

TRANSLATING EVIDENCE TOWARDS  
**Tobacco Control Policy**  
IN MALAYSIA



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# FOREWORDS



**T**obacco use and smoking kill more than 7 million people per year worldwide. Malaysia is no exception to this chilling effect where it is estimated that more than 20,000 Malaysians die from smoking annually. The analysis from the burden of disease study by the Institute for Public Health Malaysia shows that smoking is the second largest contributor to poor health quality (as measured through Disability Adjusted Life Years) and premature mortality for Malaysian men, second only to high blood pressure. The sad thing is, smoking is a risk factor that we can all do something about. It is entirely preventable and early intervention helps to reduce the risks.

I am deeply honoured to have been together with the global effort to reduce tobacco use and its related complications. Over 12 years as a party of the World Health Organisation Framework Convention on Tobacco Control (WHO FCTC), we

have strengthened many aspects of tobacco control, such as regular national surveys to monitor smoking prevalence, increasing the smokefree places to protect people from the dangers of cigarette smoke, improving cessation services, raising awareness through public campaigns and health warnings on cigarette packs, banning tobacco advertising and raising the price of cigarettes through raising tobacco taxes. The Malaysian government is committed in implementing the WHO FCTC recommendations and guidelines. We have always implemented evidence based tobacco control measures and will always continue empirical driven practice in the future.

I am very grateful that the compilation of these local scientific data helps the policy makers to further strengthened tobacco control measures in Malaysia through continuous real evidence from the population.

I would like to thank all the committee members from various government agencies and universities for their tireless effort in producing this report. Special thanks to the WHO Office in Malaysia and Western Pacific Regional Office for the grant in producing this report. May this report facilitate all quarters in the making of smokefree and healthy Malaysian generation!

**(DATUK SERI DR. S. SUBRAMANIAM)**  
**Minister of Health Malaysia**

**T**he life expectancy at birth for Malaysian men has risen from 58.67 in 1960 to 72.6 years old in 2016. Sadly, smoking continues to plaque Malaysian men as a significant and preventable risk factor for pre-mature deaths. The Malaysian government is committed with the WHO FCTC and its MPOWER strategies, to greatly reduce this destructive culture among Malaysians and to promote the development of new smokefree and healthy generation.

The implementation of the WHO FCTC and its MPOWER strategies in Malaysia does not rest solely upon the Ministry of Health alone. Smoking affects many aspects of daily life activities such as work or school, transportation, recreation and so forth. Tobacco use is an immense business in this country and many agencies are directly or indirectly involved in this commercial. Therefore, the MPOWER strategies can be applied to all features of tobacco products from importation, production, distribution, promotion, sales and other tobacco industry's activities such as corporate social responsibility (CSR) and donations.

I would like to thanks many government and non-governmental agencies and organisations for their invaluable contribution in tobacco control management in Malaysia. For Malaysia to achieve its Tobacco Endgame by 2045, all quarters could play their role in reversing this epidemic. Relevant Ministries and agencies could contribute by de-normalising smoking among our fellow Malaysians through their own programmes and promotional activities at all levels. Stricter control on tobacco products should be applied by all agencies involved with tobacco business



to achieve the overall effect reducing demand and supply of tobacco products. By working efficiently together, we can achieve our objectives and improve the nation's health and productivity!

I would also like to express my gratitude to the WHO Country Office Malaysia and the WHO Western Pacific Regional Office (WPRO) for their support and guidance in the making of this report.

Yours sincerely,

**(DATUK DR NOOR HISHAM BIN ABDULLAH)**  
**Director General of Health**  
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# Executive Summary

Malaysia is a party to the World Health Organisation Framework Convention on Tobacco Control (WHO FCTC) since 2005 and committed to the implementation of its MPOWER strategies to greatly reduce the burden of smoking and smoking related diseases in Malaysia. In 2015, the National Strategic Plan for Tobacco Control 2015-2020 was formalised and the short, medium and long-term targets for tobacco control in Malaysia were laid out.

Many reports and research papers on tobacco control and smoking related issues in Malaysia are now readily available especially in the past decade. It is now high time to look at all these data so that tobacco control in Malaysia could be effectively evidence based driven. The objective of this report is to gather all local and international scientific evidence on tobacco control and to facilitate the evaluation and planning of tobacco control policies in Malaysia. The report is organised by the WHO FCTC MPOWER strategies.

## **M**ONITOR TOBACCO USE AND PREVENTION POLICIES

Malaysia has a good system in place for monitoring adult and youth smoking prevalence although consistency and regularity could be improved. Further development in the monitoring of smoking related morbidity and mortality is highly required. Data on prevalence of smoking among adults aged 18 and above from 1996 to 2015 showed that it more or less plateaued around 24%. Nonetheless, there is a promising declining trend among youth, where the prevalence of smoking among Malaysian youths aged 13 to 15 has reduced from 20.2% in 2003 to 14.8% in 2016. Tobacco use surveillance in Malaysia can be developed further as a system. Data quality can be improved through better co-ordination and communication within various ministries and agencies.

## **P**ROTECT PEOPLE FROM TOBACCO SMOKE

Although the number of smokefree area is increasing, Malaysia has a long way to go to achieve 100% smokefree environment to protect the public from the dangers of cigarette smoke. In addition to government legislations, voluntary smokefree programmes such as

the Blue Ribbon Campaign and the KOSPEN smokefree initiatives are gaining popularity and increasing the demand for smokefree places. Research showed that Malaysian public's exposure to secondhand smoke is still high in spite of increasing knowledge and perception about harm from cigarettes smoke. Several issues such as compliance and enforcement should be addressed. Legislation of many more smokefree work and public places is needed in the future.

## **O**FFER HELP TO QUIT TOBACCO USE

Research showed that 70% of Malaysian male smokers and 83% of female current smokers age 15 and above want to quit smoking. In addition, 49% of male and 46% of female smokers had attempted quitting. Many smokers are not willing to come to cessation services and for some, accessibility is an issue that hinders them from getting the services. There is evidence that among those who attended quit smoking clinics, certain attributes such as age and nicotine dependence level may affect the outcome of the intervention. Therefore, intervention should be tailored and targeted. More support is needed to strengthen and accelerate full implementation of Article 14 of the WHO FCTC on smoking cessation.

## **W**ARN PEOPLE ABOUT THE DANGERS OF TOBACCO

The introduction of the pictorial health warning on cigarette packs has increased smokers' knowledge on the dangers of smoking. Studies showed that Malaysian smokers internalised the pictures and there is evidence that it may lead to foregoing to lit up a cigarette and may also lead to intention to quit. The evidence is also indicative that plain cigarette packing might be effective in Malaysia. With regards to public health campaign, the nationwide Tak Nak has improved the knowledge about the dangers of smoking, among smokers and non-smokers. Majority of adolescents found that the campaign was very relevant and discourage them from smoking. Public anti-smoking campaign in Malaysia works and should be sustained with further research to maximize its effectiveness.

## ENFORCE BAN ON TOBACCO ADVERTISING, PROMOTIONS AND SPONSORSHIP (TAPS)

Despite official complete ban on any form of tobacco advertising, respondents from research surveys still reported witnessing cigarette advertising on displays (point-of sale), in shop and around the street vendor. Other reported direct and indirect advertising were distribution of free cigarette samples, brand stretching and exposure through media communication platforms such as TV, film, radio and print. Indirect promotion at the point of sale such as powerboards and standby counters continue to bend to regulation. Research shows that partial bans on TAPS are ineffective because the tobacco industry will attempt to look for new advertising platforms through loopholes or even create new platforms to recruit new customers such as internet sales and person-to-person sales.

## RAISE THE PRICE OF TOBACCO

Analysis on the series of tobacco taxation data in Malaysia showed that rise in tobacco taxes and subsequently the cigarette prices, are associated with significant decline in tobacco consumption. Raising tobacco taxes may also generate more revenue for the government. It was predicted that the impact of a 25% increase in cigarette excise tax in Malaysia would result in 20.8% increase in cigarette tax revenue. A modelling analysis also demonstrated that raising

tobacco taxes along with other tobacco control policies could significantly reduce the prevalence of smoking in Malaysia in the short, medium and long term. The level of tobacco taxes in Malaysia can still be raised to an optimum level to yield maximum effect of pushing smokers to quit smoking and discouraging adolescents from starting smoking.

In conclusion, there is evidence that the MPOWER strategies implemented in Malaysia showed some significant impact. Nonetheless, to raise the efficacy of tobacco control policies, continuing evaluation through evidence based assessment is needed. Malaysia has set targets for the development of smokefree generation and all aspects of tobacco control should be optimised to ensure all the objectives are met.

## PREAMBLE

Tobacco control in Malaysia has come a long way since the introduction of text health warning '*Amaran oleh kerajaan: Merokok membahayakan kesihatan*' in 1993. On 23<sup>rd</sup> September 2003, the Malaysian government signed an international treaty on tobacco control, the World Health Organisation Framework Convention on Tobacco Control (WHO FCTC). This convention was ratified and took force on 16<sup>th</sup> September 2005.

The objective of WHO FCTC was simple, to greatly reduce the smoking prevalence globally. The approach however, is far from being simple, a holistic approach towards tobacco control is needed so that all influencing factors for tobacco use are addressed. There are 38 implementation articles in WHO FCTC main document with two important parts that are organised to reduce the demand for and supply of tobacco products.

To facilitate governments around the world to implement tobacco control, these WHO FCTC articles are further organised as the MPOWER package, encompassing different strategies in tobacco control (Figure 1).

In 2015, the National Strategic Plan for Tobacco Control 2015-2020 was formalised. This document incorporates the short, medium and long-term objectives for tobacco control in Malaysia. The ultimate aim is to develop a smokefree Malaysian generation. This strategic plan includes the WHO Global Non-Communicable Diseases target which is to reduce the smoking prevalence in Malaysia from 23.1% in 2011 to 15.0% in 2025. The long-term target is the reduce the smoking prevalence to less than 5% by the year 2045 (Figure 2).

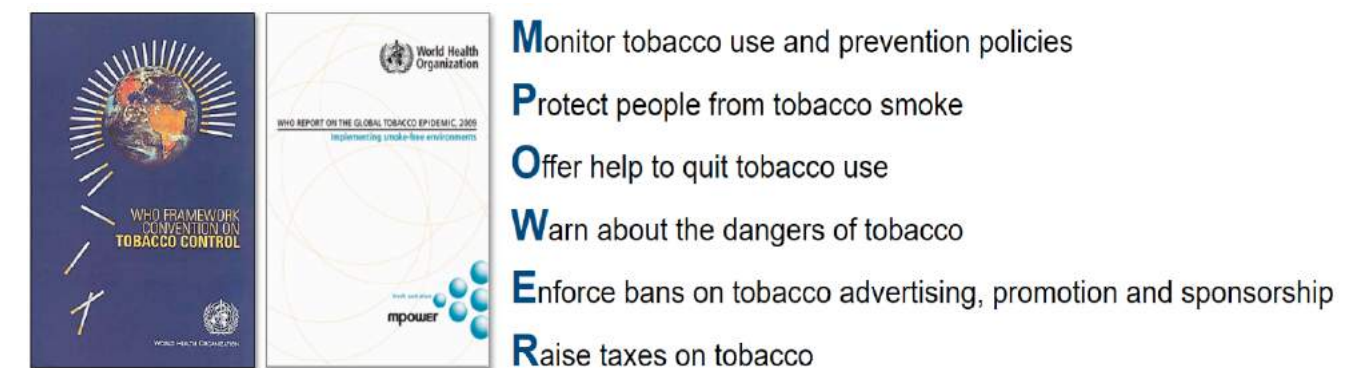
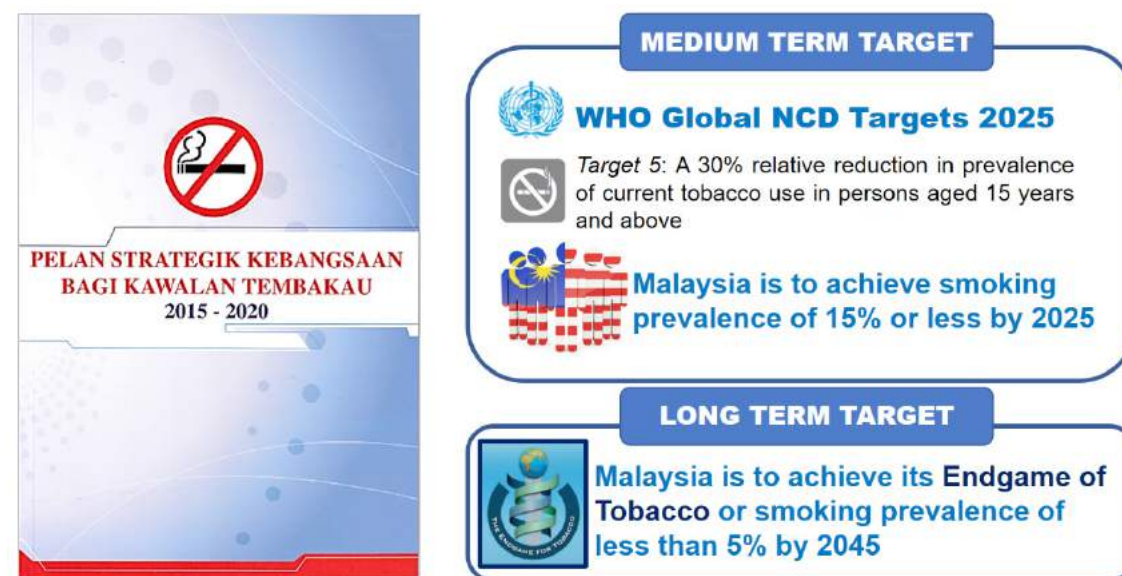


Figure 1: World Health Organisation Framework Convention on Tobacco Control and the MPOWER strategy





**Figure 2:** The National Strategic Plan on Tobacco Control and its targets

The tobacco control strategies from WHO FCTC are based on years of scientific evidence of what work best for each approach to reduce tobacco use. The WHO FCTC Secretariat also constantly collaborates with researches worldwide on improving current knowledge in tobacco control. Every two years, the Malaysian government will convene with 180 other nations who are parties to the WHO FCTC at the Conference of Parties. During this conference, latest scientific evidence will be shared and discussed with all party members of WHO FCTC.

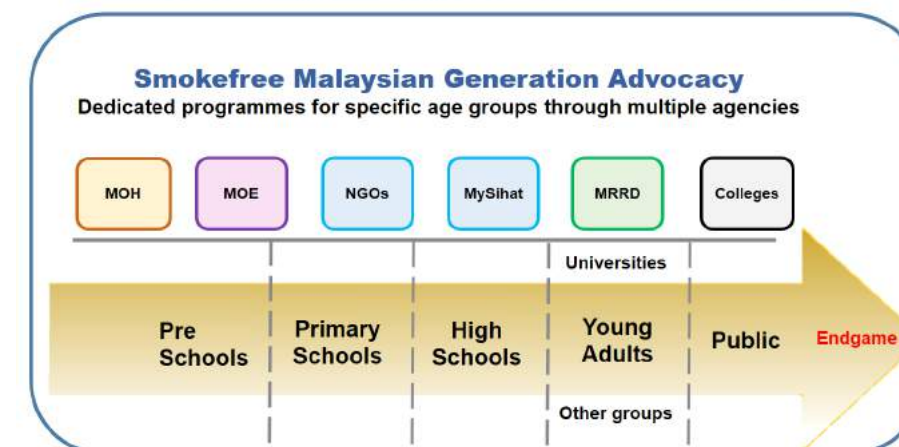
Malaysia is one of several countries in the world who have formally declared their Endgame targets. Achieving the Endgame of Tobacco in Malaysia by 2045 can be made possible if all quarters play their role in de-normalising the culture of smoking in Malaysia. The National Strategic Plan 2015-2020 highlights on strategies to achieve the smokefree generation which involves multiple agencies and ministries, according to the population group.

## NATIONAL STRATEGIC PLAN FOR TOBACCO CONTROL

**VISION** **Malaysia a tobacco free nation by 2045**

**MISSION**

1. Children born in 2009 will be free from all forms of smoking habit
2. Community empowerment to de normalized smoking habit
3. 100% public places will be gazetted as non smoking area



**Figure 3:** Achieving smokefree generation through programmes and activities by various ministries and agencies, for all age groups.

The Malaysian Ministry of Health is also committed to apply evidence-based practice in all its tobacco control policies. Local and international scientific evidence help to increase the effectiveness of tobacco control programme while optimising the use of resources. This report is organised by the WHO MPOWER strategy to look at the overall implementation of WHO FCTC tobacco control in Malaysia.

The objective of this report is to gather all local and international scientific evidence on tobacco control and to facilitate the evaluation and planning of tobacco control policies in Malaysia. In addition, research gaps that were identified could be used by local universities and other institutions to conduct relevant studies.



# MONITOR TOBACCO USE AND PREVENTION POLICIES

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## A. INTRODUCTION

Monitoring is highly essential in the implementation of national tobacco control policies. Population-based national and international monitoring are necessary for effective planning, implementation, and evaluation of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC); as stipulated in *Article 20: Research, surveillance and exchange of information*<sup>1</sup>. Only through accurate measurement can complications caused by tobacco use be fully comprehended and interventions be effectively managed and improved.

In this regards, WHO FCTC requires parties to establish, as appropriate, programmes for national, regional and global surveillance of the magnitude, patterns, determinants and consequences of tobacco consumption and exposure to tobacco smoke; and to integrate tobacco surveillance programmes into national, regional and global health surveillance programmes so that data are comparable and can be analysed at the regional and international levels, as appropriate.

WHO FCTC also recommended that monitoring must be scientifically valid. Any monitoring system must use standardized and scientifically valid data collection and analysis practices.

Standardized questions and surveillance measures are vital for monitoring. There are several internationally developed tools for monitoring tobacco use and prevention policies. Utilising standardised internationally accredited surveys will allow for global data comparison. It is also important to coordinate with regional and global tobacco control partners to ensure the development of consistent surveys.

One of the key surveys used is the Global Adult Tobacco Survey (GATS), a nationally representative household survey, which feeds into the Global Tobacco Surveillance System. The GATS survey is used to monitor tobacco use among adults aged 15 and older. On the other hand, the Global Youth Tobacco Survey (GYTS) has been developed to survey tobacco use among adolescents aged 13–15 year old.

B. CURRENT POLICY AND SITUATIONAL ANALYSIS

Tobacco use prevalence remains the main outcome for tobacco control in Malaysia as this is the most available data currently. It is also an indicator used internationally such as for the WHO Global Non-Communicable Diseases (NCD) Target 2025. Malaysia also has announced its own Tobacco Endgame target, where by 2045, the national smoking prevalence should be less than 5%.

The National Strategic Plan for Tobacco Control 2015-2020

One of four pillars of strategies in the National Strategic Plan is to strengthen the implementation of MPOWER strategies in Malaysia<sup>2</sup>. For the M: Monitoring strategy, the policy has opted for national surveys (GATS for adults and GYTS for youths) to be conducted at least every 5 years, if not sooner, as the need arises subject to the availability of funding, capacity and capability.



Figure 1: The National Strategic Plan for Tobacco Control 2015-2020

Implementing standardised and globally recognised survey will allow for reliable data trending analysis. Even if the survey is to be nested within a larger health survey, the protocol of GATS and GYTS will be observed to ensure consistency in tobacco surveillance.

Another activity under M: Monitoring strategy in the National Strategic Plan is to develop a cohort monitoring for Malaysian generations born after 2009. The idea is that in the development of smoke-free Malaysian generation, it is important to prevent youth from ever experimenting with smoking thus having a smoke-free lifestyle. The exact mechanism for monitoring this cohort is yet to be finalised but the dental school smoking prevention and intervention programme entitled ‘Kesihatan Oral Tanpa Asap rokoK – KOTAK’ (Smoke-free Oral Hygiene) promised a great potential for cohort implementation. In this programme, the dental school teams would screen and intervene school going children and adolescents who are smoking. Prevention activities will also be given to non-smoking students. Due to their annual presence in schools, cohort monitoring can be entirely possible.

Major tobacco control studies in Malaysia

Currently in Malaysia, monitoring of tobacco use and control policies has been conducted by a few organizations or projects such as the Malaysian Institute for Public Health, International Tobacco Control Policy Evaluation (ITC) Project and local universities. Surveys conducted by the Institute for Public Health have been conducted at irregular intervals since 1986.

Tobacco survey was included in the National Health & Morbidity Survey (NHMS) 1986 (Peninsular Malaysia only), 1996 and 2006 at 10 years interval. A full GATS survey was conducted in Malaysia in 2011, while a modified version (mini-GATS) was conducted in 2015.

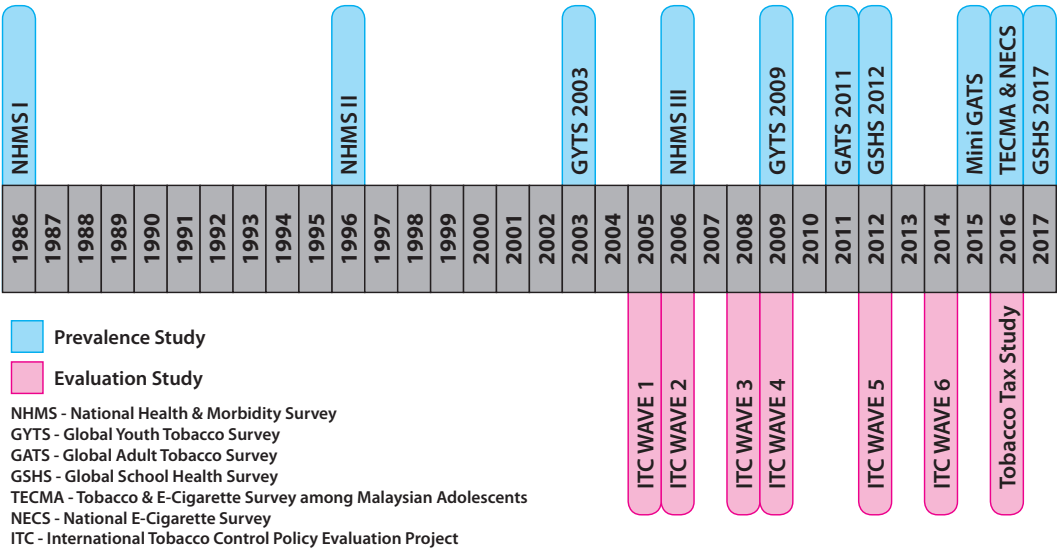


Figure 2: Timeline of major tobacco control studies in Malaysia

The Global Youth Tobacco Survey (GYTS) is a school-based survey of students aged 13–15 that also informs the Global Tobacco Surveillance System. Another internationally utilised school based survey with a tobacco component is the Global School Health Survey (GSHS). In Malaysia, GYTS was conducted in 2003 and 2009 while GSHS was conducted in 2012 and 2017.

In Malaysia, GATS, GYTS, and GSHS tools are adopted into several national surveys such as the National E-Cigarette survey (NEC) and the Tobacco and E-Cigarette Survey Among Malaysian Adolescents (TECMA).

The International Tobacco Control Policy Evaluation Project (the ITC Project) is an international research program that aims to provide systematic evaluation of key policies of the WHO FCTC at the population level. In 2005, the Ministry of Health in collaboration with the Clearinghouse for Tobacco Control, National Poison Centre (NPC), Universiti Sains Malaysia (USM), partnered with the University of Waterloo, Canada, the Cancer Council Victoria, Australia and Roswell Park Cancer Institute, US to create the ITC Malaysia Survey. Currently, six waves of evaluation studies have been conducted by ITC Malaysia from 2005 to 2014, evaluating various elements of FCTC implementation in Malaysia.

In 2016, a special study entitled 'The Relationships between Tobacco Taxation and Demand Determinants to Reduce Cigarettes Consumption and Smoking Prevalence in Malaysia' was conducted by the Ministry of Health Malaysia with Universiti Putra Malaysia to evaluate the impact of tobacco taxation policy in Malaysia.

### Problem statement for Malaysia

The monitoring system on tobacco use in Malaysia is still considered in its infancy stage and there are issues with standardisation. Inconsistent and different methodologies and working definitions sometimes render the data impracticable for time series analysis.

One of the biggest challenges to implement good tobacco surveillance programme is sustainability of financial resources. The gap between national surveys can be narrowed down with enough funding for regular national surveys. Often, tobacco surveillance is combined with other health surveillance and such decision reduced the intensity of tobacco questions, as a compromise with other health sectors.

