out the retail sale of cigarettes in Australia: results from a nationally representative survey. Tob Control 2023;32:790–4.

- 28 Kuipers MAG, Nuyts PAW, Willemsen MC, et al. Tobacco retail licencing systems in Europe. Tob Control 2022;31:784–8.
- 29 Finland National Supervisory Authority for Welfare and Health. Tobacco sales: retail license and wholesale notification. Available: https://www.valvira.fi/web/en/tobacco/myynti [Accessed 19 Nov 2022].
- 30 Scollo M. 11.B licensing of tobacco sellers Melbourne: cancer Council Victoria. 2021. Available: http://www.tobaccoinaustralia.org.au/chapter-11-advertising/ [Accessed 18 Nov 2022].
- 31 Park J-G. PL1-04: banning the tobacco. J Thorac Oncol 2007;2:S141-2.
- 32 World Health Organization. Implementing tobacco control: legislation and enforcement. Available: https://www.who.int/teams/health-promotion/tobaccocontrol/implementing/legislation-and-enforcement [Accessed 16 Nov 2022].
- 33 Jung JD. A study on reform of the regulatory legislation of tobacco products. *Journal of Law and Politics Research* 2015;15:1221–64.
- 34 Puljević C, Morphett K, Hefler M, et al. Closing the gaps in tobacco endgame evidence: a scoping review. *Tob Control* 2022;31:365–75.
- 35 Kong AY, Henriksen L. Retail endgame strategies: reduce tobacco availability and visibility and promote health equity. *Tob Control* 2022;31:243–9.
- 36 McDaniel PA, Smith EA, Malone RE. The evidence for the endgame: a white paper. 2021. Available: https://endtobaccoca.ash.org/wp-content/uploads/2021/10/The-Evidence-for-the-Endgame.pdf
- 37 Willett J, Achenbach S, Pinto FJ, et al. The tobacco endgame: eradicating a worsening epidemic a joint opinion from the American Heart Association, World Heart Federation, American College of Cardiology, and the European Society of Cardiology. J Am Coll Cardiol 2021;78:77–81.
- 38 Hwang J-E, Cho S-I, Lee SG. Setting the policy agenda for graphic health warning labels: an analysis of online news media coverage in South Korea, 2016. *Tob Induc Dis* 2020;18:64.
- 39 Amul GGH, Ong SE, Mohd Khalib A, et al. Time for tobacco-free generations in the Western Pacific? Lancet Reg Health West Pac 2022;24:100530.
- 40 WHO framework convention on tobacco control. guidelines for implementation of article 5.3. 2013. Available: https://fctc.who.int/publications/m/item/guidelines-forimplementation-of-article-5.3
- 41 Kickbusch I, Allen L, Franz C. The commercial determinants of health. *Lancet Glob Health* 2016;4:e895–6.