Apart from national surveys, tobacco surveillance is also conducted through various research from universities and other institutions. Very often than not, lack of communication resulted in the policy makers not being aware of valuable findings from these institutions. However, in the recent years, the collaboration between the Ministry of Health and the researchers in higher learning centres has been further improved.

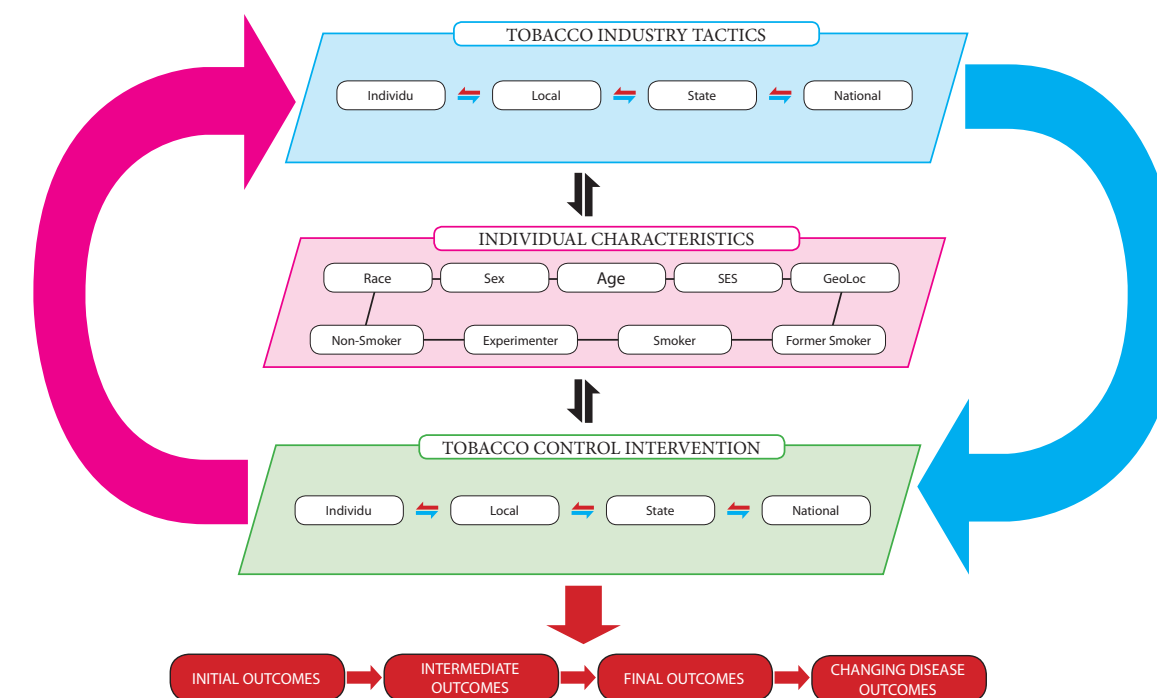
In addition, inter-ministerial collaboration also has to be strengthened. Several tobacco related activities are under the jurisdiction of other ministries such as the Ministry of Finance, Ministry of International Trade and Industry, Ministry of Plantation Industries and Commodities and others. Some important information pertaining to tobacco surveillance can be traced back to reports and data from these ministries. Therefore, a synergistic

interaction between all sectors will lead to a more holistic implementation of the FCTC in Malaysia. All ministries should strive to achieve the objectives of tobacco control for the betterment of the nation's health and development.

## C. TOBACCO CONTROL RESEARCH IN MALAYSIA

### Framework for Monitoring tobacco use and control policies

In 2001, the Institute for Global Tobacco Control at the Johns Hopkins Bloomberg School of Public Health conducted a workshop on evaluation of tobacco control interventions<sup>3</sup>. They elaborated a conceptual framework for tobacco control surveillance and evaluation which described the complexities that intensify as the scope of tobacco control programmes increase (Figure 3).



**Figure 3:** Framework for evaluating comprehensive tobacco control programmes. SES, socioeconomic status<sup>3</sup>. Reproduced with permission.



This hierarchical or multilevel modelling approach towards tobacco surveillance is to comprehensively cover the expanded focus of tobacco control by including prevention, cessation, and policy directed objectives at the community, state, and national levels.

In this framework, the individual is placed within a population context. The framework captures the dynamic relationship between individual characteristics, tobacco industry tactics, tobacco control interventions and outcomes associated with changing policy, and behaviour and disease outcomes.

Specific characteristics of a state or community can influence tobacco control efforts, including regional, cultural, economic, and political factors. For example, geographic location can greatly affect tobacco control outcomes; for example, urban communities may have different smoking behaviour patterns than rural communities.

Very often, there have been no systematic attempts to date to incorporate tobacco industry actions into evaluation methods for tobacco control programmes. Most tobacco surveillance focus on the users and their complications of tobacco use only. Acknowledging, there is a broad spectrum of covert and overt tobacco industry actions aimed at countering tobacco control efforts to reduce the use of tobacco products. Some actions can be tracked through accessible data sources (advertising expenditures, point-of-sale advertising), while others are more difficult to access consistently (number of lobbyists or contributions to political campaigns).

This conceptual framework also includes monitoring of disease outcome such as tobacco use related diseases and death as a measure of the effectiveness of tobacco control intervention. The outcome can be further divided into short-term, intermediate and long-term impact.

Research and data on monitoring of tobacco consumption and use in Malaysia.

Research by Ministry of Health			
1. General population			
Year	Study	Study Population	Main findings
1986	National Health and Morbidity Survey (NHMS I) <sup>4</sup>	Nationwide community based, 15 years and above and restricted to peninsular Malaysia	<ul style="list-style-type: none"><li>● Prevalence of current smokers was 21.5%.</li><li>● Prevalence of smoking among males was 40.9%.</li><li>● Prevalence of smoking among females was 4.1%.</li></ul>
1996	National Health and Morbidity Survey (NHMS II) <sup>5</sup>	Nationwide community based, 18 years and above throughout Malaysia (including Sabah and Sarawak).	<ul style="list-style-type: none"><li>● Prevalence of current smokers in Malaysia was 24.8%.</li><li>● Prevalence of smoking among males was 49.2%.</li><li>● Prevalence of smoking among females was 3.5%.</li></ul>
2006	National Health and Morbidity Survey (NHMS III) <sup>6</sup>	Nationwide community based, 18 years and above throughout Malaysia	<ul style="list-style-type: none"><li>● Prevalence of current smokers in Malaysia was 21.5%.</li><li>● Prevalence of smoking among males was 46.5%.</li><li>● Prevalence of smoking among females was 1.6%.</li></ul>
2011	Global Adult Tobacco Survey (GATS) <sup>7</sup>	Nationwide community based, 15 years and above	<ul style="list-style-type: none"><li>● Prevalence of current smokers in Malaysia was 23.1%.</li><li>● Prevalence of smoking among males was 43.9%.</li><li>● Prevalence of smoking among females was 1.0%.</li><li>● Prevalence of smokeless tobacco products used was 0.7%.</li><li>● Average cigarettes smoked per day = 14 stick/day.</li><li>● 48.6% had tried to quit smoking in the past 12 months.</li><li>● 39.8% who worked indoors had been exposed to secondhand smoke (SHS) in their workplace.</li><li>● 38.4% were exposed to SHS at home.</li><li>● 94% had noticed anti-cigarette information.</li><li>● 88% had seen or heard about the “Tak Nak” anti-smoking campaign.</li><li>● 90% believed that smoking causes serious illness.</li></ul>
2015 (4-year cycle)	National Health and Morbidity Survey (mini GATS module)	Nationwide community based, 15 years and above	<ul style="list-style-type: none"><li>● Prevalence of current smokers in Malaysia was 22.8%.</li><li>● Prevalence of smoking among males was 43.0%.</li><li>● Prevalence of smoking among females was 1.4%.</li><li>● Prevalence of smokeless tobacco products used was 10.9%.</li><li>● Average number of cigarettes per day was 18 sticks</li><li>● 52.3% had tried to quit smoking in the past 12 months.</li><li>● 37.3%who worked indoors had been exposed to SHS in their workplace</li><li>● 37.1% were exposed to SHS at home.</li><li>● 69.6% had noticed anti-cigarette information.</li></ul>
2016	The relationships between tobacco taxation and demand determinants to reduced cigarettes consumption and smoking prevalence in Malaysia <sup>9</sup>	Adult Smokers (18 years old and above)	<ul style="list-style-type: none"><li>● Price was found to be a significant determinant of cigarette consumption in the long run.</li><li>● The total consumption of cigarette has reduced from 23 billion sticks in 1981 to 13 billion sticks in 2014.</li><li>● The real cigarette excise tax was not a significant factor in determining demand for illicit cigarettes.</li><li>● The Malaysia Abridged SimSmoke simulation model predicts that an increase in excise tax from 42.03% to 49.5% would be able to reduce smoking prevalence by 4.5% in 2020 and by 8.9% in 2055.</li></ul>



2016	National E-Cigarette Survey (NECS) <sup>10</sup>	Adult Smokers (18 years old and above)	<ul style="list-style-type: none"> <li>● Prevalence of current ECV (E-cigarette and vape) users among Malaysian adults aged ≥ 18 was 3.2%.</li> <li>● 8.6% were former ECV user.</li> <li>● 2.3% were dual user</li> <li>● 16.2% of adults were exposed to ECV at home.</li> <li>● 35.8% of adults were expose to ECV in their workplace.</li> <li>● 47% of the user's main reason for use was to try.</li> <li>● 46.3% started used ECV at 25-39 years.</li> </ul>
<b>2. Adolescents</b>			
Year	Study	Study Population	Main findings
2003	Global Youth Tobacco Survey (GYTS) <sup>11</sup>	Nationwide School Based, 13 to 15 years old	<ul style="list-style-type: none"> <li>● Prevalence of smoking was 20.2%.</li> <li>● Prevalence of smoking among boys was 36.3%.</li> <li>● Prevalence of smoking among girls was 4.2%.</li> </ul>
2009	Global Youth Tobacco Survey (GYTS) <sup>12</sup>	Nationwide School Based, 13 to 15 years old	<ul style="list-style-type: none"> <li>● Prevalence of smoking was 18.2%.</li> <li>● Prevalence of smoking among boys was 30.9%.</li> <li>● Prevalence of smoking among girls was 5.3%.</li> </ul>
2010	Prevalence, smoking habit and factors related to smoking and nicotine addiction among lower secondary school male students in Kota Tinggi District, Johor, Malaysia <sup>13</sup>	Secondary school male students (13 and 14 years old).	<ul style="list-style-type: none"> <li>● Prevalence of smoking was 35.5%</li> <li>● Smoking prevalence was higher in schools located in the Federal Land Development Authority (FELDA) which was 42.9%.</li> <li>● 90% of current smoker had lower addiction to nicotine.</li> <li>● Smoking was associated with: <ul style="list-style-type: none"> <li>○ peer smoking</li> <li>○ having a brother smoking</li> <li>○ parental smoking</li> <li>○ locality where respondents attend school</li> </ul> </li> </ul>
2012 (4-year cycle)	Global School Health Survey (tobacco-use module) <sup>14</sup>	Nationwide School based, 13 to 17 years old	<ul style="list-style-type: none"> <li>● Prevalence of smoking was 11.6%.</li> <li>● Prevalence of smoking among boys was 21.9%.</li> <li>● Prevalence of smoking among girls was 1.4%.</li> </ul>
2016	Tobacco and E-Cigarette Survey among Malaysia Adolescent (TECMA) <sup>15</sup>	Nationwide School based, 10 to 19 year	<p>Tobacco:</p> <ul style="list-style-type: none"> <li>● Prevalence of smoking was 11.7%.</li> <li>● Prevalence of smoking among boys was 21.1%.</li> <li>● Prevalence of smoking among girls was 2.1%.</li> <li>● 37.8% of the adolescents were exposed to SHS at home and 51.2% were exposed in public places.</li> <li>● 87.3% had seen anti-tobacco messages.</li> </ul> <p>E-cigarette:</p> <ul style="list-style-type: none"> <li>● 9.1% of Malaysian adolescent (10-19 years) were current e-cigarette/ vape users.</li> <li>● 28.0% of the non-users thought that they might use e-cigarette/ vape in the future.</li> </ul>

Research by institution / universities			
1. International Tobacco Control (ITC) Survey			
Year	Study	Study Population	Main findings
2005	Characteristic of Adult Malaysian Smokers Who were smoking Mentholated Cigarettes Reasons for Choice and Associated Beliefs <sup>16</sup>	Adult smokers	<ul style="list-style-type: none"> <li>● 15.7% were smoking mentholated cigarettes</li> <li>● 11.0% were smoking non-mentholated flavour</li> <li>● 73.4% were smoking regular cigarettes</li> <li>● Female were 3 times likely to smokes mentholated cigarettes (OR= 2.83).</li> <li>● Smoking mentholated cigarettes was more likely associated with perception and beliefs like menthol is smoother on throat and chest and less harmful than non-mentholated (ORs= 3.87&amp;4.50 respectively)</li> <li>● Smokers have misperceptions about menthol : thought was safer &amp; reduce the risks of smoking and/or as a step toward quitting.</li> <li>● Mistaken beliefs about mentholated cigarettes are reducing intentions to quit smoking</li> </ul>
2005	Those who were smoking light and mild cigarettes: Did they differ from other smokers? <sup>16</sup>	Adult smokers	<ul style="list-style-type: none"> <li>● 30.2% were smoking light and mild cigarettes</li> <li>● 69.8% were smoking non light and mild cigarettes</li> <li>● 40% Chinese and almost 60% other ethnic group of smokers were more likely to smoke light and mild cigarettes, compare to Malay (ORs = 1.40 &amp; 1.56 respectively).</li> <li>● Smokers with tertiary level of education and those who were smoking less or equal than 10 cigarettes/day were more likely to smoke light and mild cigarettes. (ORs = 1.57 &amp; 1.30)</li> <li>● The decision to smoke this type of cigarettes was more likely to be based on health reason. (ORs = 1.38)</li> </ul>
			<ul style="list-style-type: none"> <li>● Smoking light and mild cigarettes was more likely associated with perception and beliefs that 'light and mild make quitting easier,' 'light and mild is smoother on throat and chest' and 'light and mild are less harmful'. (ORs = 2.30, 2.59 &amp; 3.03 respectively).</li> <li>● There is an association that mistaken beliefs about light and mild cigarettes reducing intentions to quit smoking &amp; make quitting attempts.</li> </ul>
2005	Depression and Smoking Among Youth in Thailand and Malaysia: Findings from the ITC South East Asia Survey <sup>16</sup>	Youth aged 13 to 17 years	<ul style="list-style-type: none"> <li>● Depression is associated with smoking among adolescents in Thailand and Malaysia.</li> </ul>
2006	Socio-demographic characteristic of light cigarette smokers and their believes about smoking, quitting and health <sup>16</sup>	Adult smokers	<ul style="list-style-type: none"> <li>● 22.4% smoked brand light cigarettes.</li> <li>● No significant differences among races regarding the choice to smoke lights or mild cigarettes.</li> <li>● Those with tertiary level of education were more likely to smoke lights or mild cigarettes compare to their counterparts (OR=1.92).</li> <li>● Those who smoke light or mild cigarettes smoke around 10-20 cigarettes per day and may be considered as a moderate smoker.</li> <li>● Those who smoke light or mild cigarettes make their decision to smoke this type of cigarettes based on price and taste.</li> <li>● No significant differences between light or mild cigarettes smoker and their counterparts regarding their intention to quit and quitting attempts.</li> </ul>

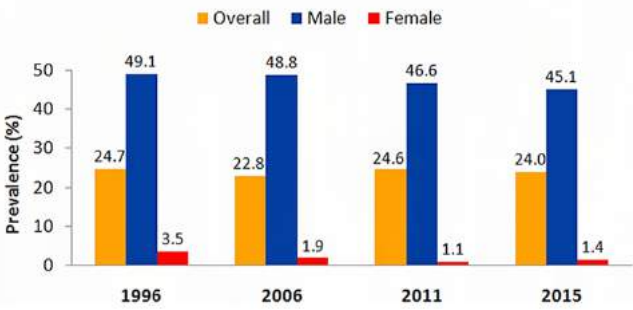
			<ul style="list-style-type: none"> <li>● Light or mild cigarettes smokers tend to believe that light or mild cigarettes make quitting easier and less harmful.</li> <li>● They also believe that light and mild cigarettes are smoother on throat and chest.</li> </ul>
2008	Prevalence and correlates of roll-your-own smoking in Thailand and Malaysia: Findings of the ITC-South East Asia Survey <sup>16</sup>	Adults smokers (18 years and above) in Malaysia and Thailand	<ul style="list-style-type: none"> <li>● The prevalence of any use of roll your own (RYO) cigarettes varied greatly between Malaysia (17%) and Thailand (58%).</li> <li>● In both countries, any RYO use was associated with: <ul style="list-style-type: none"> <li>○ living in rural areas,</li> <li>○ older average age,</li> <li>○ lower level of education,</li> <li>○ male gender,</li> <li>○ not being in paid work,</li> <li>○ slightly lower consumption of cigarettes,</li> <li>○ higher social acceptability of smoking,</li> <li>○ positive attitudes toward tobacco regulation.</li> </ul> </li> </ul>
2008	Pattern of Smoking among Adolescents in Malaysia and Thailand: Findings from the ITC-South East Asia Survey <sup>16</sup>	Youth aged 13 to 17 years old in Malaysia and Thailand	<ul style="list-style-type: none"> <li>● 3% of youth were current smokers</li> <li>● Males were between 7 and 15 times more likely to report smoking behaviour than females.</li> <li>● More than 50% Thai males and approximately one third of Malaysian males aged 17 met the criteria for either experimental or current smoking.</li> </ul>
2011	Smoking behaviour among adolescents in Thailand and Malaysia	National surveys among adolescents age 13 to 18 years old.	<ul style="list-style-type: none"> <li>● 5% of Thai and Malaysian adolescents were current smokers In Malaysia <ul style="list-style-type: none"> <li>○ first smoking a whole cigarette at age 13.9 years</li> <li>○ 68.3% bought cigarettes themselves</li> <li>○ 20.7% got cigarettes from friends</li> <li>○ 27.7% smoked factory-made brands</li> <li>○ 10% smoked hand-rolled cigarettes</li> <li>○ 40% tried to quit smoking</li> </ul> </li> </ul>
2015	Awareness and Use of E-Cigarettes in Malaysia	Adult smokers and ex-smokers	<ul style="list-style-type: none"> <li>● At Wave 5 <ul style="list-style-type: none"> <li>○ 61.8% were aware of E-Cigarettes in Malaysia.</li> <li>○ Of those who were aware, 33.4% of current smokers (20.6% of all smokers) and 13.5% of ex-smokers had tried ECs; and notably 36.5% of non-triers were eager to try in the future.</li> <li>○ Daily use of ECs among both current and ex-smokers were low (6.1% and 10%, respectively) but non-daily use among both groups were high (68.3% and 50.7%, respectively).</li> <li>○ 3.8% of smokers reported smoking more than 20 sticks a day while 53.1% said they smoked less than 10 cigarettes a day in combination with ECs</li> </ul> </li> <li>● At Wave 6 <ul style="list-style-type: none"> <li>○ Daily use of ECs appeared to have increased among both current and ex-smokers (9% and 25.2%, respectively).</li> <li>○ Proportion of less than 10 cigarettes a day users had increased to 58.7%.</li> </ul> </li> <li>● Reported reasons for using ECs were: <ul style="list-style-type: none"> <li>○ to reduce consumption of conventional cigarettes (56.9%),</li> <li>○ to smoke freely anywhere (56%),</li> <li>○ as an aid for quitting (49.1%)</li> <li>○ because of the taste (18.4%).</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>● 51.8% of EC users believed that they are less harmful than conventional cigarettes. Among dual users (using conventional cigarettes in combination with ECs), conventional cigarette consumption appeared to have decline between waves.</li> </ul>
2015	Trend of Usage of Other Tobacco Products by Malaysian Adult Smokers: Finding from the ITC Malaysia Survey	Adult smokers	<ul style="list-style-type: none"> <li>● The use of other tobacco products is relatively low in Malaysia.</li> <li>● In the baseline survey (Wave 1), only 11.0% said they used other tobacco products in the past month.</li> <li>● This percentage increased marginally in Wave 5 to 15.3%.</li> <li>● Overall, less than 5% of all respondents used cigars, cigarillos, bidis, pipes, chewing tobacco and snuffs throughout the study's five waves.</li> <li>● However, there is a reported upward trend on the use of shisha since Wave 1, from 0.7% to 10.1% by Wave 5.</li> </ul>
<b>2. Management and Science University</b>			
Year	Study	Study Population	Main findings
2011	Prevalence and associated factors of smoking among Malaysian university students <sup>17</sup>	Management and Science University (MSU) students	<ul style="list-style-type: none"> <li>● 29% of students were smokers.</li> <li>● Higher in male students and advanced semesters.</li> <li>● The main reason of smoking: <ul style="list-style-type: none"> <li>○ Stress (20%)</li> <li>○ Influenced by friends (16%)</li> </ul> </li> <li>● Characteristics of students whom smoked: <ul style="list-style-type: none"> <li>○ low level of knowledge</li> <li>○ had wrong belief in smoking</li> <li>○ negative attitude toward tobacco control policies</li> </ul> </li> </ul>
2012	Shisha smoking and associated factors among medical students in Malaysia <sup>18</sup>	Management and Science University (MSU) medical students	<ul style="list-style-type: none"> <li>● Prevalence of smoking shisha was 20%.</li> <li>● Many students believed that shisha does not contain nicotine, carbon monoxide and does not lead to lung cancer, dental problems and cardiovascular diseases.</li> <li>● Factors associated with higher smoking of shisha: <ul style="list-style-type: none"> <li>○ older age</li> <li>○ male</li> <li>○ having parents, siblings and friends smoke shisha</li> <li>○ having family, friends and financial problems</li> </ul> </li> </ul>
<b>3. Universiti Putra Malaysia</b>			
Year	Study	Study Population	Main findings
2006	Prevalence and factors associated with smoking among medical students in local university <sup>19</sup>	UPM Medical students year 1 to year 5	<ul style="list-style-type: none"> <li>● Prevalence of ever and current smokers was 19.3% and 2.4%.</li> <li>● Mean age of initiation was 13.8 years.</li> </ul>
2014	Knowledge, attitude and perception of second-hand smoke and factors promoting smoking in Malaysian adolescents <sup>20</sup>	Secondary school students aged 13-14 years	<ul style="list-style-type: none"> <li>● Participants exposed to environmental tobacco smoke (ETS) &gt;5 hour/day were more likely to smoke than those exposed &lt;1 hour/day.</li> </ul>
			<ul style="list-style-type: none"> <li>● Living in a state with partial smoke-free legislation (SFL) was associated with higher self-reported smoking attempts compared to those lived in a state with complete SFL.</li> </ul>

4. Universiti Teknologi Mara (UiTM) Malaysia			
Year	Study	Study Population	Main findings
2015	Prevalence of Nicotine Dependence among youth smokers (cigarette and shisha) in Malaysia <sup>21</sup>	Youth aged 18 to 24 years in Selangor	<ul style="list-style-type: none"><li>● Prevalence of cigarette smoking only was 58.4%</li><li>● Prevalence of both cigarette and shisha was 31.8%.</li><li>● Prevalence of smoking shisha only was 9.8%</li><li>● Those smoked both cigarette and shisha showed higher rate of nicotine dependence.</li></ul>

Trend of smoking in Malaysia

Data from previous adults and youth national surveys were compiled and standardised for age definition, to allow for data comparison and trending.



Graph 1: Trend of smoking among Malaysian adults aged 18 and older, 1996-2015

Graph 1 shows the trend of current smoking prevalence among Malaysian adults from the year 1996 to 2015. The age definition has been standardised to 18 and older to allow for the use of older surveys which used the same definition (GATS 2011 and 2015 used 15 and older as age definition). This allows for a series of data from four of national surveys to be analysed.

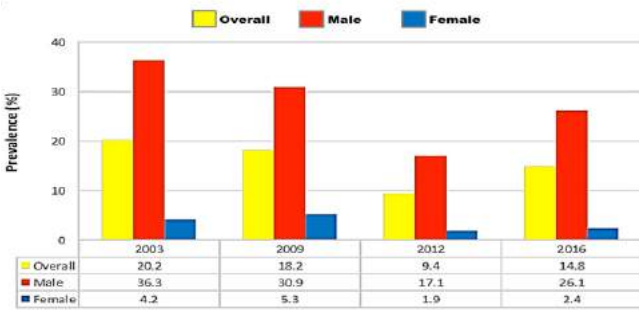
The trend of current smokers in Malaysia from 1996 to 2015 has not significantly changed. It plateaued around 24% which means almost one in four Malaysians are current smokers. This trend is worrying since the objective of tobacco control is to reduce tobacco consumption to further improve the nation’s health.

Nonetheless, the trend among male smokers showed some promising result. The prevalence of current smoking has dropped slightly from 49.1% to 45.1%. The prevalence of smoking among women remained below 5% (the target for the Endgame of Tobacco).

Even though the overall trend of smoking prevalence was slightly less encouraging, there is evidence that the smoking consumption is reducing, which means that even though the percentage of smokers remains similar, Malaysians are smoking less than before. It was also significantly associated with the rise of tobacco taxation<sup>9</sup>.

Graph 2 demonstrated that the overall smoking prevalence among Malaysian adolescents aged 13 to 15 is on the declining trend, among boys and among girls. With the intensification of prevention and intervention programme for youth, it is hoped that the prevalence will continue to decline further.

There is argument that the lower prevalence among youth has not translated to lower smoking prevalence among adults. This observation can be elucidated by the fact that the age of conversion to daily smoker in Malaysia is at 19 years old<sup>7</sup>. The smoking prevalence also peak around the age group of 20-40 years old<sup>8</sup>. Therefore, specific intervention programme should be catered to school leavers or college students to halt conversion to adult smoking.



Graph 2: Trend of smoking among Malaysian youths aged 13 to 15, from 2003 to 2016

D. RESEARCH GAPS AND RECOMMENDATION FOR RESEARCH

i. Monitoring of smoking related diseases

Tobacco use is associated with multiple debilitating diseases and a significant contributing factor to disease burden in Malaysia. Tobacco use is the second biggest attributable risk factors (10.7%) for disability-adjusted life year (DALY) for Malaysian men, almost equal to high blood pressure (10.8%)<sup>22</sup>. It is estimated that more than 15% of the total hospitalizations in the country are due to smoking-related illnesses<sup>23</sup>. However, data on smoking related diseases is not routinely available. Monitoring smoking related diseases would be a measurement of tobacco control outcomes. The government should initiate a system to routinely monitor smoking related diseases.

ii. Monitoring of smoking related deaths

Globally, tobacco use contributes to 6 out of 8 top causes of death<sup>24</sup>. In Malaysia, smoking accounts approximately 20% of all deaths annually. The objective of tobacco control is to greatly reduce these avoidable and unnecessary premature deaths through multiple levels of prevention and interventional strategies. The mortality data system in Malaysia is improving, however, currently there are limitations to its functionality. For example, only data from hospital deaths can be used in terms of data quality. To get a national estimate, special studies and modelling have to be done. Improving mortality data will add to another dimension of evaluation of tobacco control policies in Malaysia.

iii. Economics studies for direct, indirect cost of smoking in Malaysia

One of the more frequent questions asked about the benefit of tobacco control in Malaysia is the cost effectiveness of the FCTC implementation. Many argued that the government may benefit from a huge number of smokers consuming tobacco products thus increasing tobacco tax revenue. However, a study conducted in 2007 demonstrated annual tobacco taxation revenue collected by the government was far less than the cost of treating the top three smoking

related diseases in Malaysia<sup>25</sup>. This study was one of its kind in this country and more research of this kind is desperately needed. The economic impact may not stop at health economic perspective but it can also include loss of productivity and general economic loss at individual, community, and national level.

#### iv. Monitoring the effect of policy on vulnerable population

National anti-tobacco campaign and interventional programmes are not designed for the masses and they do not necessarily reach the vulnerable population such as the low-income group, adults with mental illness and pregnant women. The impact of these programmes may differ from one group to another. For example, the rural and those with lower education attainment are associated with higher risk of being in pre-contemplation stage of quitting and may require different approach in their promotion and intervention. Policy evaluation may also look at the majority who are non-smokers (youth and adults) and identify how current tobacco control policy affect their perception and attitude.

#### v. Monitoring of the usage other tobacco products

Monitoring the trend of other tobacco products is vital as popularity of other products such as waterpipes, bidis, snuff, heat-not-burn products, etc. may revolve due to variable reasons. Emerging new products especially those targeted towards youth may go undetected without formal enquiries. For example, in an analysis of national surveys 2000 – 2012 in the US, there is evidence to suggest increasing trend of use of candy flavoured mini-cigar or cigarillos among teenagers<sup>26</sup>.

#### vi. Average number of cigarette sticks smoked per day

Data on smoking prevalence is vital to evaluate the progress in achieving national and international targets in terms of overall measurement of tobacco control implementation. However, smoking prevalence alone may not be sufficient to describe the whole smoking scenario in Malaysia. Data on smoking consumption such as the number of cigarettes

smoked per day could also help to further evaluate the effectiveness of tobacco control programmes. Currently, the data available is limited and there is standardisation issue to allow for comparison and data trending. Proxy data such as cigarette production and importation will also shed some light on cigarette consumption in Malaysia. Data on consumption of legal and illicit cigarette would also be valuable.

#### vii. Age of smoking initiation

The is limited data available for the age of smoking initiation. There are two separate components to this which are the age of first cigarette and the age of becoming daily smoker. From limited data available, it is known that Malaysian smokers become daily smoker at a later age – at the age of 19 years old. With the introduction of school and college promotional and interventional programmes, it would be ideal to monitor this data on regular basis.

#### viii. Compliance to smoking ban regulations

The effectiveness of implementation of smoking ban under the Control of Tobacco Products Regulations (CTPR) 2004 is only as good as the compliance and enforcement activities. Owners/occupiers of premises gazetted as smoke-free public places are responsible to ensure that nobody smokes in these premises. A study that looks into compliance at gazetted non-smoking places would be useful for policy evaluation.

## E. POLICY RECOMMENDATIONS

The limited data available indicates that the smoking prevalence has been stagnant over the years. The national smoking prevalence remains at around 24%. Nonetheless, this may not mean that tobacco control programmes are not yielding their effectiveness in Malaysia. Further detailed data are needed to explain why the observation is as such. For example, the prevalence may remain the same but the level of consumption may have reduced. The Ministry of Health should look at all available data before forming the conclusion.

Tobacco control surveillance in Malaysia has great potential for improvement since Malaysia has the capacity to further enhance this system. In Malaysia, the basic monitoring of tobacco use and its complications has already been developed. Therefore, the system needs sustainability and stability so that it can grow to become a more comprehensive system.

The interval between national surveys can be regulated so that it is well planned to obtain the best evaluation for tobacco use and prevalence in Malaysia. Setting a formal interval for national tobacco use surveys could also justify for secured funding for this activity. Financial allocation is more likely to be secured if the programme is regular and well planned.

The Ministry of Health Malaysia has decided to adopt international standards such as the GATS and GYTS protocols for consistency in all future national surveys and tobacco use surveillance. Apart from ensuring

standardised working definition, data quality can be further improved by ensuring that all study protocols are strictly observed. Smaller scaled studies by other institutions should also adopt the same working definitions (such as definition of current smoker, age of initiation, etc.) to allow for comparable interpretations and data analysis. This move will improve the quality of data which allows for better evaluation and planning.

Tobacco use surveillance is not mere monitoring the smoking prevalence. As illustrated in Figure 3, the framework of tobacco surveillance encompasses multiple levels of tobacco use activities. Monitoring should include data on tobacco products supply and demand, tobacco industry interference, smoking related diseases, smoking related mortality, public perception and acceptance of tobacco control policies and so forth. All these data can be monitored through one centralised monitoring agency or committee.

The Ministry of Health should work together and co-ordinates with other relevant agencies to organise tobacco use surveillance data monitoring. This could be co-ordinated under the National WHO FCTC Steering Committee, chaired by the Minister of Health. Other ministries and agencies include:

1. The Ministry of Finance
2. The Royal Customs Department
3. The Ministry of Plantation Industries and Commodities
4. The National Kenaf and Tobacco Board
5. The Ministry of International Trade and Industry
6. The Ministry of Education
7. The Ministry of Higher Education



- 8. Various Universities
- 9. The National Health Promotion Board (MySihat)
- 10. The Malaysian Council on Tobacco Control

By working together and improving communication between agencies, various data and information pertaining to tobacco control activities can be mapped out, using the framework given.

Setting up an independent national tobacco control programme committee may also be beneficial for the government. This committee should be separated from the Ministry of Health and be given its own funding. The objective of this special committee is to provide independent and unbiased evaluation on the implementation of WHO FCTC articles in Malaysia. The committee could produce regular reports whilst providing recommendations on how to further improve tobacco control in Malaysia.

F. SUMMARY

Monitoring is an important part of tobacco control. Currently, data over the years indicated that national smoking prevalence has been plateauing at around 24% for Malaysians aged 18 and above. However, further details are required to explain this observation. The basics of tobacco use surveillance is already established in Malaysia and could be enhanced further. Surveillance must be planned as a system and national surveys could be done at regular intervals. Improvement of data quality will help with evaluation of WHO FCTC implementation in Malaysia. Tobacco use surveillance in Malaysia can be developed further by improving co-ordination and communication within various ministries and agencies.

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# PROTECTING PEOPLE FROM TOBACCO SMOKE

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## A. INTRODUCTION

The primary objective of smoke-free initiatives by the government is to protect people from the harms of second-hand smoke (SHS)<sup>1</sup>. Additionally, this will also help smokers to quit and prevent youth from taking up smoking habit. This is a very important strategy as protecting people from tobacco smoke which includes, smoke-free areas and expansion of smoke-free areas, is the second most effective strategy after taxation that will affect smoking prevalence in a country.

WHO recommends a step-by-step process as the most effective method to create a smoke-free environment. The first step is for the government to prepare educational campaigns for the public and business communities on the dangers of SHS. Once there is evidence of public support for smoke-free spaces, legislation should be drafted and submitted for public comment. Once this groundwork is completed, the government must ensure continuing strong political and public support for smoke-free places before implementing a comprehensive legislation that includes clear penalties for violations as well as effective enforcement policies. Following the enactment, the government must maintain strong support for the law

through aggressive and uniformed enforcement capable of achieving high compliance levels<sup>2</sup>.

Guidelines to the implementation of smoke-free strategy is stipulated under Article 8 of the WHO FCTC based on the following seven principles<sup>1</sup>.

**Principle 1:** Effective measures to provide protection from exposure to tobacco smoke, as envisioned by Article 8 of the WHO FCTC, require the total elimination of smoking and tobacco smoke in a particular space or environment in order to create a 100% smoke-free environment. There is no safe level of exposure to tobacco smoke, and notions such as a threshold value for toxicity from SHS should be rejected, as they are contradicted by scientific evidence.

**Principle 2.** All people should be protected from exposure to tobacco smoke. All indoor workplaces and indoor public places should be smoke-free.

**Principle 3.** Legislation is necessary to protect people from exposure to tobacco smoke. Voluntary smoke-free policies have repeatedly been shown to be ineffective and do not provide adequate protection. In order to be effective, legislation should be simple, clear and enforceable.

**Principle 4.** Good planning and adequate resources are essential for successful implementation and enforcement of smoke-free legislation.

**Principle 5.** Civil Society has a central role in building support for and ensuring compliance with smoke-free measures, and should be included as an active partner in the process of developing, implementing, and enforcing legislation.

**Principle 6.** The implementation of smoke-free legislation, its enforcement and its impact should all be monitored and evaluated. This should include monitoring and responding to tobacco industry activities that undermine the implementation and enforcement of the legislation.

**Principle 7.** The protection of people from exposure to tobacco smoke should be strengthened and expanded, if necessary such action may include new or amended legislation, improved enforcement, and other measures to reflect new scientific evidence and case-study experiences.

According to WHO (2009), all people have a right to breathe clean air. There is no safe level of exposure to SHS, which causes heart disease, cancer and many other diseases. Even brief exposure can cause serious damage<sup>3</sup>.

The elimination of indoor smoking through the creation of 100% smoke-free environments is the only effective science-based measure to protect the population from the harmful effects of exposure to SHS. Only a total ban on smoking in public places, including all indoor workplaces, protects people from the harms of SHS, helps smokers quit and reduces youth smoking<sup>2</sup>.

## B. CURRENT POLICY AND SITUATIONAL ANALYSIS

Under Article 8 of FCTC, WHO calls for full protection for all people against tobacco smoke, based on best practices in protecting public health within the period of five years after enforcement of FCTC in the country. The Parties to the FCTC are under legal obligation to enact smoke-free laws within 5 years after signatory that effectively protect all persons from exposure to second-hand tobacco smoke. However, only 88% of the parties fulfil the obligation under Article 8<sup>4</sup>.

In Malaysia, Article 8 in accordance with all of its seven principles is not fully implemented, since smoking is allowed in bars, pubs and non-air conditioned restaurants<sup>5</sup>. We are still lacking in having all indoor workplaces to be smoke-free. Smoking rooms are still provided in certain public places.

Past experiences with smoke-free legislation suggest that various challenges may arise when implementing the smoke-free law. Some of these are non-compliance, behaviour change and support for such policy<sup>2</sup>. Smoke-free implementation will also receive all sorts of opposition from the tobacco industry. Entrepreneurs will claim that smoke-free laws are too difficult to implement and enforced and will drive customers away from businesses, particularly restaurants and bars. They will propose separate smoking areas or ventilation as “reasonable” alternatives to 100% smoke-free workplaces. On the contrary, it has been proven, regardless of the country, or income level, where comprehensive smoke-free

legislation has been enacted, smoke-free environments are popular, easy to implement and enforce, and does not harm the business<sup>6</sup>.

The current situation in Malaysia highlights two main strategies to protect people from tobacco smoke (abbreviated as “P”), that is law and empowerment.

Firstly, by law and enforcement for full protection for all people against tobacco smoke, Malaysia has a regulation on smoking area in Sub-Regulation 11(1) PPKHT 2004 under Food Act 1983<sup>7</sup>. These regulations have been revised several times, the latest in January 2017. There are 23 currently gazetted places where smoking is prohibited. They include<sup>7</sup>:

- in any entertainment centre or theatre, except any pub, discotheque, night club or casino, at any time when such place is open to the public;
- in any area in an educational institution or a higher educational institution;
- in any area in a library; or
- in any hospital or clinic;
- in any area in a nursery;
- in any area in an internet café;
- in any public lift or toilet;
- in any school bus;
- in any area in National Service Training Center;
- in any air-conditioned eating place or shop;
- in any floor with a service counter in the building specified in the Second Schedule;
- in any centralized air conditioned working area;
- in any public vehicle or public transport terminal;

- in any shopping complex;
- in any premises or children playground or park including three meters from its border at highway rest area (R&R);
- in any airport;
- in any area in a petrol station;
- in any area of public park except open car park;
- in any government premises;
- in any area in a stadium, sports complex, fitness centre or gymnasium;
- in any observational tower, camp site, canopy walk and five meters from entrance or exit of canopy walk, national park or state park.
- in any area which is used for any assembly activity in a building other than private or residential building;
- in any building or public place which is used for religious purposes;

Based on Principle 2, Malaysia has not achieved a comprehensive smoke-free environment compared to other ASEAN countries as discretion is based on an approval as stated in Sub-Regulation 11(2) of PPKHT 2004. Table 1 shows Malaysia as the only ASEAN country where bars and pubs and non-air conditioned restaurant is still not a smoke-free area<sup>8</sup>.

**Table 1:** Summary of smoke-free settings (indoor) based on the national law

	BRUNEI	CAMBODIA	INDONESIA	LAO PDR	MALAYSIA	MYANMAR	PHILIPPINES	SINGAPORE	THAILAND	VIETNAM
Airport										
Bars & Pubs	*									
Educational Facilities										
Health Care Facilities										
Hotels										
Places of Worship										
Restaurants (Aircond)										
Restaurants (Non-Aircond)										
Shops & Shopping Complex										
Transport Terminals										
Transportation (Public)										
Universities										
Workspace/Offices										

LEGEND:

100% Smoke-Free/No Smoking Room

With Smoking Room

Allows

(Source: Copyright permission from ITC USM received)

Therefore, 100% smoke-free environment has not yet been achieved.

Under Sub-Regulation 22<sup>7</sup>, premises owner/setting are allowed to request for their places to be gazetted where smoking is prohibited. Up to present, five settings have been gazetted as non-smoking areas. This includes smoke-free city initiatives carried out in Malacca, Johor Bahru, Penang, Kelantan and Terengganu. Four cities in the states of Perlis, Perak, Sabah and Sarawak have expressed interest to participate in this initiative.

Secondly, through empowerment, we have the KOSPEN (*Komuniti Sihat Pembina Negara*) initiative, smoke-free homes (*Rumahku Bebas Asap Rokok*, RBAR), Blue Ribbon Campaign and expansion of smoke-free areas.

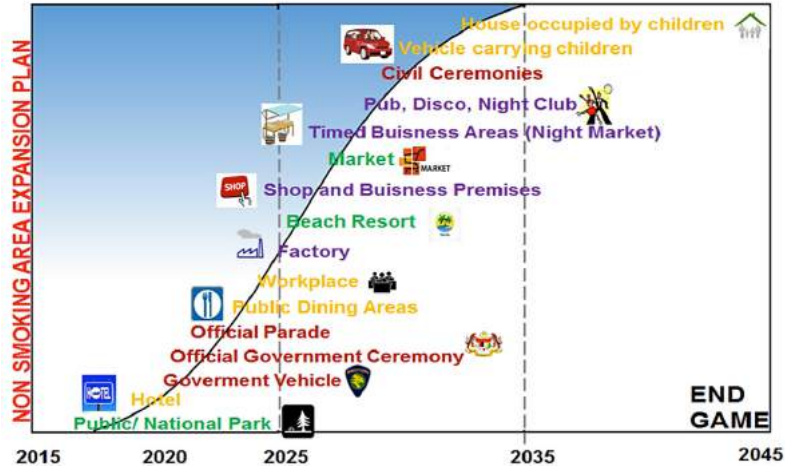
Communities under KOSPEN are empowered to identify places in their respective localities [Sub-Regulation 11(1)] for implementation of smoke-free areas and to generate as many smoke-free settings as possible (which are not gazetted under the Control of Tobacco Products Regulations 2004) e.g. smoke-free homes (*Rumahku Bebas Asap Rokok*, RBAR) and other smoke-free settings such as, smoke-free shops, stalls and eateries. KOSPEN communities are also encouraged to carry out their public social events such as weddings, public meetings and gathering as smoke-free activities. Currently there are 22,237 RBARs, 514 *Premis Bebas Asap Rokok* (PBAR), 915 smoke-free events in KOSPEN localities<sup>9</sup>.

Communities who have successfully made their homes smoke-free are given a RBAR plaque as recognition for

their commitment and for serving as a platform to create awareness and promote smoke-free initiatives.

In addition, the Blue Ribbon Campaign is a special program coordinated by the Malaysian Health Promotion Board (MySihat), in collaboration with state health departments<sup>10</sup>. The objective of this program is to give recognition to those who implement voluntary non-smoking areas in their establishments. A total of 119 premises have been awarded certificates from TBRC from 2013-2015<sup>9</sup>.

Currently, the Malaysian government has enforced smoking bans in public recreational parks/National Parks since December 2016. By 2025, smoking bans will include hotels, government official transport, government ceremonies, official parades, and all food establishments. By 2035, this regulation will cover workplaces, factories, beaches, tourist attractions, night markets, pubs, nightclubs, public ceremonies, vehicles with children and homes with children (Figure 1).



**Figure 1:** Plan on gazettement of public places as non-smoking areas<sup>11</sup>

C. TOBACCO CONTROL RESEARCH IN MALAYSIA

The implementation of smoke-free policies requires proper evaluation to ensure its effectiveness.

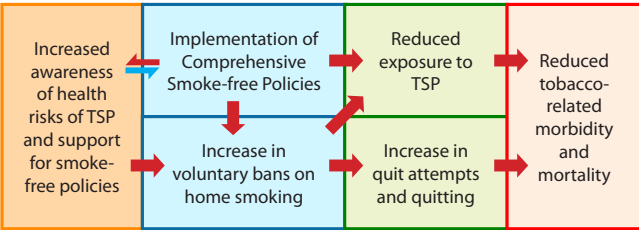


Figure 2: Framework for evaluation smoke-free policies (IARC Handbooks of Cancer Prevention)<sup>1</sup>

Figure 2 illustrates a framework for evaluating the effectiveness of smoke-free laws to reduce tobacco-related morbidity and mortality. Although, the main objective of banning smoking in public places is to eliminate tobacco smoke exposure, there are other indirect effects of smoke-free policies on smokers’ attitudes and behaviours that can lead to voluntary bans on smoking in the home and also reductions in smoking prevalence<sup>1</sup>.

This section presents a compilation of research and data available for Malaysia relevant to strategy P (Protection) in MPOWER. All findings are presented below:

Year	Study	Study Population	Main findings
	Study name, authors, journal name	National / State / District / Schools / Clinics etc	Summary of main findings from the study
2003-2014	ITC Project (March 2012). Smoke-free Policy: ITC Cross-country Comparison Report. University of Waterloo, Waterloo, Ontario, Canada <sup>8</sup>	International-cross country	<ul style="list-style-type: none"><li>● Data for Malaysia was based on 2009 statistics</li><li>● 24.2% of smokers and former smokers observed smoking in restaurant in the last six months</li><li>● 29.1% of smokers and former smokers reported observing smoking at their workplaces</li><li>● 65.3% of smokers and former smokers reported smoking was not allowed at their workplaces</li><li>● 30.4% of smokers reported smoking was not allowed in their home</li><li>● 89.4% of smokers and former smokers thought smoking should not be allowed at all in workplaces</li><li>● 96.5% of smokers and former smokers thought smoking should not be allowed at all in restaurant.</li></ul>
2011	Report of the Global Adult Tobacco Survey (GATS) Malaysia, 2011. Institute for Public Health (IPH), Ministry of Health Malaysia <sup>12</sup>	National survey	<ul style="list-style-type: none"><li>● Prevalence of current smokers in Malaysia was 23.1% (43.9% among men, 1.0% among women)</li><li>● 39.8% of adults who work indoor had been exposed to SHS in their workplace in the past 30 days. For non-smokers (NS) it was 33.9%.</li><li>● 38.4% of adults were exposed to SHS at home. Among non-smokers it was 27.9%.</li><li>● Among adults who had visited different public places in the past 30 days, 84.9% (84.1% of NS) were exposed to SHS in cafes/ coffee shops/ bistros; 78.7% (70.3% NS) in bars/ nightclubs; 71.0%(68.3% NS); in restaurants; 28.2% (27.9%, NS) in public transportation; 20.0% (19.0%) NS in government buildings; 13.6% (14.6% NS) in indoor shopping complexes; and 8.7% (8.6% NS) in healthcare facilities.</li></ul>

2012	The National Health Morbidity Survey: Malaysia Global School Based Student Health survey 2012 <sup>13</sup>	National Survey	<ul style="list-style-type: none"><li>● 11.5% of the students were current cigarette smokers.</li><li>● Among those who ever smoked, almost ¾ tried a cigarette before the age of 14 years.</li><li>● More than 1/3 of the students reported exposure to second hand smoke (SHS) from people smoking in their presence,</li><li>● More than half claimed they had parents/guardians who use any form of tobacco.</li></ul>
2013	Pengaruh Faktor Sosial Kesan Kempen Media Tak Nak Merokok Kementerian Kesihatan Malaysia. Daing Diana M & Mohd Nizam O. Jurnal Komunikasi Malaysia 29(1): 179-198 <sup>14</sup>	382 youths in Kuala Lumpur	There are significant negative relationships between social peers influence and the effects of the “Tak Nak” anti-smoking campaign at the cognitive level.
2013	SHS in Public Spaces: How Effective has Partial Smoke-Free Legislation Been in Malaysia? Abridin, Emilia Zainal; Hashim, Zailina; Semple, Sean; Asian Pacific Journal of Cancer Prevention Volume 14, Issue 11, 2013, pp.6845-6850 <sup>15</sup>	61 restaurants, entertainment centres, internet cafés and pubs in Kuala Lumpur, Malaysia.	Despite 8 years of smoke-free legislation, this study provided evidence of high levels of SHS across a range of hospitality venues, including 12 premises where smoking is prohibited. For premises where smoking was prohibited and no active smoking observed, the mean (SD) indoor PM2.5 concentration was 33.4 (23.8) µg/m3 compared to 187.1 (135.1) µg/m3 in premises where smoking was observed. The highest mean PM2.5 was observed in pubs [361.5 (199.3) µg/m3].
2014	Smoke-free Melaka Policy Evaluation: Promoting Evidence- Based Strategies to Fight the Global Tobacco Epidemic Melaka State Health Department (2014) <sup>16</sup> .	State Survey	<ul style="list-style-type: none"><li>● 94.5% of respondents reported they had seen or heard about smoke-free Melaka (SFM).</li><li>● Following the enforcement of SFM policy 70-80% of smokers committed to not smoking, or not smoking when a NS is present (79.2%), NS family members present (88.1%), an older NS person is present (90.3%), children are present (96.0%), a policy or by law officer is present (93.8%) and when a signage indicating the area as smoke-free is seen (78.6%).</li></ul>
			<ul style="list-style-type: none"><li>● 9.0% of smokers committed to not smoking if other smokers are present.</li><li>● 46% of the respondents indicated their wishes to make their homes totally smoke-free within the next year, in particular those with spouses and children.</li><li>● 60-70% of the people who have visited enclosed restaurants, coffee shops and open air restaurants did not often see people smoke.</li><li>● More than 70% of the smokers did not often smoke indoor or outdoor in public places after the implementation of SFM.</li></ul> <p>Evaluation of smoke-free Melaka after the implementation of smoke-free city found that most smokers said that they would not smoke in the presence of children (83%), non-smoking family members (76.7%), older non-smoking person (78.2%) and policy officers (86.6%). In spite of the ban on smoking indoor and outdoor in all public places, smokers said they would visit more often places within the smoke-free zones in Melaka<sup>9</sup>.</p>
2014	Knowledge, Attitude And Perception On Secondhand Smoke Among University Students Who Are Non Smokers. Mohammad Syafiq Idris; Amer Siddiq Amer Nordin; Tee Guat Hiong; Farizah Mohd Hairi. (Presented at University of Malaya Research Week, Kuala Lumpur; 24-28 March, 2014) <sup>17</sup>	300 students who are non-smokers at University of Malaya, Kuala Lumpur.	Although majority knew about SHS and its harmful effects, 42.3% admitted that they will remain with their group of friends even when someone starts smoking. 35.7% thinks SHS is offensive, 57.0% thinks that SHS is unpleasant while the remainder 7.3 % do not mind about SHS.  The campaigns and programme regarding smoking and SHS should not only educate but also try to implement changes in people’s attitude towards SHS.



2015	Penilaian Kualiti Udara Dalam Yang Berkaitan Dengan Pendedahan Asap Rokok Basi Di Premis-Premis Awam Di Pulau Pinang. Ahmad Salihin bin Mohd Samin 2015 (thesis from University Science Malaysia) <sup>18</sup>		Compliance also can be observed through indoor air quality of the gazetted non-smoking area. A study in Penang reported that the level of indoor fine particles air pollution in most of the measured premises improved from the first year to the third year, satisfying the good level of the US Environmental Protection Agency, i.e. 15 µg/m <sup>3</sup> . However, there were premises where smoking was noted to be typically greater than the recommended level due to the absence of smoke-free policy. The implementation of smoke-free policy could reduce long-term exposure to SHS pollution. Smoke-free policy will also serve to encourage smokers to quit smoking thus reducing the number of chronic diseases caused by cigarette smoke.
2015	Second-hand Smoke Exposure and Psychological Distress among Pregnant Women in Malaysia. Siti Munira Yasin, Khairul Mizan Taib, Mohd Rodi Isa, Mohd Ariff Fadzil, Aimi Nadira Mat Ruzlin and Imran Zainuddin. (Presented at Kuala Lumpur International Nicotine Addiction Conference, KLNAC 2015; 23-24 April 2015) <sup>19</sup>	A representative sample of non-smoking pregnant women attending health clinics (n = 661) across six states in Malaysia.	Among non-smoking pregnant women, 54.7% were exposed to SHS in the home, and 67.9% outside the home.
2016	Tobacco & E- cigarette survey Among Adolescents (TECMA). Institute for Public Health (IPH) (2016). <sup>20</sup>	National Survey	Tobacco: <ul style="list-style-type: none"><li>● 14.2% of adolescents were current tobacco smokers</li><li>● 11.7% of adolescent were current cigarette smokers</li><li>● 37.8% of the adolescents were exposed to SHS at home and 51.2% were exposed in public places.</li><li>● 87.3% had seen anti-tobacco messages.</li></ul> E-cigarette: <ul style="list-style-type: none"><li>● 9.1% of Malaysian adolescent (10-19 years) were current e-cigarette/ vape users.</li><li>● 28.0% of the non-users thought that they might use e-cigarette/ vape in the future.</li></ul>
2016	National e- cigarette survey (NECS) 2016: Prevalence and Pattern of E Cigarette and Vape Use among Malaysian Adults <sup>21</sup>	National Survey	<ul style="list-style-type: none"><li>● Prevalence of current ECV users among Malaysian adults aged 18 years and above was 3.2%.</li><li>● 16.2% of adults were exposed to ECV at home.</li><li>● 35.8% of adults were exposed to ECV in their workplace.</li></ul>
2016	Smoke-Free Legislation (SFL) in Malaysia: A comprehensive review. Najihah Zainol Abidin, Aziemah Zulkifli, Emilia Zainal Abidin. Asia Pacific Environmental and Occupational Health Journal, 2 (2): 58 - 66, 2016 <sup>22</sup> .	Review of existing smoke-free legislation in Malaysia	Malaysia has taken a proactive action in protecting its people from the adverse effects from tobacco. The compliance level to SFL implementation thus far was unable to show its positive effects in protecting the health of the public. Empowering the local authority in its ability to perform enforcement is recommended in helping to improve the effectiveness of the existing SFL.

D. RESEARCH AND POLICY GAPS

It is important to protect people from second-hand smoke through elimination of tobacco smoke. Based on the framework for evaluation of smoke-free policies in Figure 2, there are still research gaps for “P” in particular, Increasing awareness of health risks of Tobacco Smoke Product (TSP) and Support for smoke-free policies.

Local research shows that people exposed to SHS is still high, among adults who visited different public places<sup>12,13,15,17,19</sup>.

It is pertinent, therefore, that protection from second-hand smoke must be unanimous and legislated. The following programs need to be expanded:

1. All public places and transportation should be smoke-free; there should not be any ‘smoking room’ around.
2. All states in Malaysia should initiate smoke-free cities.
3. Comprehensive and immediate action for expansion of smoke-free areas.
4. All indoor workplaces should be smoke-free.  
It is suggested that smoke-free initiatives include other settings such as workplace through The Blue Ribbon campaign.

Shared practises, outcomes, and impact evaluation studies for all implemented programmes would be helpful to enhance smoke-free/tobacco-free initiatives, monitoring, and assessment on the effectiveness of existing programmes and ways to improve them. It is suggested that research be carried out in the following areas:

- Awareness of health risks of Tobacco Smoke Product (TSP)
- Knowledge, attitude and practice of smoke-free bans in homes and private cars
- Smoking behaviour change and environment monitoring in designated non-smoking workplaces
- Support for smoke-free policies among smokers, non- smokers and community of various ages
- Air quality of smoke-free gazetted areas and proposal for new gazetted areas
- Impact of smoke-free policy on reduction of tobacco-related morbidity and mortality
- Trends in compounds issued pre- and-post smoke-free implementation
- Evaluation on the effectiveness of smoke-free implementation in gazetted areas in Malaysia
- Economic evaluation of smoke-free policies.



E. POLICY RECOMMENDATIONS

It is recommended there be further improvement to current policies through collaboration with government and private agencies, public/private universities, NGOs and funders, based on evidence from research.

The findings from ITC cross country survey clearly reveal gaps in public policy with regards to smoke-free gazetted areas in Malaysia wherein bars, pubs and non-air conditioned restaurants are still not smoke-free<sup>8</sup>. There still exists smoking rooms inside certain workplaces and public places and this provision must be removed. Gazettment for these premises to be completely smoke-free must be expedited. All indoor workplaces, public places and private transport should be 100% smoke-free. The law should avoid exempting certain classes of premises.

F. SUMMARY

In summary, Malaysia has introduced steps in the control of tobacco use in public places through its Smoke-free Legislation (SFL) and community empowerment. Nevertheless, there are still rooms for improvement towards fully implementing and complying with Article 8 of the WHO FCTC.

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# OFFER HELP TO QUIT TOBACCO USE

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## A. INTRODUCTION

Article 14 of the WHO Framework Convention on Tobacco Control (FCTC) states that *“each Party shall develop and disseminate appropriate, comprehensive and integrated guidelines based on scientific evidence and best practices, taking into account national circumstances and priorities, and shall take effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence”*. Evidence has shown that comprehensive cessation treatment policies primarily affect quit success<sup>[1]</sup>. Combining cessation treatment with other policies creates a synergistic impact that improves the

effect of other policies. Tobacco use disorder treatment includes intervention measures to reduce tobacco use at the individual level as well as the whole population. These include interventions using both behavioural and pharmacological approaches.

The World Health Organization (WHO) has set a global target to reduce premature mortality from four main non-communicable diseases (NCD) by 2025. Tobacco use is a major cause of premature death and diseases from NCD. Stopping tobacco use is a vital element in any comprehensive approach to tobacco control. Reduction of 30% in tobacco use prevalence is one of the nine targets

of the WHO Global monitoring framework on NCDs. Malaysia is committed to achieve this target and the two main approaches from MOH are to greatly reduce smoking initiation and to facilitate current smokers to quit, in large numbers. To achieve the global NCD tobacco use target by 2025, combination of tobacco control activities from the two main strategies (quit smoking and preventing new smokers) will require 140,000 smokers to quit smoking annually from 2017 to 2025.

The strategy is to continuously develop and disseminate appropriate, comprehensive and integrated guidelines based on scientific evidence and best practices on smoking cessation. It will also identify cost-effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence.

## B. CURRENT POLICY AND SITUATIONAL ANALYSIS

### Current Policy

Prior to 2015, most policy decisions concerning quit smoking in Malaysia were done administratively. Pursuant to the publication of the first Clinical Practice Guidelines on Management of Tobacco Use and Dependence in 2003, selected medications for smoking cessation were incorporated in the National Drug Formulary of the Ministry of Health (MOH) as Group A\* or specialised items. The budget for cessation medications was also decided by the State Health Director under the Pharmacy's budget. A directive from the Director-General of Health at the time also included a minimum 60% quit rate for all hospitalised smokers within six months of enrolment into the smoking

cessation programme as a Key Performance Indicator (KPI) of all MOH hospital directors.

The majority of quit smoking services in Malaysia are provided under MOH. Most quit smoking clinics (QSC) in the primary healthcare centres are managed by the Family Health Development Division, while quit smoking clinics in the hospitals are managed by the Health Education Division. In 2014, Health Education Officers managed all QSCs in the government hospitals. There are currently 509 active QSCs at the health clinics and 45 at the government hospitals.

In 2015, the Ministry of Health published the National Strategic Plan 2015-2020 (NSP) paving the way for a smoke-free nation by 2045. The policy aims to provide a roadmap to ensure that this aspiration was attainable. Among the initiatives of this policy is the strengthening of Article 14 of the FCTC, namely, the provision of treatment to quit smoking. This initiative known as the mQuit Services was initiated on 27th November 2015. It was a joint effort between MOH with member partners from University of Malaya, Universiti Sains Malaysia, Malaysian Academy of Pharmacy and Johnson & Johnson Sdn. Bhd. Each partner complemented one another in various aspects of smoking cessation. These include strengthening the QSCs, ensuring the availability of treatment to quit smoking, updating the Clinical Practice Guideline, improving the training to provide quit smoking services in the country and, the establishing of a national Quitline. The mQuit Services is also one of few public – private partnerships that allow collaborative efforts among MOH, Ministry of Higher Education and the private sectors. The Memorandum

of Understanding (MOU) of this joint partnership which expires in 2017, is to be continued, and will see the addition of five new partners in the mQuit Services.

As part of MOH's commitment to the mQuit Services, an FCTC Steering Committee chaired by the Honourable Minister of Health was convened on 22 September 2016. It was attended by senior officials from various government ministries and agencies and non-governmental organisations. The meeting decided on a policy that nicotine replacement therapy (NRT) should be made available in all quit smoking clinics; all medical officers should be proficient in treating nicotine addiction and the mQuit Services to be strengthened and promoted further.

In 2016 the mQuit Services was further strengthened with the expansion of an additional 160 private mQuit providers from various community pharmacies, institutions and private hospitals. To date, there are 775 QSCs recorded in the mQuit Services database. A further boost to the QSCs was the publicised launching by the Deputy Director-General of Health (Public Health) on 29th May 2016, and the introduction of the jomquit.com website. This website, initiated by the corporate sector as part of the MOU has since been transferred to MOH and can be found at [www.jomquit.moh.gov.my](http://www.jomquit.moh.gov.my). In the same year, on 29th August, the Deputy Minister of Health officiated another vital component of the mQuit Services, the national Quitline. This service is currently located at the National Poison Centre, Universiti Sains Malaysia, Penang. This Quitline supports the overall mQuit Services, particularly for hard to reach areas in Malaysia where access to a QSC might not be as easy.

As part of the NSP on tobacco control and its commitment to Article 14, a new programme was also introduced in MOH that aims to increase the number of tuberculosis patients and their contacts who smoke to quit smoking at the nearest quit smoking clinics. Other initiatives to increase quitting include providing quit smoking assistance to schoolchildren since some may start smoking much earlier than the allowable age to purchase. For this initiative, the Tobacco Control Unit has worked together with the Dental Division on a special program called KOTAK (Kesihatan Oral Tanpa Asap Rokok or Smoke-free Oral Health). The KOTAK program is an enhancement of the existing school dental health program, where dental healthcare providers screen and intervene tobacco use among school children throughout their primary education.

The latest initiative in the NSP is a joint effort by MOH and the Ministry of Higher Education (MOHE) in working together to strengthen tobacco control further with the implementation by the latter to institute Smoke-Free Campuses in public institutions of higher learning including the provision of mQuit Services through their respective Student Health Services. To date, a number of universities across the country such as University of Malaya, University Kebangsaan Malaysia, Universiti Sains Malaysia and others have organised activities in support of this call.

Problem statement for Malaysia

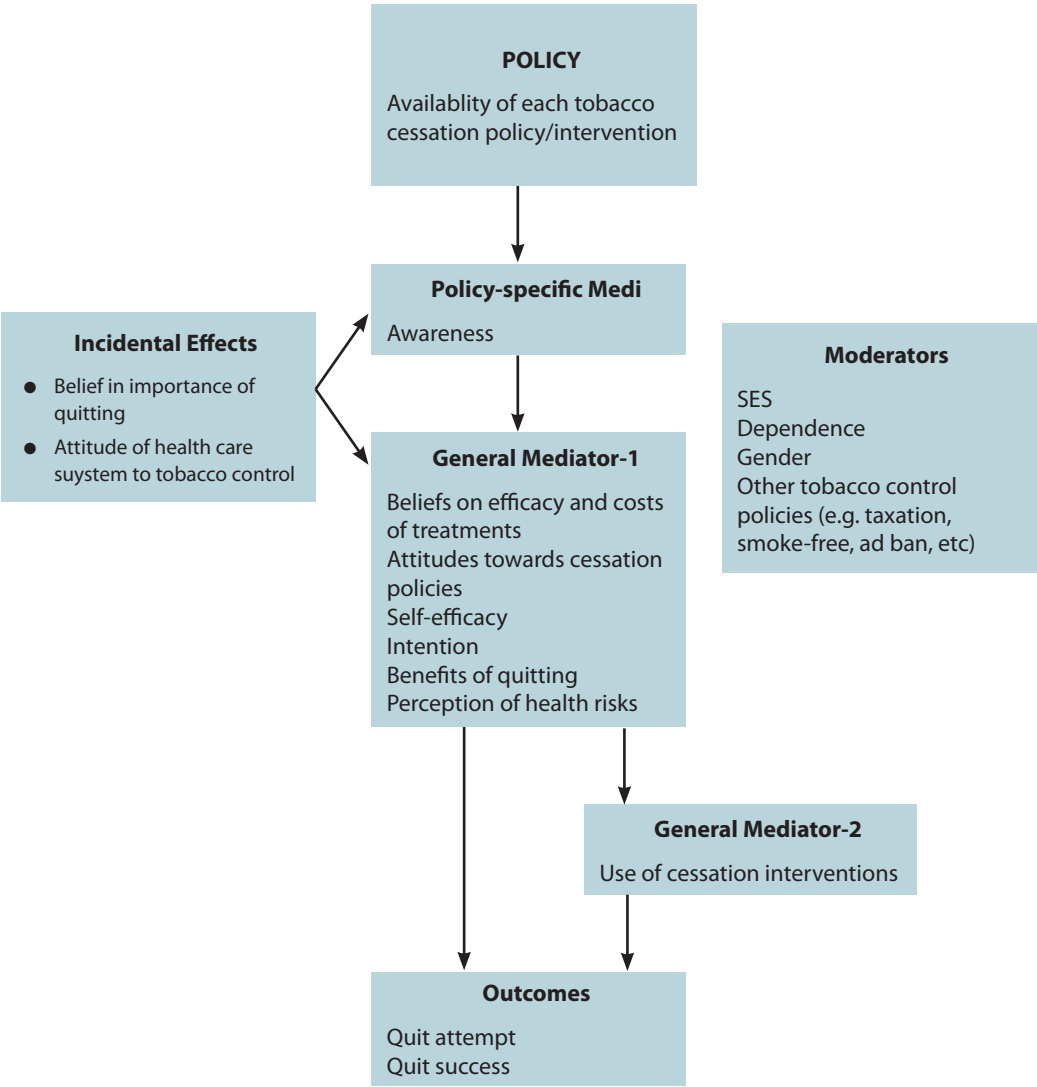
Prevalence of smoking among adult Malaysians, especially male, remains high and relatively unchanged over the last 30 years. Smoking prevalence among adolescents is also high, particularly among girls<sup>[3,4]</sup>. Coverage of delivery and uptake of cessation service by health professionals is still a challenge, especially when there is still a lack of clarity concerning the effectiveness and cost-effectiveness of tobacco dependence treatment. Perceived cost may be one reason for hesitation in addressing tobacco treatment support. In addition, knowledge and skills on smoking cessation among health profession students and practicing health professionals need to be continuously increased. There is also the issue of attitude and/or perception of smokers concerning the dangers of smoking and the benefits of quitting. Improvement in cessation services for special populations should be intensified. Last but not the least, tobacco industry’s influence and/or interference remains a looming threat.

Table 2 (Appendix) illustrates a SWOT analysis for Article 14 in Malaysia. Bench mark with activities within Article 14 are shown in Table 3 (Appendix). Strategies to reduce smoking prevalence are shown in Table 4 (Appendix).

C. TOBACCO CONTROL RESEARCH IN MALAYSIA

Based on the Global Adult Tobacco Survey (GATS) 2015, 70% of Malaysian male smokers and 83% of female current smokers age 15 and above reported intentions to quit. In addition, 49% of male and 46% of female smokers attempted quitting. However, only 9% used pharmacotherapy while 4% received counselling or brief advice during their attempt. Among smokers who visited a healthcare provider in the past 12 months, 68% of current smokers reported being asked about smoking status while 53% were advised to quit smoking. This supports findings from other studies conducted locally which indicate that although smokers were asked regarding their smoking status, not many were advised to quit smoking. Earlier findings also indicated that only 36% of Malaysian were aware regarding the availability of the QSCs in public hospitals. This clearly shows a lack of promotion for such services<sup>[3]</sup>. The role of increasing promotion is important as it has been shown that smokers who attended more cessation sessions, their chance of achieving a successful quit attempt was much higher. Moreover, one predictor successfully quitting was the role of the QSC itself. Marked differences exist among quit smoking clinics suggest that there may be important differences in the way that the treatment is delivered which affect success rates<sup>[2]</sup>. These findings suggest strongly that there is an urgent need to address promotion of these QSCs by the relevant stakeholders.

Framework Policies to Assist Quitting of Tobacco Use



Source: IARC Handbooks of Cancer Prevention, Tobacco Control, Vol. 12: Methods for Evaluating Tobacco Control Policies (2008: Lyon, France)



There are several research outputs in Malaysia concerning various aspects of assistance for smoking cessation. However, most studies focus on the public in general and lack information on special populations in Malaysia e.g. those with mental health, HIV/AIDS and others. There are only two publications reporting people with tuberculosis and their smoking habit.

Review of literatures also found studies in Malaysia that have looked at various aspects of quitting, e.g. through telephone service and individual face-to-face clinics. The role of hospitals to promote quit smoking in the country has been raised. Although no available clinical trials is found, there is a paper reporting the use of varenicline and also NRTs in Malaysia. The role of group therapy is also reported in one local publication. One published paper reported the use of physical activity consultation and its role to quit smoking.

Very few publications in Malaysia have reported the outcome of quit smoking. Included in the reporting are associated factors that might be responsible for the results such as, number of cigarettes smoked, severity of addiction to nicotine and certain demographic factors. Glaringly, there are few publications on intentions to quit in the Malaysian literature.

Improvement of services through training has received some interest in the Malaysian literature. There are publications on training among dentists, medical doctors and pharmacists in the country.

Environmental factors have also been studied, for example, the role of pictorial warnings and intentions to quit. There is also one important publication on the role of religion and intention to quit in the Malaysian literature. This publication was supported by another reporting the reduction in cotinine levels during Ramadan. Refer to Table 1.

Table 1: Summary of Literature on Smoking Cessation in Malaysia

Year	Study	Study Population	Main findings
2017	<i>Rationalisations and identity conflict following smoking relapse: A thematic analysis</i> <sup>5</sup>	14 smokers in Quit Smoking Clinic at Hospital Tengku Ampuan Rahimah, Malaysia	Smokers rationalize their failure to quit and minimize their health risk in order to protect their image as non-smokers while it remains a source of identity conflict.
2017	<i>Effects of honey supplementation on inflammatory markers among chronic smokers: a randomised controlled trial.</i> <sup>6</sup>	32 non-smokers and 64 chronic smokers from Quit Smoking Clinic and Health Campus, Universiti Sains Malaysia	Honey supplementation has opposite effects on tumour necrosis factor- $\alpha$ and high sensitive C-reactive protein indicating the inconclusive effect of honey on inflammation among chronic smokers thus requiring further study on other inflammatory markers.
2017	<i>Knowledge, attitude, pictorial health warnings and quitting attempt on smoking in Sarawak, Malaysia.</i> <sup>7</sup>	1064 adults In Sarawak	Demographic status and knowledge of health effects of smoking influence, their attitude towards smoking, and subsequent quit smoking attempts.
2016	<i>Shisha Smoking Practices, Use, Reasons, Attitudes, Health Effects and Intentions to Quit among Shisha Smokers in Malaysia. International Journal of Environmental Research And Public Health.</i> <sup>8</sup>	503 shisha users in the city of Kuala Lumpur and the area of Klang Valley in Selangor state, Malaysia.	Intention to quit shisha associated with long duration of shisha use, the perception that shisha is healthier than tobacco cigarettes, and the perception shisha smoke is not as intrusive compared to tobacco cigarette smoke.
2016	<i>Reasons for Using Electronic Cigarettes and Intentions to Quit Among Electronic Cigarette Users in Malaysia.</i> <sup>9</sup>	12 retail and 429 e-cigarette user	Those with monthly income of RM1000 or less, disagreed with the statement ‘Smoking e-cigs is relatively cheaper compared to tobacco cigarettes’ were significantly more likely to intend to quit smoking e-cigarette
2016	<i>Treatment outcome, assessment of pharmacist-managed quit smoking clinic in Malaysia. Journal of Smoking Cessation.</i> <sup>10</sup>	Patients’ medical records at the PM-QSC in a tertiary hospital in Melaka, Malaysia	The pharmacist delivery of cessation services at a public-funded QSC was associated with a high default rate. Need to address the high default rate prior to the expansion of the service.
2016	<i>Evaluating effectiveness and safety toward electronic cigarette among Malaysian vapers: One-month observational study. Archives of Pharmacy Practice, 2016.</i> <sup>11</sup>	12 e-cigs users from the Kuantan and Pekan districts of Pahang state, Malaysia	7 elements that seem to assist Malaysian existing vapers to self-restrain from smoking. 1) As quit smoking aid 2) To decline consumption of tobacco cigarettes 3) Alternative device to take nicotine 4) To reduce cost of smoking 5) As a healthier alternative to smoking 6) To manage withdrawal symptoms 7) More enjoyable compared to other tobacco products.
2016	<i>Suitability of a Group Behavioural Therapy Module for Workplace Smoking Cessation Programs in Malaysia: A Pilot Study.</i> <sup>12</sup>	8 individuals	7 major themes which were reasons for regular smoking, reasons for quitting, comprehending smoking characteristics, quit attempt experiences, support and encouragement, learning new skills and behaviour, and preparing for lapse/relapse or difficult situations
2016	<i>The effect of faith-based smoking cessation intervention during Ramadan among Malay smokers.</i> <sup>13</sup>	62 control and 62 intervention from two local authorities in Selangor	The reduction in the saliva cotinine level was found to be more sustainable post-Ramadan in the intervention group. This finding could indicate the positive effect of using this culturally-competent intervention to encourage smoking cessation during Ramadan.
2016	<i>Quit rates at 6 months in a pharmacist-led smoking cessation service in Malaysia. Canadian Pharmacists.</i> <sup>14</sup>	176 participants from one of the quit-smoking centres in Sabah, Malaysia	Lower cigarette intake, lower Fagerström score, longer duration of follow-up and more frequent visits were significantly associated with success in quitting smoking.



2016	<i>A mixed-method study on the efficacy of physical activity consultation as an adjunct to standard smoking cessation treatment among male smokers in Malaysia.</i> <sup>15</sup>	7 participants from a government smoking cessation clinic located in Kuala Lumpur	PAC was helpful in maintaining or increasing the overall physical activity levels of participants and could assist with smoking abstinence
2015	<i>Tobacco cessation through community pharmacies: Knowledge, attitudes, practices and perceived barriers among pharmacists in Penang.</i> <sup>16</sup>	107 registered pharmacists practising in community settings on Penang Island.	More effort should be made to increase participation of community pharmacists in tobacco cessation continuing education and formulation of strategies to overcome barriers to tobacco cessation practice.
2015	<i>Training Malaysian Pharmacy Undergraduates with Knowledge and Skills on Smoking Cessation. American Journal of Pharmaceutical Education.</i> <sup>17</sup>	Sixty Year-3 and 80 Year-4 pharmacy undergraduates	Intervention group able to counsel excellently on smoking cessation, scoring more than 80%.
2014	<i>Does the duration of smoking cessation have an impact on hospital admission and health-related quality of life amongst COPD patients? International Journal of Chronic Obstructive Pulmonary Disease.</i> <sup>18</sup>	117 COPD patients from a chest clinic	Sustained quitters were less likely to have respiratory symptoms (cough, phlegm and dyspnea) than smokers. The hospital admission rate per year increased in quitters compared to smokers
2014	<i>Effectiveness of a brief physician counselling session on improving smoking behaviour in the workplace.</i> <sup>19</sup>	163 participants in the workplace clinic at a car manufacturing plant in Selangor, Malaysia.	Significant improvement in smoking behaviour after 1-month post intervention but not significant after 3-months post intervention
2014	<i>Impact of additional counselling sessions through phone calls on smoking cessation outcomes among smokers in Penang State, Malaysia.</i> <sup>20</sup>	232 smokers at Quit Smoking Clinic of two major hospitals in Penang, Malaysia.	At 6 month, intervention group successfully quit smoking (bio-chemically verified) compared to control group. The control group were significantly less likely to quit smoking
2013	<i>Secular versus religious norms against smoking: Which is more important as a driver of quitting behaviour among Muslim Malaysian and Buddhist Thai smokers?</i> <sup>21</sup>	2,166 Muslim Malaysian and 2,463 Buddhist Thai adult smokers who participated in the first three waves of the International Tobacco Control Southeast Asia project	Religious norms on smoking may play a greater role than secular norms in driving behaviour change in an environment
2013	<i>Understanding smokers' beliefs and feelings about smoking and quitting during a quit attempt: a preliminary evaluation of the SNAP model.</i> <sup>22</sup>	Eight smokers' clinic attendees in Malaysia	There was a shift in SNAP categories pre- to post-quit in those who were not smoking but only so far as 'attemper'
2013	<i>Stronger pack warnings predict quitting more than weaker ones: Finding from the ITC Malaysia and Thailand surveys.</i> <sup>23</sup>	ITC Malaysia and Thailand Survey 3189 surveyed at baseline; 1781 re-contacted in Wave 2; 2361 current smokers surveyed in Wave 2; 1586 re-contacted Wave 3	Graphic warnings appear to have common mechanisms for influencing quitting regardless of warning strength. The larger and more informative Thai warnings were associated with higher levels of reactions predictive of quitting and stronger associations with subsequent quitting, demonstrating the potency of graphic warning.
2012	<i>Job stressors and smoking cessation among Malaysian male employees.</i> <sup>24</sup>	185 employees in two major public universities in Malaysia	Men with higher co-worker's support demonstrated a higher likelihood of quitting. Smokers in a 'passive job' also demonstrated higher likelihood of quitting compared with those working in the 'low strain' category at six months
2012	<i>Conflict About Quitting Predicts the Decision to Stop Smoking Gradually or Abruptly: Evidence From Stop Smoking Clinics in Malaysia. Journal of Smoking Cessation.</i> <sup>25</sup>	198 smokers attending five quit smoking clinics in Malaysia	Conflict about quitting' can be conceptualised as a single dimension and is prevalent among smokers voluntarily attending stop-smoking clinics.

2012	<i>Perceived Effects of the Malaysian National Tobacco Control Programme on Adolescent Smoking Cessation: A Qualitative Study.</i> <sup>26</sup>	Twenty-eight participants (12 teenagers, 8 teachers, and 8 doctors)	The programme-related problems (environmental factors) were not the only factors contributing to its perceived ineffectiveness. The cunning behaviour of the teenagers (personal factor) and poor self-efficacy to overcome nicotine addiction (behavioural factor) were also found to hinder cessation.
2012	<i>Cessation assistance reported by smokers in 15 countries participating in the International Tobacco Control (ITC) policy evaluation surveys.</i> <sup>27</sup>	International Tobacco Control Policy Evaluation Project	There is wide variation across countries in rates of attempts to stop smoking and use of assistance with higher overall use of medication than behavioural support. There is also wide variation in the provision of brief advice to stop by health professionals.
2012	<i>Impact of connecting tuberculosis directly observed therapy short-course with smoking cessation on health-related quality of life. Tobacco Induced Diseases.</i> <sup>28</sup>	120 TB patients	An integrated TB-tobacco treatment strategy could potentially improve overall quality of life outcomes among TB patients who are smokers.
2011	<i>Smokers can quit regardless of motivation stage in a worksite smoking cessation programme in Malaysia.</i> <sup>29</sup>	185 smokers from two universities	Sustained abstinence was not predicted by pre-session motivation stage, but it did predict a higher relapse for the participants, compared to those in the preparation stage.
2011	<i>Predictors of 3-month abstinence in smokers attending stop-smoking clinics in Malaysia. Nicotine &amp; Tobacco Research.</i> <sup>30</sup>	198 smokers attending 5 stop-smoking clinics in Malaysia	3-months follow-up, participants reported being abstinent. including strength of motivation to quit smoking associated with the abstinent
2011	<i>The SCIDOTS Project: Evidence of benefits of an integrated tobacco cessation intervention in tuberculosis care on treatment outcomes. Substance Abuse Treatment, Prevention, and Policy.</i> <sup>31</sup>	120 TB patients	This study provides evidence that connecting TB-tobacco treatment smoking patients. The findings suggest that the integrated approach may be beneficial and offer advantages on short-term outcomes and possibly on future lung health of TB patients who quit smoking.
2010	<i>Nicotine-replacement therapy: A proven treatment for smoking cessation.</i> <sup>32</sup>		NRT has been available for more than two decades and has been shown to be safe and effective for stopping smoking.
2010	<i>Predictors of smoking cessation among adult smokers in Malaysia and Thailand: Findings from the International Tobacco Control Southeast Asia Survey.</i> <sup>33</sup>	4004 smokers were surveyed in Malaysia and Thailand	Smoking fewer cigarettes per day, higher levels of self-efficacy, and more immediate quitting intentions were predictive of both making a quit attempt and staying quit in both countries. Previous shorter quit attempts and higher health concerns about smoking were only predictive of making an attempt, whereas prior abstinence for 6 months or more and older age were associated with continuing.
2010	<i>Effectiveness of group counselling in smoking cessation program amongst adolescent smokers in Malaysia.</i> <sup>34</sup>	346 secondary school students in two districts in Selangor Malaysia,	Group counselling is very effective in improving the respondents' knowledge and quit rate, but not their attitudes toward smoking
2009	<i>Adult smokers' perception of the role of religion and religious leadership on smoking and association with quitting: a comparison between Thai Buddhists and Malaysian Muslims.</i> <sup>35</sup>	1482 Muslim Malaysian and 1971 Buddhist Thai adult smokers who completed Wave 1 (early 2005) of the International Tobacco Control Southeast Asia Survey (ITC-SEA).	Religious factors had a clear independent association with making quitting attempts in both countries and this translated to success for Malaysian Muslims but not for the Thai Buddhists.
2009	<i>Varenicline - A New Pharmacotherapy for Smoking Cessation: Implication for Smokers With Mental Health Problem.</i> <sup>36</sup>		Current available data support the effectiveness of varenicline to treat nicotine dependence. However, its safety among smokers with mental health problems remains to be elucidated.

2009	<i>Smokers' responses toward cigarette pack warning labels in predicting quit intention, stage of change, and self-efficacy.</i> <sup>37</sup>	2,006 adult smokers in Malaysia	The responses "more likely to quit because of the warning labels" and "stopped from having a cigarette when about to smoke one" significantly, predicted all stages of change and self-efficacy, independent of the other measures. In addition, thinking about the health risks and reading the warnings more often added extra predictive capacity but only in the early stages of contemplating change.
2008	<i>Patterns and predictors of smoking cessation among smokers attending smoking cessation clinics in peninsular Malaysia.</i> <sup>38</sup>	254 smokers from 8 clinics	Smokers aged 40 years and above were 6.7 times more successful in quitting; high level of confidence were nine times more successful; smoked more than ten sticks per day were ten times less successful; self-referred smokers were ten times more successful; attending for at least 30 minutes counselling sessions were 12 times more successful.
2008	<i>Is there a need for a hospital-based smoking cessation programme in Malaysia?</i> <sup>39</sup>		More attention is required to address and treat smokers presenting themselves to hospitals with acute and chronic medical illness as hospitals provide good settings to implement smoking cessation intervention.
2008	<i>Attitudes and practices in smoking cessation counselling among dentists in Kelantan.</i> <sup>40</sup>	84 dentists	Majority of the dentists agree that they have a role in smoking cessation counselling, only few among them are actually involved to a considerable extent due to limited training received.
2005	<i>An Online Smoking Cessation Program: Experience of the Malaysian Poison Centre. In: ICT In Pharmacy.</i> <sup>41</sup>	Quitline was set up in conjunction with "World No Tobacco Day" on 31st May 2005 run by pharmacists at the National Poison Centre through telephone using Computer system called "Smokefree-Online System" (SOS).	58 smokers and 2 proxy callers called the Quitline and from these 52 smokers were enrolled into the program

D. RESEARCH GAPS AND RECOMMENDATION FOR RESEARCH

i. Treatment of High Risk Group

There is a growing number of research papers in recent years on the treatment for tobacco use. This was particularly noticeable from 2015, an indication of the emphasis of activities in this area in comparison to the prior implementation of the NSP. However, most studies have focused on epidemiological research work with little intervention studies. There is now a better understanding of who are the targets for treatments within the general and, to a limited extent, the special population. However, more can be accomplished for the latter as the current available research has mainly been on mental health patients with little or no information on elderly and smoking, hospitalised patients with multiple co-morbidities and even with pregnant women.

ii. Effectiveness of the QSC

Studies on intervention within the QSC or the Quitline is limited. Available studies appear to focus on MOH QSCs with little information of QSCs in hospitals, universities or private centres. This limits the generalisability of the access to care for quit smoking in Malaysia. Because of scant reporting on this aspect, treatment, or access to treatment, is also limited. This poses difficulty for the relevant stakeholders to support or seek additional support for treatment options. Within this limitation, the studies focus mainly on pharmacological interventions with even fewer information on behavioural support.

iii. Training of Health Care Providers

Another area of research that appears popular within the Malaysian context is on training and education for quit smoking. This too, however, has only just increased over the past two years since the introduction of the NSP. Prior to this, only some studies on the training by pharmacist were reported. On matters of providing training or being trained, this seems to have increased in the types of speciality involved. Whereas in the past training mostly involved pharmacists, recent studies indicate dentists are equally involved in smoking cessation apart from medical doctors.

In this context, the summary in Table 4 suggests that more research are required for the various aspects of smoking cessation. The introduction of the NSP and subsequent mQuit Services has prompted more research interest and relevant publications on smoking cessation.

other smoking cessation aids that have proven beneficial in increasing quit attempts and eventual successful quitting. Where possible, smoking cessation interventions should be standardised and commissioned. Consideration should be given to ways of increasing the availability of NRT to private facilities such as private hospitals, GPs' and community pharmacists including low-income smokers at a reduced cost. This would enable and encourage studies to determine cost-effective significant health gain for smokers seeking help from clinics to quit smoking.

All hospitalised patients who smoke should be offered assistance to stop smoking. Such individuals might require the provision of NRT more so due to the chronicity of their condition and possibly the urgent need to quit due to health complications. This should ideally be done in the hospital before the patient is discharged. This could even be a policy in future planning. There is also a need to study the role of providing core funding to integrate smoking cessation into health services to ensure sustainability and that 140,000 quitters is met each year from present until 2025.

There is an opportunity with the introduction of the mQuit Services to create and support smoking cessation specialists among healthcare providers to a specialist cessation service. This can be accomplished through continuous improvement in accredited training in smoking cessation as provided by SCOPE and CSCSP. These courses in due time can be further supported towards a standard and recognised training course for upskilling in smoking cessation service. Nevertheless, there need to be a clear

E. POLICY RECOMMENDATIONS

There are a number of suggested improvements that may be executed with the current available policies for "O". Foremost, is the re-organising and strengthening of the practices of 3A to every health staff. It is essential that they be trained to ask, assess, and assist smoking status of every patient, in-patient and out-patient alike. Where needed and where assistance is not able to be given onsite, smokers should be referred to the nearest QSC.

Intensive smoking cessation support should be carried out individually or in groups where applicable, and this should include using motivational interviewing and coping skills. This will allow a more comprehensive treatment plan where both pharmacological and behavioural support are provided since this has been shown to be most effective. Where intensive smoking cessation is provided, this should also include the use of prescription NRT, and/or

policy of funding for this training through prioritisation within existing training budgets.

There is still a need to introduce a system to require all quit smoking services (public and private) to maintain current record of smoking status and to regard this as vital and valuable information for auditing purposes. Although the mQuit Services has a general auditing activity, it nevertheless requires a clear policy to streamline this, allowing better data capturing as we move towards smoke-free Malaysia in 2045.

It is also crucial to formalise cessation interventions policy in schools and higher learning institutions targeting adolescents and young people including the creation of a standardised curriculum. Smoking and smoking cessation should be a component in the core curriculum of basic training for all health professionals. Funding should be built into this programme.

## F. SUMMARY

More support is required to strengthen and accelerate full implementation of Article 14 of the WHO FCTC because only effective tobacco cessation will have a sufficient effect on mortality in the few years left to reach the UN/WHO goal of a 25% reduction in premature mortality from NCDs by 2025. Failure on this front will surely thwart the global aspiration for success in NCD control and to save millions of current smokers' lives.

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APPENDIX

Table 2: SWOT Analysis

Title	Local Evidence
Strength	
3A's and 5 A's approach	[42]
Clinical Practice Guideline on Management of Tobacco Use and Dependence 2003	[42]
Selected cessation medications available at some government health facilities	*National formulary
National Tobacco Control Strategy – QSC, meds, CPG, CSCSP; integration into curricula	[43]
FCTC secretariat (Steering Committee?)	[43]
Healthcare providers wanting to assist in SC activity	[44-48]
Presence of national infoline	
Structured smoking cessation (SC) training available. Online training modules include the Certified Smoking Cessation Service Provider (CSCSP) programme, developed for practicing pharmacists to equip pharmacy students with knowledge necessary for smoking cessation counselling	[17]
Weaknesses	
Accessibility issues to QSC <ul style="list-style-type: none"><li>Medication</li><li>Dedicated staff</li><li>Operating days</li><li>Equipment</li></ul>	[49, 50]
Lack of communication between relevant ministerial agencies	
No consistent supply of cessation aid	[51]
Low referral to QSC	[50]
Outdated clinical practice guideline (CPG)	[42]
No national Quitline	
Lack of knowledge of HCP	[44, 52-54]
Incomplete smoking rates in staff	

Funding <ul style="list-style-type: none"><li>Training</li><li>Infrastructure</li><li>Medication</li><li>Equipment</li><li>Human capital</li></ul>	[51]
Key performance index (KPI)	
Variable screening of 3A/5A	[55]
Stakeholders (smokers) having abnormal belief	[56, 57]
Lack of promotion for quit smoking clinic (QSC) <ul style="list-style-type: none"><li>Referral system</li><li>Promotional material</li></ul>	[58]
There is a need to standardise the differences in the measurement of the threshold levels of the expired-air carbon monoxide concentration in the quit smoking clinics to validate success in quitting even though this study reported reducing the threshold to verify claimed smoking abstinence from10 ppm to 5 ppm made minimal difference to documented success rates.	[59]
Numerous constraints impede the progress of research into smoking cessation in Malaysia, chiefly a lack of resources such as funding, manpower, and waning interest in this area	[60]
Most studies in this area are saturated with prevalence studies targeting adolescents and factors associated with smoking initiation. The over-emphasis on student initiated research into this area has resulted in research samples largely from school and institutional settings. Immediately lacking are studies examining smoking in adults and special groups.	[60]
Opportunity	
Available clients wanting to quit	[55]
Available quitline infrastructure	[61]
Presence of SC experts	
Available QSC	[42, 43]
Support from other stakeholders	[46, 52, 54, 62]
Availability of HCPs which are not in Ministry of Health (MOH)	[46]
Hospitals provide a good setting to implement smoking cessation intervention especially in smokers with acute and chronic medical illness	[39]
Exhaled CO was proven to be a useful tool in predicting nicotine dependence and to motivate smokers to quit.	[63]
A study reported that smokers were conflicted in their beliefs and feelings about smoking and quitting.	[22]

Smokers who display greater conflict with regards to quitting were more likely to choose gradual cessation.	[25]
Motivation to stop smoking was found to predict cessation at 3-month follow-up.	[30]
Community intervention programmes are sorely needed for smokers who want to quit without clinic assistance.	[60]
Currently, there are few clinical trials, pharmacotherapy and behavioural support interventions available to improve cessation. There is a need for more clinical trial research.  Research into the relationship among environmental factors, behavioural, developmental, social and other factors in greater depth and in relation to interventional studies is required to determine new interventional strategies for quitting smoking.	[60]
There is a need for conclusive research into the use of e-cigarettes and vaping and its role in helping smokers quit smoking.  The need for local data as to whether electronic cigarettes may be a gateway into conventional tobacco smoking for non-smokers through smoking initiation smoking in adolescents and young adults.  We do not know much if electronic cigarettes can assist recalcitrant smokers to quit in Malaysia.  Long term studies examining the health effects of vape usage should be undertaken, along with sourcing treatment to help vapers quit.	[60]
There is a need to review and enhance the existing mandatory health warning messages on cigarette packs in Malaysia and the implementation of plain packaging in Malaysia.	[60]
<b>Threats</b>	
Tobacco industry	[64-66]
Availability of cessation aids	[42]
Stakeholders (patients) not keen	[67]
Lack of options of cessation aids <ul style="list-style-type: none"><li>● More established eg. Bupropion</li><li>● New treatments eg. NRT mouth spray</li></ul>	[42]
Alternative non-evidence based options to quit	[67]
To improve smoking cessation, identifying causes of relapse is crucial	[5]
There is also the constraint of recruiting new samples at quit smoking clinics due to various reasons such as smokers themselves not seeking clinic help to quit smoking and healthcare workers not doing enough to encourage participation.	[60]

Table 3: Six Core Measures of Article 14

Core Measures	FCTC	FINDINGS FROM MALAYSIA	REFERENCES
Conduct a national situation analysis, as recommended in the FCTC Article 14 Guidelines.	3.2.8.1 - Evidence-based comprehensive and integrated guidelines developed	There is a need to review and enhance the existing mandatory health warning messages on cigarette packs in Malaysia and the implementation of plain packaging in Malaysia.	[60]
		Tobacco industry	[64-66]
Develop and implement an evidence-based national cessation strategy and national cessation guidelines.	3.2.8.9.a - Tobacco dependence treatment incorporated into the curricula of medical schools	3A approach was introduced and subsequently 5A in the latest guideline	[42]
	3.2.8.9.b - Tobacco dependence treatment incorporated into the curricula of dentist schools	National Tobacco Control Strategy available	[43]
	3.2.8.9.c - Tobacco dependence treatment incorporated into the curricula of nursing schools		
	3.2.8.9.d - Tobacco dependence treatment incorporated into the curricula of pharmacy schools	Structured smoking cessation (SC) training available. Online training modules include the Certified Smoking Cessation Service Provider (CSCSP) programme, developed for practicing pharmacists to equip pharmacy students with knowledge necessary for smoking cessation counselling	[17]
		There is a need to standardize the differences in the measurement of the threshold levels of the expired-air carbon monoxide concentration in the quit smoking clinics to validate success in quitting even though this study reported reducing the threshold to verify claimed smoking abstinence from 10 ppm to 5 ppm made minimal difference to documented success rates	[63]
		Numerous constraints impede the progress of research into smoking cessation in Malaysia, chiefly a lack of resources such as funding, manpower, and waning interest in this area	[60]
		Most studies in this area are saturated with prevalence studies targeting adolescents and factors associated with smoking initiation. The overemphasis on student initiated research into this area has resulted in research samples largely from school and institutional settings. Immediately lacking are studies examining smoking in adults and special groups.	[60]
		Exhaled CO was proved to be a useful tool in predicting nicotine dependence and to motivate smokers to quit.	[63]

		<p>Currently there are few clinical trials, pharmacotherapy and behavioural support interventions available to improve cessation. There is a need for more clinical trial research.</p> <p>Research into the relationship among environmental factors, behavioural, developmental, social and other factors in greater depth and in relation to interventional studies is required to determine new interventional strategies for quitting smoking.</p>	[60]
		<p>There is a need for conclusive research into the use of e-cigarettes and vaping and its role in helping smokers quit smoking.</p> <p>A need of local data as to whether electronic cigarettes may be a gateway into conventional tobacco smoking for never before smokers by increasing the initiation of smoking in adolescents and young adults.</p> <p>We do not know much if electronic cigarettes can assist recalcitrant smokers to quit in Malaysia.</p> <p>Long term studies examining the health effects of vape usage should be undertaken, along with sourcing treatment to help vapers quit.</p>	[60]
		To improve smoking cessation, identifying causes of relapse is crucial	[5]
Mandate recording tobacco use of all patients in all medical notes.		In the process of policy development	
Train healthcare workers to record tobacco use and give brief advice.	3.2.8.3.a - Designed programmes to promote cessation in educational institutions	There is also the constraint of recruiting new samples at quit smoking clinics due to various reasons such as smokers themselves not seeking clinic help to quit smoking and healthcare workers not doing enough to encourage participation.	[60]
	3.2.8.3.b - Designed programmes to promote cessation in health-care facilities	Lack of knowledge of HCP	[44, 52-54]
		A study had reported that smokers were conflicted in their beliefs and feeling about smoking and quitting.	[22]
		Smokers who displayed greater conflict with regards to quitting were more likely to choose gradual cessation.	[25]
		Motivation to stop smoking was found to predict cessation at 3-month follow-up.	[30]
Help healthcare workers to quit tobacco use.	3.2.8.3.c - Designed programmes to promote cessation in workplaces	Healthcare providers wanting to assist in SC activity	[44-48]

Integrate brief advice to all tobacco users into the healthcare system.	3.2.8.4.a - Included diagnosis and treatment in national tobacco control programmes	Healthcare providers reported wanting to assist in SC activity	[44, 45, 47, 48, 68]
		Low referral to QSC	[50]
		Stakeholders (smokers) having abnormal belief	[56, 57]
		Support from other stakeholders	[44, 50, 52, 53]
		Availability of HCPs which are not in Ministry of Health (MOH)	[46]
		Hospitals provide a good setting to implement smoking cessation intervention especially in smokers with acute and chronic medical illness	[39]
		Community intervention programmes are sorely needed for smokers who want to quit without clinic assistance.	[60]
	3.2.8.4.b - Included diagnosis and treatment in national health programmes 3.2.8.4.c - Included diagnosis and treatment in national educational programmes 3.2.8.5 - Included diagnosis and treatment in the health-care system 3.2.8.8.a - Physicians offering counselling services 3.2.8.8.b - Dentists offering counselling services 3.2.8.8.c - Family doctors offering counselling services 3.2.8.8.d - Traditional practitioners offering counselling services 3.2.8.8.f - Nurses offering counselling services 3.2.8.8.g - Midwives offering counselling services	Stakeholders (patients) not keen	[67]
		Structured smoking cessation (SC) training available. Online training modules include the Certified Smoking Cessation Service Provider (CSCSP) programme.	[69] [47]
	3.2.8.8.h - Pharmacists offering counselling services		
	3.2.8.8.i - Community workers offering counselling services		
	3.2.8.8.j - Social workers offering counselling services		

**Table 4:** Additional Implementable Policies for More Resourced Countries

RECOMMENDATIONS	FCTC	FINDINGS FROM MALAYSIA	REFERENCES
Offer mobile phone text messaging support and other evidence-based web support (very low cost and accessible).			
Make evidence-based affordable cessation medicines and less harmful forms of nicotine more available.	3.2.8.10 - Accessibility and affordability of pharmaceutical products facilitated	Cessation aid available	[42] *National formulary [49, 50]
		Accessibility issues to QSC <ul style="list-style-type: none"><li>○ Medication</li><li>○ Dedicated staff</li><li>○ Operating days</li><li>○ Equipment</li></ul>	
		Availability of cessation aids	
		Lack of options of cessation aids <ul style="list-style-type: none"><li>○ More established eg. Bupropion</li><li>○ New treatments eg. NRT mouth spray</li></ul>	
		Alternative non-evidence based options to quit	[67]
	3.2.8.11 - Where and how pharmaceutical products legally purchased		
	3.2.8.12.a - Nicotine replacement therapy available	No consistent supply of cessation aid	[51]
	3.2.8.12.b - Treatment with bupropion available		
	3.2.8.12.c - Treatment with varenicline available		
Offer evidence-based telephone quit-lines and put the number on pack warnings	3.2.8.2.e - Implemented telephone quit-lines	Available quitline infrastructure	[61]
Expand training to include other healthcare workers; e.g. village health workers.			
Offer specialist face-to-face cessation support.	3.2.8.6.b - Secondary and tertiary health care providing programmes on diagnosis and treatment	Available clients wanting to quit	[55]
		Available QSC	[42, 43]
	3.2.8.6.c - Specialist health-care systems providing programmes on diagnosis and treatment		
	3.2.8.6.d - Specialized centres for cessation providing programmes on diagnosis and treatment		
	3.2.8.6.e - Rehabilitation centres providing programmes on diagnosis and treatment		

	3.2.8.7.c - Programmes in specialist health-care systems covered by public funding		
	3.2.8.7.d - Programmes in specialized centres covered by public funding		
Establish mass communication and education programmes that encourage cessation and promote cessation support.	3.2.8.2.a - Implemented media campaigns to promote tobacco cessation	Lack of promotion for quit smoking clinic (QSC) <ul style="list-style-type: none"><li>○ Referral system</li><li>○ Promotional material</li></ul>	[58]
	3.2.8.2.c - Implemented programmes specially designed for women		
	3.2.8.2.d - Implemented programmes specially designed for pregnant women		
	3.2.8.2.b - Implemented programmes specially designed for underage girls and young women		
	3.2.8.2.f - Implemented local events to promote cessation of tobacco use		
	3.2.8.3.d - Designed programmes to promote cessation in sporting environments		
OTHERS Establish cessations programmes covered by public funding.	3.2.8.7.a - Programmes in primary health care covered by public funding		
	3.2.8.7.b - Programmes in secondary and tertiary health care covered by public funding		
	3.2.8.7.e - Programmes in rehabilitation centres covered by public funding		
		Funding <ul style="list-style-type: none"><li>○ Training</li><li>○ Infrastructure</li><li>○ Medication</li><li>○ Equipment</li><li>○ Human capital</li></ul>	[51]





# WARNING PEOPLE ON THE DANGERS OF TOBACCO

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## ARTICLE 11

### A. INTRODUCTION

Warning labels on tobacco packaging provide crucial information on the dangers of tobacco use. It is an excellent method to inform and educate people on the harms of tobacco use and tobacco constituents. Research shows that health warnings on cigarette packs is an effective smoking intervention. If a smoker who smokes an average of 20 cigarettes per day, he or she is potentially exposed to 7,300 times to the warnings and these exposures are during the times and situations that are relevant to the

behavior especially during buying cigarettes and when getting a cigarette out of the pack. Research also shows that there is probably no other intervention for health improvement that is delivered so consistently and in such an appropriate way<sup>[1]</sup>.

According to Article 11 in the WHO FCTC Guidelines, the size of PHWs is important as its effectiveness hinges on its size. It specifies that health warnings and their messages should be large, clear, visible, and legible, and the use of culturally appropriate language(s)<sup>[2]</sup>. The larger the image, the better impact it will serve<sup>[3]</sup>. Article 11 also requires alternation of warnings to maintain saliency and enhance impact. The Guidelines further specify that Parties should

consider using two types of rotation: having multiple warnings appear concurrently, and, having the warnings change after a set period of time<sup>[3]</sup>.

Article 11 also requires Parties to implement measures to ensure that tobacco packaging and labelling do not create any false, misleading, or deceptive impressions on the product. Examples of such terms are “low tar”, “light”, “mild”, “ultra”, or other terms/messages that might mislead consumers. Parties should also provide relevant information on constituents and emissions of tobacco products but this needs to be done with descriptive text without yielding the numbers. Guideline of Article 11 also stated that Parties should prohibit the display of figures of emission yields as they may be misleading<sup>[2]</sup>.

The Guidelines of Article 11 and 13 of the Framework recommends that Parties work towards adopting plain packaging[3]. Australia is the first and only country to fully implement plain packaging since December 2012. Plain packaging is a suitable policy for any country employing a comprehensive approach for tobacco control covering all categories of tobacco products. Evidence supporting the benefits of plain packaging are<sup>[4-5]</sup>:

- Reduces the attractiveness of tobacco products
- Restrict use of the pack as a form of advertising and promotion
- Limits misleading packaging, and
- Increase the effectiveness of health warnings.

Health warning labels on cigarette packaging is an excellent method to inform the public on the harms of tobacco use and tobacco constituents. Hence, warning labels can be taken into consideration as a health communication intervention.

The evaluation on the effectiveness of pictorial health warnings have been well documented by many country parties to the WHO-FCTC. These include the aspects of salience (noticing, reading), recognizing labels as a source of information on the harms of smoking, recognizing that warning labels communicate the health risks of smoking, thinking and pondering on the health risks of smoking, internalizing and developing intention to quit, seeking cessation services and performing quit attempts and quitting and avoiding relapse.

However, findings from the MPOWER report found that not many smokers or non-smokers fully understand the health risks of tobacco. Many smokers believe that they can reduce or stop tobacco use before the occurrence of a health problem. Smokers also underestimate the addictiveness of tobacco use and the risks it poses to health. Both smokers and non-smokers also underestimate the danger of exposure to second-hand smoke. These threats have not been adequately explained to the public in many low and middle income countries including Malaysia where tobacco use is on the rise and tobacco control policy is generally in its early stages<sup>[7]</sup>.

## B. CURRENT POLICY AND SITUATIONAL ANALYSIS

Best practice warning labels, that comply with the Guidelines for implementing Article 11 of the WHO-FCTC, reach all tobacco users, increase their awareness of health risks, are well-accepted by the public and cost the government virtually nothing. This section presents the current Tobacco Control Policy in Malaysia pertaining to implementation of Article 11 and its situational analysis.

### i. Implementation of **Textual** Warnings and other information

Health warning labels in Malaysia have evolved over the past 30 years. Since 1979, the Malaysian government has implemented a general textual warning “AMARAN OLEH KERAJAAN MALAYSIA - MEROKOK MEMBAHAYAKAN KESIHATAN”, (Warning by the government of Malaysia, Smoking Endangers Health) on one side of the cigarette pack<sup>[8]</sup>. In 2009, this textual warning was replaced by six new textual health warnings to compliment six new pictorial health warnings (PHWs)<sup>[2]</sup>. The textual health warnings, both in English and the Malay language, focused on the adverse effects of cigarette use as listed in Table 1.0.

Table 1.0: Implementation of Textual Warnings and other information

Front Panel ( text in Malay language)	Back Panel (text in English)
Rokok Penyebab Kanser Leher	Cigarette Causes Neck Cancer
Rokok Penyebab Kanser Paru-Paru	Cigarette Causes Lung Cancer
Rokok Penyebab Kanser Mulut	Cigarette Causes Mouth Cancer
Rokok Penyebab Penyakit Gangren	Cigarette Causes Gangrene
Rokok Penyebab Kelahiran Bayi Pra-Matang	Cigarette Causes Premature Birth
Rokok Penyebab Keguguran Janin	Cigarette Causes Miscarriage

The second series of textual health warnings were implemented three years later in January 2014 in combination with the existing PHWs<sup>[2]</sup>. These textual health warnings communicate similar adverse effects as the 2009 textual warnings. The later series focused on the act of smoking i.e. ‘merokok’, rather than the product itself i.e. ‘rokok’ (see Table 2.0).

Table 2.0: Implementation of Textual Warnings and other information 2<sup>nd</sup> round

Front Panel (text in Malay language)	Back Panel (text in English)
Merokok Menyebabkan Kanser Leher	Smoking Causes Neck Cancer
Merokok Menyebabkan Kanser Paru-Paru	Smoking Causes Lung Cancer
Merokok Menyebabkan Kanser Mulut	Smoking Causes Mouth Cancer
Merokok Menyebabkan Kanser Lidah	Smoking Causes Tongue Cancer
Merokok Menyebabkan Kelahiran Mati	Smoking Causes Still Birth
Merokok Menyebabkan Kelahiran Bayi Pra-Matang	Smoking Causes Premature Birth

According to the 2009 Regulations, apart from the above textual warnings, the printing of other information are also required on the side panel of the pack. This includes statement on the constituent of a cigarette “*Produk ini mengandungi lebih 4,000 bahan kimia termasuk tar, nikotina dan karban monoksida yang membahayakan kesihatan*”, and “*20 batang rokok*” should be written in the Malay language. On the other side panel, is the warning on the prohibition of cigarette sale to minors in the Malay language “*Dilarang Jual Kepada Orang Bawah Umur 18 Tahun*”. It also required the complete address of manufacturer to be clearly stated. On the top panel, “*tarikh dikilang*” must be stated clearly as well<sup>[2]</sup>.

According to the WHO-FCTC Guidelines, content message is important. Currently, the Malaysian text-warning messages focus on the various adverse health effects of smoking, framing its statement constructions on health consequences such as, “Smoking Causes Lung Cancer”. The effectiveness of text warning may be enhanced by focusing on human suffering, impact on quality of life, and human tragedy of cigarettes (for example, the the Canadian new text warning 2012). As an example text warning “Smoking Causes Lung Cancer” could be constructed to “This is what dying of lung cancer looks like”, “Smoking Causes Stroke” to “A stroke can leave you helpless”, “Smoking Causes Premature death” to “Another premature death”<sup>(1),(9)</sup>.

- ii. Implementation of **Pictorial** Health Warnings and size of the warnings
- The legal requirement for pictorial health warnings was implemented on January 2, 2009, with full compliance required on all cigarette packs for sale in the Malaysian market as of June 1, 2009. The labels consist of six pictorial health warnings printed in both the Malay and English language, covering 40% of the front and 60% of the back of all cigarette packs. In addition, all packs require an advisory against selling cigarettes to minors, an info-line number, and a warning that cigarette smoke contains 4000 types of chemicals<sup>(2)</sup> (Figure 1.0) below:

Figure 1.0: Malaysia’s 2009 pictorial health warnings (40% front, 60% back)



In January 2014, Malaysia introduced a new set of larger pictorial warnings (50% front, 60% back), mandated under the Control of Tobacco Product (Amendment) Regulations (Figure 2.0)<sup>(2)</sup>.

Figure 2.0: Malaysia’s 2014 pictorial health warnings (50% front, 60% back)





Currently, the Malaysian pictorial warnings convey vivid depictions of close-up views of body parts of smoker affected by diseases linked to smoking. For example, “Smoking Causes Lung Cancer” shows a real life photo of decaying lungs. “Smoking Causes Tongue Cancer” shows an image of an affected tongue.

However, based on the Canadian new PHWs 2012<sup>[11],[9]</sup>, pictorial warnings can be enhanced using real life pictures, medium shots or long shots of vivid depiction of human suffering, impact on quality of life, and human tragedy of cigarettes. For example, pictorial warning “Smoking Causes Lung Cancer” could be depicted using a real life photo of a patient lying on a hospital bed suffering and dying of lung cancer with text warning states “This is what dying from lung cancer looks like”.

iii. Rotating Messages and Multiple Rounds of Health Warnings

In the case of Malaysia, multiple warnings have appeared concurrently. The usage of the new set of 2014 PHWs in combination with the PHWs of 2009 may dilute the saliency of the new PHWs. Although the FCTC recommends a rotation possibly for every 1-3 years, there has been no new set of PHWs since 2014.

iv. Design Features of Health Warnings

Currently, the Malaysian PHWs covers 50% front and 60% back, with vivid real life photos of human affected by smoking or cigarette smoke. These photos could be enhanced to larger size in order to increase its effectiveness, i.e. deep thinking (pondering) and understanding, leading to change in beliefs, attitude and behaviour towards quitting<sup>[9]</sup>.

The Malaysian PHWs eliminate direct terms such as low tar”, “light”, “mild”, “ultra”. However, there are attempts by the tobacco industry to challenge the boundary on the use of words and terms with alternative descriptors such as “Elite”, “Silver”, “Nova” or using devices such colour-coding, numbers, or images on their cigarette packs<sup>[10]</sup>.

v. Tax stamps ‘Tracking and Tracing’ on Cigarette pack

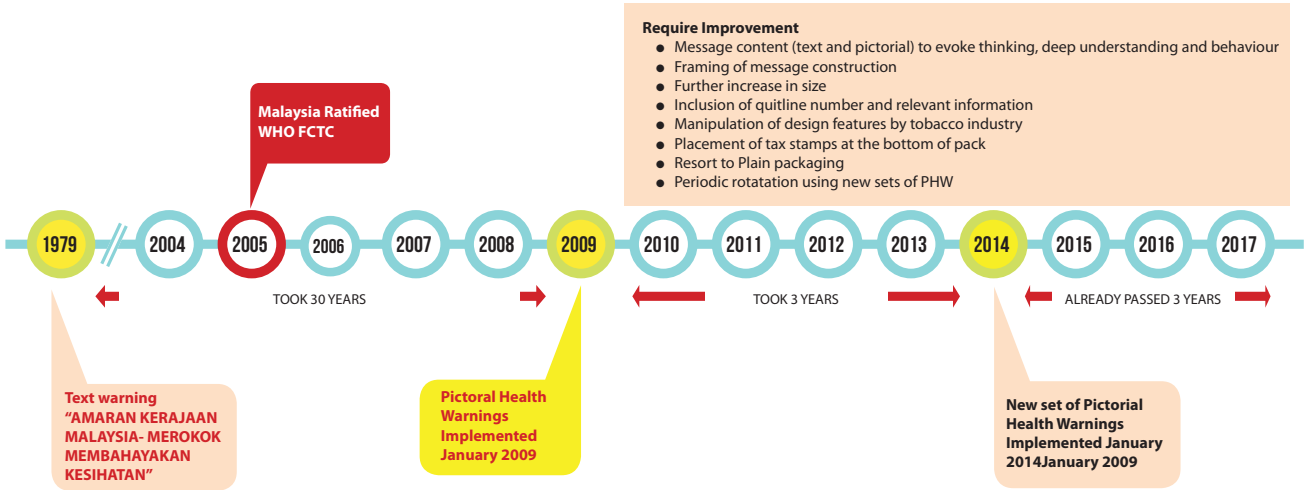
Since 1 October 2016, security ink on cigarette packs have been mandatorily replaced by tax stamps for all locally manufactured cigarette packs in Malaysia<sup>[11]</sup>. Switching to tax stamp (for both local and imported cigarettes) is in compliance with the World Health Organization Framework (FCTC) where a ‘Track and Trace’ system helps to facilitate the monitoring of tobacco supply. The new tax stamps is a major effort to ramp up security and curb the distribution of illegal cigarettes, which are potentially fatal due to its unregulated levels of chemicals. Violations to the ruling is subject to charge under Section 89 of Goods and Services Tax Act 2014. Despite the positive effort made by the FCTC on Track and Trace, there is evidence that companies have deliberately placed the tax stamps on the pack obscuring most parts of the PHW thus reducing saliency.

vi. Progress in implementation of Article 11

In summary, following the ratification of the WHO-FCTC in 2005, Malaysia has had considerable progress in its implementation of effective PHWs. After 30 years of reliance on textual health warning, Malaysia implemented pictorial health warnings (PHWs) in 2009 and in the following three years, produced a new set of PHWs (Figure 3.0). However, a number of details pertaining to packaging and labelling components do require further scrutiny. These include message content, framing of message construction, further increase in size, inclusion of quitline numbers, and counter-manipulation of design features by the industry and placement of tax stamps.

The Malaysian government should make the most of the cost effective method to educate the public on the hazards of tobacco use and motivate tobacco users to quit<sup>[11]</sup>. With this understanding, the Malaysian government ratified the World Health Organization Framework Convention on Tobacco Control (WHO-FCTC) in 2005 with the commitment to implement strong tobacco control policies. Within three years, the government fulfilled the requirement by adopting more prominent pictorial health warnings on tobacco products under the provision of Article 11 on packaging and labelling of tobacco products and is working toward improving its effectiveness.<sup>[12]</sup>

Figure 3.0: Malaysia progress in implementing Article 11



C. TOBACCO CONTROL RESEARCH IN MALAYSIA

The International Tobacco Control (ITC) Policy Evaluation Malaysia Project

The ITC Malaysia Survey has the most extensive evidence on health warnings in Malaysia. The ITC Malaysia Survey is a prospective cohort study of adult smokers and non-smokers (Wave 1-3) age 18 and older, and adolescents age 13-17 using the stratified multistage design sampling. The survey involved six consecutive waves conducted between 2005 and 2014. Wave 1 to Wave 3 was conducted between 2005 and 2009 when text warning was in place. Wave 4 (July to November 2009), Wave 5 (May 2011 to April 2012) and Wave 6 (May 2013 to January 2014) after the implementation of Pictorial Health Warnings (PHWs) on 1 January 2009.

The International Tobacco Control Policy (ITC) Evaluation Malaysia surveys evaluated the impact of tobacco control policies from 2005. The last cohort of the ITC longitudinal research which involved 2,000 adult smokers and 1,000 adolescents were followed up until 2014. It studied the effectiveness of PHWs using the conceptual model<sup>[13]</sup> IARC (Figure 4.0) below:

- a. Policy-specific variables such as label salience, awareness of the label information, and thinking of the warnings;
- b. Psychosocial mediators such as beliefs and attitudes, perceive risk, perceive severity, self-efficacy, behaviour control, and quit intention;
- c. Policy-Relevant Outcomes such as quit attempt, successful quitting, consumption changes, and brand switching

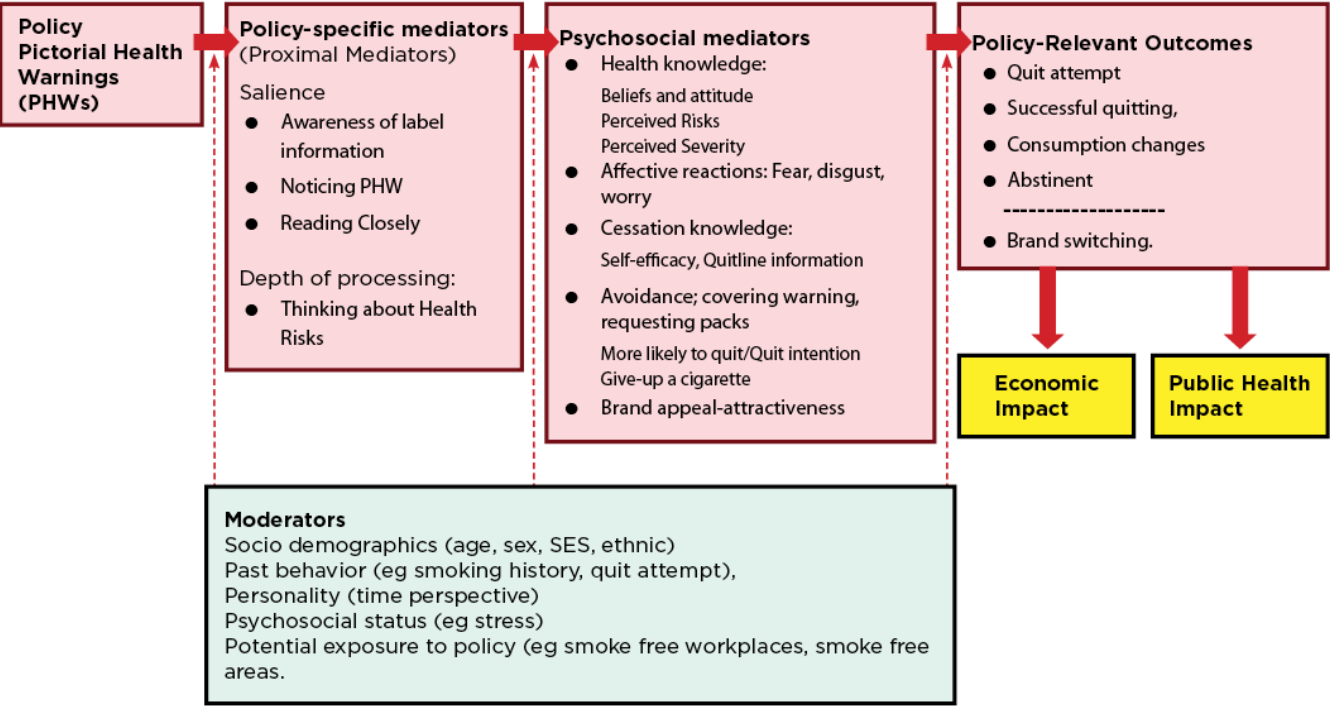


This framework assumes that policy has an influence on tobacco related-behaviours through a causal chain of psychological mediators. The most immediate effects are those on policy-specific mediators, i.e. those that are proximal to the policy (conceptual closest) or most specifically related to the policy itself. The more downstream effects are the psychosocial mediators to measure smokers’ beliefs on the norms of smoking. This articulates the goal of understanding the psychosocial processes that explain how and why PHWs may lead to changes in attitudes and behaviour of smokers. The policy-relevant outcomes that measure include smoking

quit attempt, successful quitting and support for other tobacco control policies.

Thus, based on this framework depicted in Figure 4.0 a well-designed PHW should increase salience of the PHWs, increase awareness of label information, evoke deep thinking of the health risks involved that may lead to an increase in perception about risks and severity, seeking cessation knowledge, feeling of disgust and worry, which is theorized to lead to quit intentions and quitting behaviour.

Figure 4.0: Conceptual Framework for Evaluation of Effectiveness of PHWs



**Impact of the Malaysian PHWs on proximal mediators and psychosocial behaviour of health risks among adult smokers and adolescents**

Generally, the Wave 4 survey results demonstrate that the introduction of pictorial warnings increased the salience of health warnings. Additionally, there is evidence that the larger pictorial warnings led to a reversal in the decline in label effectiveness that had occurred between 2005 and 2008, at the time when the same small text-only warnings were on cigarette packs. There were significant increases after the pictorial warnings were introduced in effectiveness measures such as, whether health warnings made smokers think about the health risks of smoking and whether they forego a cigarette because of the warning label. However, in the Wave 5 and Wave 6 surveys, the effects of PHWs appeared to have diluted. In addressing the issue of wear-out effect, the Malaysian government introduced a new set of larger PHWs (50% front and 60% back) in January 2014.

**Salience-noticing to PHWs**

Across Wave 1 to Wave 3 (2005 to 2008), when cigarette pack carried only text warning, slightly more than half of adult smokers and quitters noticed the text health warning on cigarette packs in relation to “often” and “very often”. The percentages did not differ much throughout the three years – Wave 1 (54.4%), Wave 2 (47.3%) and Wave 3 (48.0%). Following the introduction of PHWs in 2009, there was a significant increase in the percentage of adult smokers noticing the labels (“often” or very often) to more than two-thirds of smokers in Wave 4 (60.7%) and Wave 5 (65.1%). This is an increase of 12.7 and 17.1 percentage points respectively from Wave 3 (before the pictorial

warnings were introduced). However, this percentage decreased marginally in the Wave 6 (55.4%) survey. This may be an indication that the wear-out effects of PHW is showing after two years of implementation.

Percentages of noticing “often” and “very often” reported by adolescents before and after the implementation PHWs were slightly lower than adult smokers as well as quitters although the trend reported almost similar.

**Cross-country comparison impact on salience-noticing**

A comparison with other ITC countries reveal that the percentage of male adult smokers in Malaysia noticing the PHWs “often” or “very often” after its implementation during the Wave 4 survey was 65.7%, higher than two other middle-income ITC countries that had implemented pictorial warnings (Brazil and Mexico). The percentage was closely similar to Uruguay but was lower than two other middle-income countries (Thailand and Mauritius) that had also implemented pictorial warnings.

**Salience- read and look closely**

There is also a significant increase in the percentage of adult smokers and quitters who read or looked closely at the label “often” or very often”, from one-third (38.2%) of adult smokers in the Wave 3 survey when text warnings were on packs, to more than half (52.5%) of adult smokers in Wave 4 after pictorial warnings were introduced. However, there was a decline in the trend in the Wave 5 survey (44.0%). It rose slightly during the Wave 6 survey (48.8%). This again indicates that the wear-out effects might have shown out after two years of its implementation.

**Wear-out effect overtime**

The result pattern overtime indicates that from Wave 1 to Wave 3 (2005 to 2008), there are declines in the indicators of label effectiveness. The wear-out effect was also with other psychosocial and behavioural measures of label effectiveness. For example, the percentage of adult smokers who think health risk of smoking at level “Somewhat” reported significant increase before and after the implementation of the PHWs from (29.6%) in Wave 1 to (50.7%) in Wave 4. However, a decline was reported in Wave 5 (36.1%) and in Wave 6 survey (36.0%). As for those who were thinking “A lot”, a high percentage was reported in Wave 4 (9.8%) and Wave 5 (12.4%) compared to the other Waves.

For adolescents, an increased trend was reported for those who were thinking “A lot” of health risk of smoking: Wave 2 (51.1%) to Wave 6 survey (65.1%). Findings also show that 13.8% of adult smokers in the Wave 1 survey (2005) indicated that health warning made them more likely (“a lot”) to quit smoking. This percentage decreased to 7.5% in Wave 2 and 5.7% in Wave 3 surveys. Following the implementation of PHWs, the percentage increased significantly in Wave 4 (16.7%). It however decreased slightly in the Wave 5 (12.9%) and Wave 6 (10.1%) surveys.

These “pre-behaviour” measures of label effectiveness - thinking about health risks and linking health warnings to likelihood of quitting - are important because along with increased noticing/ salience and knowledge of the health harms of tobacco products, it implies that larger pictorial health warnings are more effective than the former text-only warnings.

**Impact of Pictorial Warning Labels on Smoking Behaviours**

Another important indicator of label effectiveness is self-reported behaviour. This may be illustrated as an example whether or not a smoker decides to forego a cigarette when he or she is about to light up but refrained because of the warning labels. Giving up a cigarette when a smoker is about to smoke has been shown to be a predictor of a future quit attempt.

The percentage of adult smokers reporting that they gave up smoking a cigarette at least once because of the warning labels decreased sharply from Wave 1 (39.8%) to Wave 3 (23.7%). However, when pictorial warnings were introduced during the Wave 4 survey, the percentage climbed significantly to 60.3%. A declining trend was reported in Wave 5 (46.9%) and Wave 6 (46.1%).

**Impact of Pictorial Warnings Labels on Emotions**

Following the introduction of PHWs on cigarette packs during the Wave 4 survey, a high percentage of adult smokers said the PHW images made them felt “somewhat/very” unpleasant (76.6%) and alarmed (73.8%). Only 36.2% said the PHWs were “Extremely/very” realistic while 26.0% said it made them felt “extremely/very” worried. Overall, a declining trend was reported in Wave 5 although it slightly increased in Wave 6.

Majority of adolescents said PHWs on cigarette packs were very believable following its introduction during the Wave 4 survey. This reporting increased through the period of study surveys. While among those who said that the health warning on cigarette packages discourage people their age to smoke, significant increases were reported from Wave 2 (18.0%) to Wave 6 (42.7%), before and after the implementation.

**Impact of Pictorial Warnings Labels on Avoidance**

Lastly, the introduction of pictorial warnings did not lead to a significant increase in avoiding warnings (and even if it had, a number of studies have shown that avoidance of warnings is non-associated).

**Impact of Pictorial Warnings 2009 on number of smokers forgoing a cigarette**

**Table 3.0:** Percentage of smokers forgoing a cigarette after noticing PHWs

Impact of PHWs	Pre	Post	% Dif
Noticing Pictorial Warning Labels	51.4%	67.2%	Increased 15.8%
Forgoing a cigarette	21.2%	54.6%	Increased 33.4%

Based on the data in Table 3.0, in year 2009, there were approximately 3.6 million smokers in Malaysia. After the introduction of pictorial warnings, 500,400 smokers noticed the warnings and 1, 317, 600 smokers reported forgoing a cigarette because of the warnings. This is a clear indication of the increased effectiveness even at salience level (noticing) leading to behavioural change and forgoing a cigarette at least once when about to smoke.

**Pictorial Health Warnings Design Characteristic Efficacy testing exploring what works and what does not work.**

To date, there are very few efficacy testing exploring design of PHWs that could be used for the Malaysian cigarette packs.[9] Most research were carried out by the Clearinghouse for Tobacco Control at the National Poison Centre, USM, and the Institute for Public Heath, Ministry of Health Malaysia. Most efficacy studies involved mock-up cigarettes packs as samples for smokers to view while other studies involved scientific measurement using an eye-tracking machine. Design-to-purpose of PHWs that are efficacious arising from these studies are:

1. Increase salience/attention: pictures of diseases, babies and women suffering from second-hand smoke;<sup>[9]</sup>
2. Increase desires/feelings: vivid pictures of babies affected by second-hand smoke, real-life or manipulated depicting fear appeal or scary;<sup>[9]</sup>
3. Increase thinking leading to change in perception and beliefs: picture illustrating high degree of severe illness, pictures that tell story/narrative, pictures that use associated objects such as ashtray full of cigarette butts to illustrate degree of addiction and display of universal symbol e.g poison symbol;<sup>[9]</sup>
4. Change in attitude and behaviour: use of inserts for additional information, text explanation, and other information such as quitline and quitting steps process<sup>[5,9,14-15]</sup>

Other research findings on impact of Pictorial Warning Labels have been published in several journals and presented in various conferences as listed in Table 4.0 below:

Table 4.0: Tobacco Control Research in Malaysia

Year	Study	Study Population	Main findings
2015	Elton-Marshall T, Xu SS, Meng G, Quah AC, Sansone GC, Feng G, et al. (2015). The lower effectiveness of text-only health warnings in China compared to pictorial health warnings in Malaysia. <i>Tobacco Control</i> 24, iv6-iv13. <sup>16</sup>	ITC Malaysia and ITC China (Involved of 2000 adult smokers)	Compared to Malaysia, the weak text-only warning labels in China led to a significant change in only two of six key indicators of health warning effectiveness: forgoing cigarettes and reading the warning labels. The change to pictorial warnings in Malaysia led to significant and substantial increases in five of six indicators (noticing, reading, forgoing, avoiding, thinking about quitting).
2013	Yong, H.-H., T.Fong, G., Driezen, P., Borland, R., Quah, A. C. K., Sirirassamee, B., et al. (2013). Adult smokers' reactions to pictorial health warning labels on cigarette packs in Thailand and moderating effects of type of cigarette smoked: Finding from the International Tobacco Control Southeast Asia Survey <i>Nicotine &amp; Tobacco Research</i> , 15(8), 1339-1347. <sup>17</sup>	ITC Southeast Asia Survey; Malaysia & Thailand: National & International (Involved of 2000 adult smokers)	The paper compared the impact of the new Thai pictorial health warning labels to the Malaysian text warning. They found that Thai PHWs have led to a greater impact than the Malaysian text-only warning labels, and refreshing the pictorial images may have helped sustain effects.  This finding provides strong support for introducing pictorial warning labels in low- and middle-income countries, where the benefits may be even greater, given the lower literacy rates and generally lower levels of readily available health information on the risks of smoking.
2013	Fathelrahman, A. I., Li, L., Borland, R., Yong, H.-H., Omar, M., Rahmat Awang, et al. (2013). Stronger Pack Warnings predict Quitting more than Weaker ones: Finding from the ITC Malaysia and Thailand surveys. <i>Tobacco Induced Disease</i> , 11(20). <sup>18</sup>	ITC Southeast Asia Survey; Malaysia & Thailand: National & International (Involved of 2000 adult smokers)	Warnings appear to have common mechanisms for influencing quitting regardless of warning strength. The larger and more informative Thai warnings were associated with higher levels of reactions predictive of quitting and stronger associations with subsequent quitting, demonstrating their greater potency.
2010	Fathelrahman, A. I., Omar, M., Awang, R., Cummings, K. M., Borland, R., & Samin, A. S. M. (2010). Impact of the New Malaysian Cigarette Pack Warnings on Smokers' Awareness of Health Risks and Interest in Quitting Smoking. <i>International Journal of Environmental Research and Public Health</i> 7. <sup>19</sup>	ITC Southeast Asia Survey; Malaysia & Thailand: National & International (Involved of 2000 adult smokers)	The new Malaysian PHWs increased smokers' knowledge of the adverse health effects of smoking and have a positive effect on interest in quitting.
2009	Fathelrahman, A. I., Omar, M., Awang, R., Borland, R., Fong, G. T., Hammond, D., et al. (2009). Smokers' responses toward cigarette pack warning labels in predicting quit intention, stage of change, and self-efficacy. <i>Nicotine &amp; Tobacco Research</i> , 11(3). <sup>20</sup>	ITC Southeast Asia Survey; Malaysia & Thailand: National & International (Involved of 2000 adult smokers)	The new Malaysian PHWs increased smokers' knowledge of the adverse health effects of smoking and have a positive effect on interest in quitting.
2013	Zain, Z., Omar, M., Awang, R., Rani, N. A. A., Rashid, S. M., Tahir, M. N. M., et al. (2012). <i>Wear-Outs Effects on the Malaysian Pictorial Health Warnings: Findings from the International Tobacco Control Policy Evaluation (ITC) Malaysia Project</i> Paper presented at the 15th World Conference Tobacco or Health, Singapore. <sup>21</sup>	ITC Malaysia Survey: National (Involved of 2,000 adult smokers)	Since the pictorial health warnings on Malaysian cigarettes packs were implemented, wear-out effects were seen in noticing, thinking of health risks, feelings, and intention to quit among adult smokers.  Hence, Malaysia should replace the existing pictorial health warnings with new images and health messages to improve their effectiveness.

2012	Omar, M., Awang, R., Zain, Z., Borland, R., Driezen, P., Quah, A. C. K., et al. (2012). <i>How do Graphic Health Warnings on Cigarette Packs Affect Malaysian Adolescents?: Findings from the International Tobacco Control Policy Evaluation (ITC) SEA Project</i> . Paper presented at the World Conference Tobacco or Health, Singapore. <sup>22</sup>	ITC Malaysia Survey: National (Involved of 2,000 adult smokers)	Awareness about graphic warnings on cigarette packs was very high among adolescents. Thought about perceived health risk of smoking plays a major role as the mediator between exposure to graphic health warning cigarette packs and susceptibility to smoking.  Graphic health warnings on cigarette packs is a good mediator to increase level of thinking about health risk of smoking among adolescents and indirectly protect never-smoked adolescents from starting smoking in the future.
2012	Omar, M., Awang, R., Zain, Z., Borland, R., Driezen, P., Quah, A. C. K., et al. (2012). <i>Do Graphic Health Warnings on Cigarette Packs Effective in Changing Smoking Behaviour among Malaysian smokers?: Findings from the International Tobacco Control Policy Evaluation (ITC) SEA Project</i> Paper presented at the World Conference on Tobacco or Health, Singapore. <sup>23</sup>	ITC Malaysia Survey: National (Involved of 2,000 adult smokers)	The implementation of graphic health warnings on cigarette packs has a significant effect on the level of thinking about health risks of smoking and the intention to quit smoking.
2011	Omar, M., Samin, A. S. M., Zawahir, S., Rani, N. A. A., Jasni, N. H., Rashid, S. M., et al. (2011). <i>Text Warnings Alone on Cigarette Packages May Not be Sufficient for Behavior Changes Among Never Smoked Adolescents Longitudinal cohort study findings from the International Tobacco Control Policy Evaluation SEA Project</i> Paper presented at the SRNT Annual Meeting Canada. <sup>24</sup>	ITC Malaysia Survey: National (Involved of 2,000 adult smokers)	Label health warnings (text only) on cigarette packs alone are inadequate to protect never smoked adolescents from experimenting smoking.  Thinking of adverse health consequences of smoking is a mediator for behavior changes.  Multiple interventions may give better effect on mediator and subsequent behavior change.
2011	Omar, M., & Awang, R. (2011). <i>Evaluating the relative efficacies of the pictorial warning labels' components among adult smokers attending Quit Clinics using repeated measure analysis</i> . Malaysia: Clearinghouse for Tobacco Control, National Poison Centre, Universiti Sains Malaysia and Institute for Public Health, Ministry of Health Malaysia. <sup>11</sup>	240 adults smokers who visited 6 quit clinic in Selangor	This study evaluated the impact of plain packaging among smokers and identify the most efficacious visual from each of six smoking related health effects such as throat cancer, mouth cancer, gangrene, blindness, stroke and emphysema  Comparison study between plain package and colorful package with logos and brands infers that the colorful background packages are more attracted and got higher mean score compare to plain packages. Recommendation: Use Plain Packaging to focus attention to graphic health warning.
2011	GH Tee, Gurpreet K, Omar, M., Awang, R., Sundirees I, Shariffuddin H, et al. (2011). <i>Effects of the pictorial health warnings on cigarette packages on smokers' behaviour and perception</i> . Malaysia: Institute for public health, Ministry of Health. <sup>14</sup>	120 smokers seeking Quit Smoking Services and 120 smokers seeking other health services at selected government hospital / health clinics in Wilayah Persekutuan Kuala Lumpur and Putrajaya.	This study was to determine the effects of the pictorial health warnings on cigarette packages among smokers seeking Quit Smoking Services (QSS) and other health services (OHS).  The existing Malaysian PHW 2009 do not elicit strong affective responses or effectively increase the desire to quit smoking. Hence, new messages and images which could evoke a strong negative emotional reaction to smokers should be regularly introduced to maintain warning salience.



2010	Omar, M., Rashid, S. M., & Tahir, M. N. M. (2010). <i>A study of viewing Malaysian current cigarette graphic warning labels among adult smokers by using eye tracking technology</i> . Malaysia: National Poison Center. <sup>15</sup>		This report contains efficacy testing of various PHWs designs to determine types of designs that are efficacious and suitable for recommendation to use on the Malaysian cigarette packs.  The eye-tracking machine measures eye movement /gaze to PHWs using several variables such as fixation count, fixation duration (second), dwell count and time of viewing.
2008	Omar, M. (2008). <i>Regional efficacy testing graphic health warnings in ASEAN countries of Cambodia, Indonesia, Lao PDR, Malaysia, Philipines, Thailand and Vietnam</i> . Thailand: SEATCA. <sup>25</sup>	Key person from Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Thailand, and Vietnam.	This book review and summaries the efficacy research related to text and pictorial warnings from ASEAN countries focus on type of efficacy methodology employed, research evidence generated, design of the graphic health warnings and text warnings as well as content messages to determine what works and does not work for countries to use in formulating their Article 11.
2006	Omar, M., Lajis, R., Foong, K., Sirirassamee, B., Sethaput, C., Borland, R., et al. (2006). <i>The greater impact of warning labels in Southeast Asia compared to four high income countries: Finding from the International Tobacco Control Policy Evaluation Project</i> . Paper presented at the 13th World Conference on Tobacco Health, Washington D.C. <sup>26</sup>	ITC Survey 2000 Malaysian adult smokers	Noticing and reading closely warnings in Malaysia and Thailand are higher than the four countries. Significantly higher proportion of smokers in MY and TH are saying that cigarette packs are a source of health information about the harms of smoking. about thinking the the important message conveyed by labels dropped significantly. <ul style="list-style-type: none"><li>● Warning labels on cigarette packs are an excellent method of communication and source of information about the harms of smoking.</li><li>● To ensure greater impact (i.e thinking about health risk), warning labels should rely strong and specific information about health risk.</li><li>● Warning labels should be periodically enhanced (as showed in UK result)</li></ul>

D. RESEARCH GAPS AND RECOMMENDATION FOR RESEARCH

Article 11 is an important, cost-effective intervention for educating the public (smokers and non-smokers alike), hence should be delivered in the most effective manner. There are, however, very few efficacy study on PHWs, either at laboratory level (e.g. eye-tracking testing), focus group or cross-sectional study in the country. If there were, most study are academic exercises, not structured to fulfil the needs of policy makers. The following are important research areas (gaps) to be studied in preparation for the new rotation of PHWs at population level.

- a. Research on content and themes for both text and pictorial messages relating to diseases, economics and social;
- b. Research on pictorial images and design characteristics;
- c. Research on information messages and its impact such as infoline, quitline, constituents and insert;
- d. Research related to Impact of size of pictorial images;
- e. Research on immediate impact of PHWs on policy-specific mediators or proximal variables such as salience, awareness and perception as well psychosocial mediators (e.g. thinking and attitude) of tobacco users and non-smokers.
- f. Research on plain packaging to enhance impact of PHWs.

After implementation of PHWs, continuous evaluation on the impact and monitoring should be in place. At least one comprehensive longitudinal research evaluating the effectiveness of PHWs on distal variables, the psychosocial mediators (thinking, attitude and beliefs) and policy-relevant outcomes behaviours (avoidance, forgoing cigarette, quit attempt, relapse and quitting) of tobacco users and non-smokers as well as adolescents at population levels should be considered. It should also include research on wear-out effect extending to subsequent rotation, monitoring pattern of purchase and compliance to PHWs regulations (violations) in the market.

E. POLICY RECOMMENDATIONS

Malaysia should capitalise on the potentials and benefits of PHW as it is a cost-effective opportunity to educate the population on the hazards of tobacco use and encouraging tobacco users to quit. Indeed, policy makers should REALLY respect the potential power of package warnings and utilise it as an effective communication tool to reduce tobacco use for a healthier nation. The Malaysian government is urged to fully comply to the Article 11 and its Guidelines especially in these aspects:

- 1. Increase the size of PHWs;
- 2. Implement rotation after 2 years;
- 3. Enforce and Monitor the implementation ‘Track and Trace’ as well as industry manipulations and violations;
- 4. Allocate support for longitudinal research on the effectiveness of PHWs. This also includes efficacy and testing of prototype of PHWs;
- 5. Consider research on plain packaging leading to its implementation.

F. SUMMARY

Article 11 offers an extraordinary opportunity for the Malaysian government to communicate directly with the public, to educate and inform the population on the harms of the tobacco products. It is pertinent that Malaysia makes the most of this opportunity. Just like any message system or any advertising campaign, there are many dimensions of health warnings that must be carefully planned and tested. Pictorial warnings converging evidence from the ITC Malaysia population-level studies conclude several key benefits of pictorial warnings.

- Increases in salience and memory of warnings
- Increases in thinking about health harms
- Key indicators of effectiveness, which are in turn linked to progression toward smoking (intentions to quit) and quit attempts
- Linked to lower likelihood of relapse among quitters.
- Discourage youth from starting to smoke.



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## ARTICLE 12

### Education, Communication, Training and Public Awareness

#### A. INTRODUCTION

Article 12 of the World Health Organization, Framework Convention on Tobacco Control (WHO-FCTC) states that Parties must promote and strengthen public awareness of tobacco control issues through education and public awareness programmes on the health of tobacco and the benefits of cessation, and provide public access to information on the tobacco industry. In rationalizing this article, mass-media counter-advertising campaigns have been consistently found to reduce overall tobacco consumption. In addition, mass-media campaigns are a cost-effective way to educate large population groups about the full extent of the risks of tobacco use and exposure to second-hand smoke. Media campaigns can also motivate and inform people on how to quit. Well-executed campaigns can also increase public support for key policy changes such as smoke-free public places.<sup>[1]</sup>

Article 12 of the WHO-FCTC obligates Parties to promote and strengthen public awareness of tobacco control issues, using all available appropriate communication tools. Towards this end, each Party shall adopt and implement effective legislative, executive, administrative or other measures to promote<sup>[2]</sup>:

- Broad access to effective and comprehensive educational and public awareness programmes on the health risks including the addictive characteristics of tobacco consumption and exposure to tobacco smoke;

- Public awareness on the health risks of tobacco consumption and exposure to tobacco smoke, and the benefits of cessation of tobacco use and tobacco-free lifestyles;
- Public access, in accordance with national law, to a wide range of information on the tobacco industry as relevant to the objective of the FCTC Convention;
- Effective and appropriate training or sensitisation and awareness programmes on tobacco control addressed to persons such as health workers, community workers, social workers, media professionals, educators, decision-makers, administrators and other concerned persons;
- Awareness and participation of public and private agencies and non-governmental organizations not affiliated with the tobacco industry in developing and implementing inter-sectorial programmes and strategies for tobacco control; and
- Public awareness of and access to information regarding adverse health, economic, and environmental consequences of tobacco production and consumption.

Despite overwhelming evidence of the dangers of tobacco, not many tobacco users fully understand the risks of smoking towards their health. Likewise, non-smokers also do not fully comprehend the adverse effects of cigarette smoke to their health. Most tobacco users are unaware of the extent the harm that tobacco causes

and tend to underestimate the risks to themselves and others. In addition, most are unaware of the powerfully addictive properties of nicotine, a compound present in all tobacco products, which is absorbed readily from tobacco smoke into the lungs and from smokeless tobacco in the mouth or nose. The ease and depth of addiction to nicotine for tobacco users makes quitting extremely difficult and perpetuates the cycle of increased addiction, leading to devastating health effects. Beyond the health consequences, there is also a lack of awareness among both the general public and policy-makers of the overwhelming social, economic and environmental consequences of tobacco use<sup>[1]</sup>.

#### B. CURRENT POLICY AND SITUATIONAL ANALYSIS

The objective of this strategy is for Malaysia to strengthen public awareness on the health risk, including the addictive characteristics of tobacco consumption and exposure to tobacco smoke in accordance with Article 12 of the WHO-FCTC and its guidelines<sup>[1]</sup>.

From 2004 to 2010, the Malaysian government launched “Tak Nak” or “Say No”, a nationwide anti-smoking campaign aimed to reduce prevalence of smoking by influencing current smokers to quit and deterring young people from starting. The campaign used the mass media and print channels to promote accurate information to the public on the dangers of smoking. The “Tak Nak” media campaign was a 5-year project with an annual cost for approximately RM 20 million and was financed by the Malaysian government.

##### The history of the Nationwide “Tak Nak” Media Campaign<sup>[3]</sup>

The Mission of the Malaysian nationwide anti-smoking media campaign with the tagline “Tak Nak”! Don’t Start! Smoking damages your health” was conceived in 2002 to (1) create an anti-smoking campaign that would effectively become a meaningful part of the Malaysian lifestyle, and, (2) create a popular campaign icon that would galvanise the public to build a cleaner, healthier, and more sophisticated Malaysia.

Its objective was to build up a campaign that would eventually result in the creation of a nation of no smokers. During the early years of the “Tak Nak” campaign, the government’s commitment and drive was very serious to keep pace for at least 5 years, with a year-to-year review of innovative strategies to achieve more precise, bigger and successful targets. The year-to-year review monitored the campaign to gauge the public’s response and enabled the sharpening of content for the succeeding years ahead of the campaign.

“Tak Nak” Campaign objectives are:

- 1. To galvanise the entire nation with an anti-smoking campaign that is immediately engaging and appealing.
- 2. To provide health-risk information that will get the public thinking seriously about the dangers of smoking.
- 3. To discourage the young from starting, and encourage smokers to give up smoking.
- 4. To orchestrate a wave of popular support across the nation for the campaign in enthusiastic support of the Government.

Tak Nak’s target audiences are youth age 10-18, parents, and male and female smokers. The core message of the campaign is anchored in, “Don’t start!” which is expressed as -Tak Nak!

An integrated communication approach was used to ensure that the message was effectively delivered to all. These were through (1) Mass Media - television, cinema, magazines, newspapers, radio, billboards and community boards, (2) Event - Federal Launch, State Launches, and, (3) Public Relation - News Generation and Media Relations

The Tak Nak campaign opened with, (1) Smile Series of a Girl and a Boy at an interview session conveying the message, “Cigarette smoke not only spoils your good looks, it poisons the body. So Say Tak Nak to cigarettes”. (2) Horror Series with a tagline “Every puff you take damages your body”, showing video of diseases such as, smoking can cause brain damage, blindness and rotting of the lungs.

In 2009, the Tak Nak campaign introduced “Don’t Break My Heart”, showing adverse effects of smoking to evoke emotion and fear followed by “Sign of Time” in 2010. Sign of time campaign was aimed to educate public on a method of expressing their right to stop second-hand smoke.

Tak Nak Nationwide Media Campaign was broadcasted in national TV channels as well as radio channels across the country. Evaluation on effectiveness of the Tak Nak Campaign was carried out by the Malaysia National Poison Centre from 2004 to 2010.

Other Public Awareness Campaign

Other public awareness efforts include “Kempen Nafas Baru Ramadan” or “New Breath Beginning Ramadan”, a campaign encouraging Muslim smokers to stop smoking during Ramadan with the aim of promoting long-term cessation.

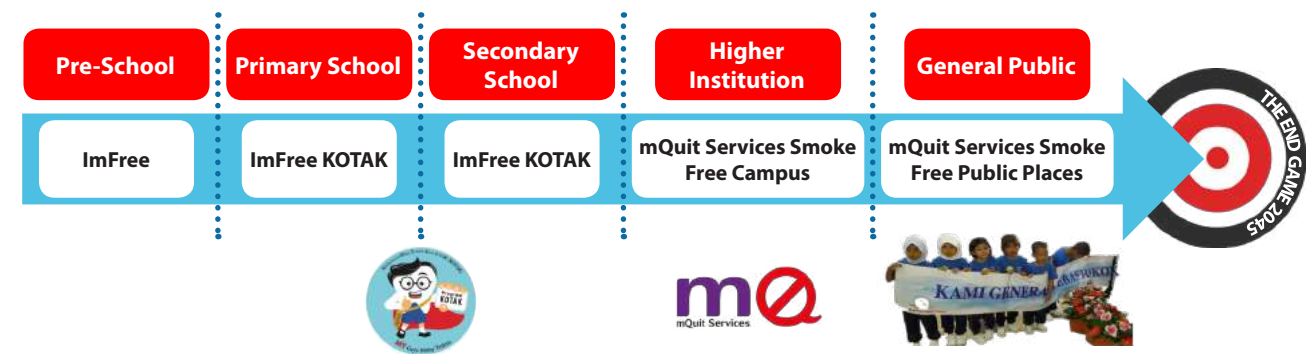
The health effects of tobacco use are also being taught in school across curriculum. In schools, young adult students are educated on the dangers of smoking by health professional.

Smoke Free Generation<sup>(4)</sup>

Tobacco Free Generation (TFG) is a social movement that seeks to re-balance the landscape of teenage smoking. Statistics show that more than 80 per cent of smokers start by the age of 18, and virtually all by 26. It is recognised therefore that preventing youth initiation may be the key to ending the tobacco epidemic. TFG is recognised as the new innovative preventive measure. The Malaysian government has proposed that children born in year 2009 and beyond will not smoke. The government aims to reduce smoking prevalence from 23 per cent in year 2009 to 15 per cent by year 2025 and achieve the endgame less than 5% by year 2045.

To achieve TFG, health professionals, i.e. doctors, nurses, medical students, teachers and volunteers are encourage to connect with youths, especially in schools to educate and encourage them to be part of the TFG and not fall prey to being ‘replacement smokers’ of the tobacco industry. TFG encourages teens to be the generation that effect the change; the generation that says NO to cigarettes, understands and prioritises health and wellness for themselves and their peers. Figure 1.0 shows the potential involvement among Ministries, Non-Governmental Organizations, schools, colleges and universities in advocating TFG for the country.

Figure 1.0: Advocacy Smoke Free Generation<sup>(9)</sup>



ImFree: Smoke Free Advocacy Program | KOTAK: Dental Screening and Intervention Program | mQuit Services: Malaysia Quit Smoking Services

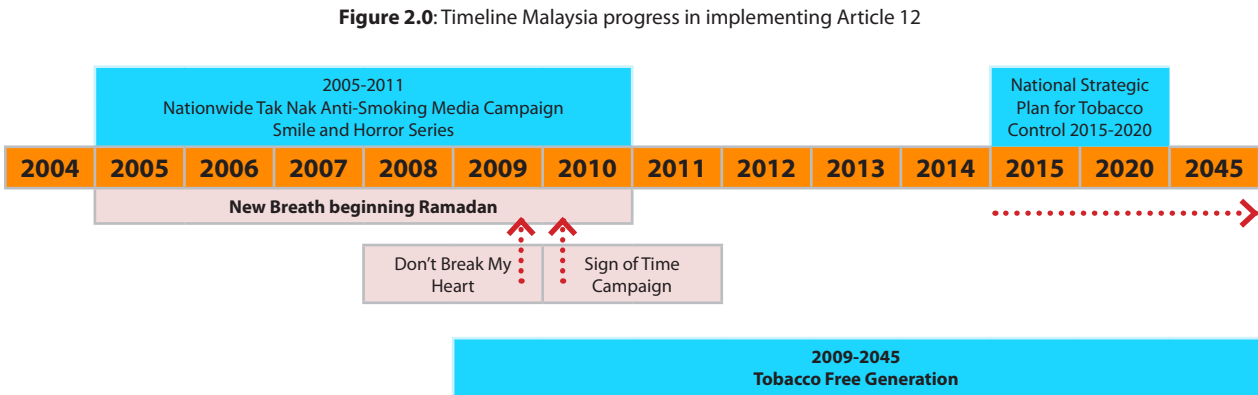
The Malaysian government through its major health related players i.e. the Ministry of Health, The Health Education and Communication Centre (HECC), and the Malaysia Health Promotion Board (MySihat) have continually been developing and implementing various educational and public awareness programmes, including training of health professional and community on the harmful effects of tobacco use on health (also addiction), economic, environmental consequences of tobacco production, tobacco consumption, exposure to tobacco smoke, the benefits of smoking cessation and tobacco-free lifestyles. Despite the available infrastructure, access to such programmes is limited plus most of them are a one-off activity. Training in tobacco control or sensitisation and awareness programmes for health workers, community workers, social workers, media professionals, educators, decision-makers, administrators and other concerned persons is also limited<sup>[5]</sup>.

Adding to this, most public health departments in universities and colleges programmes primarily focus on teaching and academic exercises, hence are minimally involved, or not all, with government health agendas or programmes on tobacco control.

It is important for the Malaysian government to ensure Article 12 be implemented comprehensively to benefit the whole nation. The Tak Nak Campaign was an ambitious programme that has shown positive impact to its people. However, this comprehensive campaign lagged consolidated effort for sustainability after the initial 5 years support by the government. In 2009, a new strategy to curb smoking was initiated through Tobacco Free Generation

Program (TFG) by the Ministry of Health Malaysia. This new programme is across all governmental organisations and Non-Governmental Organizations, schools, colleges and communities to participate towards achieving the mission and vision of the endgame. Nevertheless, this program is still in its infancy stage where considerable effort will need to be on the table for discussion, especially among potential collaborators, policy makers, funding agencies (Figure 2.0). Additionally, Malaysia has formulated its new National Strategic Planning for Tobacco Control (NSPTC) 2015-2020 and currently in its implementation process. To date, comprehensive evaluation of effectiveness for all government health programmes i.e. Tak Nak Campaign, TFG and NSPTC are not documented clearly in terms of their broad access, content message, target audience, training, as well as proximal and distal outcomes such as salience, psychosocial and behavioural impact on smokers, non-smokers, children and adolescents.

The timeline of implementation Article 12 WHO FCTC are summarized in the Figure 2.0.

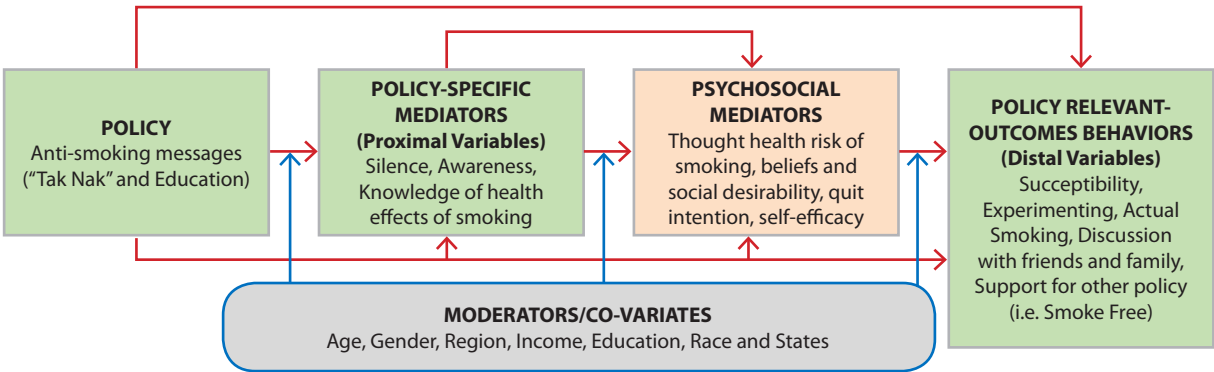


C. TOBACCO CONTROL RESEARCH IN MALAYSIA

A conceptual framework derived from social cognitive theory was used to evaluate the effectiveness of anti-smoking media campaign (“Tak Nak”) on the knowledge, attitude, susceptibility and behaviour of an individual before and after being exposed to anti-smoking media messages (Figure 3.0). This theory postulate that behaviour change results from motivation to change and the acquisition of skills and abilities (i.e. self-efficacy) to

change, within a given environmental context. A public communication campaign grounded in this theory would try to attract the target audience’s attention, convey a compelling message, impart specific knowledge, and provide motivation to undertake behaviour change. An evaluation of such campaign would assess attitude, knowledge in the target population and desire to change the behaviour (i.e. preferably in conjunction with a reinforcing environmental change, such as a price increase on cigarette, or the adoption of smoke free policy).

**Figure 3.0:** Conceptual framework to evaluate the effectiveness of anti-smoking media campaign (“Tak Nak”)





Prevalence of Smokers in Malaysia

Since ratifying the FCTC in 2005, Malaysia has achieved considerable progress in developing and implementing stronger and more comprehensive tobacco control strategies under the national anti-tobacco campaigns. In 2004, the Malaysian government launched the “Tak Nak” campaign to increase awareness of the harmful effects of smoking. The campaign was a 5-year project with an annual cost of approximately RM 20 million per year. In that period, it could be observed that the overall prevalence of adult smoking decreased from 24.8% in 1997 [6] to 21.5% in 2007<sup>[7]</sup>.

However, the overall prevalence of smoking increased in 2011 (23.1%) [8], but declined in 2015 (22.8%)<sup>[9]</sup>. In terms of gender, male smoking prevalence decreased from 43.9% to 43.0% (-0.9%) while for woman, the prevalence rose by 0.4%. This could be due to the waning effect of the “Tak Nak” campaign compared to its earlier years from 2004 to 2010.

In terms of effectiveness, the ITC Malaysia Survey has the most extensive evidence on the knowledge of health warnings and also the evaluation of the anti-smoking campaigns in Malaysia. The findings presented here are from the 2012 Waves 1-4 ITC Malaysia Survey National Report and the findings in a number of the figures presented here are extended to include data from the Waves 5 and 6 of the ITC Malaysia Survey.

The Tak Nak (Say No) anti-smoking campaign is widely recognized among smokers.

Result of the ITC Malaysia Survey found that nearly all adult smokers, quitters and adolescents surveyed were aware of the “Tak Nak” anti-smoking campaign. More than 80% of these respondents said they had seen or heard about this campaign.

- i. “Don’t Break My Heart” anti-smoking campaign  
Following the introduction of the “Don’t Break My Heart” campaign during the ITC Malaysia Wave 5 survey, almost 61.6% adolescents and 55.7% adult smokers said they have seen “Many times” these anti-smoking campaigns. Adolescents found more likely to say this campaign very relevant (74.3%) and it discouraged them from smoking very much (62.2%) compared to adult smokers at 56.2% and 29.9% respectively.
- ii. “Sign of Time” anti-smoking campaign  
Noticing of “Sign of Time” anti-smoking campaign “many times” was found to be high among adolescents (47.9%) compared to adult smokers/quitters (35.6%) in the Wave 5 survey. However, these percentages slightly decreased in the Wave 6 survey. When asked on their perception towards this campaign, adult smokers and quitters (43.2%) said it was very relevant while 26.6% said this campaign discourage them from smoking very much during the Wave 5 survey. This percentage declined slightly in the Wave 6 survey.
- iii. “Kempen Nafas Baru Ramadhan” (New Breath Beginning Ramadhan)  
An increased trend (54.4% in Wave 1 to 65.4% in Wave 4) was reported among adult smokers who have seen “Kempen Nafas Baru Ramadhan” (New Breath Beginning Ramadhan). However, this percentage slightly decreased in Wave 5 (56.9%) and Wave 6 (45.7%).

- iv. Education on the dangers of smoking in schools and by health professionals  
  
A significant percentage of adolescents have been taught in schools on the harmful effects of smoking with noteworthy increases reported from Wave 3 (64.5%) to Wave 5 (83.2%) although the percentage slightly decreased in Wave 6 (82.9%). Among those who received this information from health professionals, the percentage reported lower with an average of 27.5% throughout six surveys.
- v. Common Platform that have used for anti-smoking campaign  
  
The most common sources of information received by more than 77% of adult smokers and quitters were from cigarette packs, posters, television and billboards. Of particular interest is the fact that cigarette packs (with pictorial health warnings) were the most common source of information with an increasing trend reported from Wave 1 (79.3%) to Wave 4 (95.0%) although this percentage slightly decreased in Wave 5 (92.3%) and Wave 6 (89.1%). Therefore, pictorial health warnings (PHWs) on cigarette packs is the most important medium to educate people on the dangers of smoking at no cost to the government compared to others such as television, newspapers, billboards.
- vi. Anti-smoking campaigns have encouraged smokers to quit and helped smokers to stay quit.  
  
One of the aims of anti-smoking campaigns is to create social norm that is less supportive of smoking, hence encouraging smokers to quit and discouraging non-smokers from starting the habit. The percentage of adult smokers who said that advertisements providing information on the danger of smoking made them feel smoking is less socially desirable increased from Wave 2 (61.4%) to Wave 4 (74.0%) following the implementation of the “Don’t Break My Heart” and “Sign of Time”. This percentage dropped slightly in Wave 5 (70.1%) and Wave 6 (73.2%). As for those who said that this campaign made them felt more likely to quit, a high percentage was reported in Wave 4 (43.9%) but dropped in Wave 5 (24.2%) and Wave 6 (24.9%).

In summary, findings from of the International Tobacco Control (ITC) Policy Evaluation Malaysia, Wave 1 to Wave 6 (2004-2014) show that overall, Malaysian anti-smoking media campaigns have achieved a high level of public awareness. The campaigns also generate significant long-term benefits in smoking reduction, by indirectly inducing more future attempts to quit among adult smokers, and deterring more initiating intention among adult non-smokers and adolescents. “Tak Nak” (Say No), “Don’t Break My Heart” and “Sign of Time” succeeded in reducing smoking prevalence in the short-run (awareness and thinking) as well as in the long-run (beliefs, quit intention and quit attempt). The positive outcome is proof that continuous funding of future anti-smoking media campaigns must be made available. Educating adolescents on the dangers of smoking in schools is the most effective means for reducing smoking vulnerability in Malaysia, although different prevention strategies may be necessary to ensure effectiveness for male and female adolescents. Hence, anti-smoking education at schools should be increased to the optimum level. Health messages on cigarette packs are the most viewed channel, both by smokers and non-smokers alike, hence media campaign reinforcing these messages will help strengthen viewers’ belief, inspire positive behaviour toward pro-health and de-normalising smoking culture.

Table 1.0: Tobacco Control Research in Malaysia

Year	Study	Study Population	Main findings
2010	MOH (2009). <i>Report of the evaluation of the anti-smoking campaign in Malaysia. Kempen Tak Nak Merokok 2009 Phase 1 and 2.</i>	Phase 1: n=2026; Peninsular Malaysia, Kota Kinabalu and Kuching. Phase 2: n=1508;	Tak Nak Smoking campaign has not reduced the population of smokers. However, it has equipped the population with the knowledge required for them to make an informed decision.
2013	Maarof, D. D., & Osman, M. N. (2013). Pengaruh faktor sosial kesan kempan media Tak Nak Merokok Kementerian Kesihatan Malaysia. <i>Jurnal Komunikasi Malaysia</i> , 29(1), 179-198.	382 youths in Kuala Lumpur	There are negative but significant relationships between social peers influence and the effects of the TakNak health campaign at the cognitive level.
2013	Kennedy, R. D., Lee, W. B., Omar, M., Awang, R., Kin, F., Lajis, R., et al. (2013). <i>Understanding the Influence Of The Malaysia-Wide Media Campaign "Tak Nak" On Intentions To Quit And Perceived Risk Of Smoking: Findings From The ITC Southeast Asia Survey</i>	ITC: International 2,000 adult smokers in Malaysia	Mediational model used in analysing mechanism of depth of mental processing in viewers suggests an answer for what was happening inside the thought process of smokers who received the TAK NAK campaign.  TAK NAK campaign was associated with greater quit intentions through both enhancing perceived risk and increasing fear/worry about the health consequences of smoking.
2011	Omar, M., Zawahir, S., Awang, R., Samin, S., Radzi, M. Y. M., Amir, N. A., et al. (2011). <i>Impact of Overall Anti-Smoking Information (messages) on Knowledge, Thinking and Behaviour Changes Among Adolescents.</i> Paper presented at the SRNT Annual Meeting, Wastin Harbour Castle, Toronto, Canada.	ITC: International 1,000 adolescents in Malaysia	Anti smoking messages in Malaysia and Thailand are effective to deliver knowledge of health effects of smoking among adolescents. Merely expose or notice anti smoking messages without gaining any knowledge may not be sufficient to increase the negative thinking of smoking among adolescents. Negative thinking of smoking may protect adolescents from susceptible to smoking. Only strong thinking about danger of smoking may help to protect susceptible adolescents from smoking in future. Introducing more interactive multimedia anti-smoking messages may improve the effectiveness and ultimately this may protect the adolescents from being in the list of smokers in future
2012	Zawahir, S., Omar, M., Yong, H.-H., Awang, R., Rani, N. A. A., Borland, R., et al. (2012). <i>Impact of Anti-Smoking Media Messages among Malaysian Adult Non-Smokers' Knowledge, Perception and Behaviour: Findings from the International Tobacco Control Policy Evaluation (ITC) SEA Project.</i> Paper presented at the 15th World Conference Tobacco or Health Singapore.	ITC Malaysia Survey: National 1,500 of non-smokers	Anti-smoking media messages delivered through campaigns such as the "Tak Nak" and other programs may help to enhance knowledge about health effects of smoking and increase receptivity to these messages among non-smoker in Malaysia. Introducing more interactive and emotional multimedia anti-smoking messages may improve the effectiveness of these messages further particularly if they can help to engage the male non-smokers.
2012	Zawahir, S., Omar, M., Awang, R., Yong, H.-H., Borland, R., Sirirassamee, B., et al. (2012). Effectiveness of Antismoking Media Messages and Education Among Adolescents in Malaysia and Thailand: Findings From the International Tobacco Control Southeast Asia Project <i>Nicotine &amp; Tobacco Research Advance Access.</i>	ITC: International 1,000 adolescents in Malaysia	Educating adolescents about the dangers of smoking in schools appears to be the most effective means of reducing adolescents' smoking susceptibility in both countries, although different prevention strategies may be necessary to ensure effectiveness for male and female adolescents.

2012	Zawahir, S., Omar, M., Yong, H.-H., Awang, R., Rani, N. A. A., Borland, R., et al. (2012). <i>The Impact of Anti-Smoking Media Messages on Knowledge, Attitude and Behavior among Adult Smokers in Malaysia. Findings from the International Tobacco Control Policy Evaluation SEA-Malaysia Project</i>	ITC: International 2,000 adult smokers in Malaysia and in Thailand	Anti-smoking messages delivered through mass-media campaign and various programs by the Malaysian government appear to have a beneficial effect on smokers in increasing their knowledge of the health effect of smoking, which in turn will stimulate them to think more negatively about smoking and prompting them to make an attempt to quit smoking. The finding suggests that with sustained delivery of anti-smoking messages via various campaigns and programs, more smokers in Malaysia will quit smoking.
2012	Zawahir, S., Omar, M., Awang, R., Yong, H.-H., Borland, R., Sirirassamee, B., et al. (2012). <i>Can Anti-Smoking Messages Protect Malaysian and Thai Adolescents from Smoking?:Findings from the International Tobacco Control Policy Evaluation (ITC) SEA Project</i>  Paper presented at the 15th World Conference on Tobacco or Health (WCTOH), Singapore.	ITC: International 1,000 adolescents from Malaysia and Thailand	Anti-smoking education provided in schools can help reduce smoking susceptibility of female but not of male adolescents in Malaysia and Thai.  Exposure to anti-smoking messages has a beneficial effect in protecting Malaysian (due to the presence of a nationwide antismoking campaign) but not Thai adolescents from taking up smoking in the future.
2013	Omar, M., Awang, R., Samin, A. S. M., Misnan, A., Amir, N. A., Arif, A. M., et al. (2013). <i>Impact of Anti-Smoking Media Messages on Malaysian Adult Smokers' Perception, Beliefs, and Intention to Quit: Findings from the ITC Malaysia Survey.</i> Paper presented at the 10th Asia Pacific Conference on Tobacco or Health, Chiba, Japan.	ITC: International 2,000 adult smokers in Malaysia and in Thailand	Anti-smoking media messages delivered through the Tak Nak campaigns were well received by adult smokers and have stimulated them to discuss with their family and friends, as well as modified their perception about smoking and built intention to quit smoking.
2015	Tahir, M. N. M., Omar, M., Awang, R., Hashim, H., Samin, A. S. M., Rani, N. A. A., et al. (2011). <i>Impact of Anti-Smoking Campaign to Discourage Malaysian Adolescents from Smoking: Finding from the ITC Malaysia Survey.</i> Paper presented at the 16th World Conference on Tobacco or Health (WCTOH), Abu Dhabi.	ITC Malaysia Survey: International 1,000 adolescents in Malaysia	Noticing the campaign "Don't Break My Heart" and "Sign of Time" numerous times were positively associated with discouraging adolescents from taking up smoking as well as with positive perception.

## D. RESEARCH GAPS AND RECOMMENDATION FOR RESEARCH

Creating effective anti-smoking campaigns is a challenging task. An effective campaign should make smokers engage in both cognitive and affective processes and make people consider whether society disapproves of smoking. Research on designing and conceptualising effective and appropriate media for anti-smoking campaign should be one of the priority areas. This important component however, is very much overlooked.

Despite the broad reach of the Tak Nak campaign, social norms are less negative towards smoking compared to other countries. Whilst the majority of adult smokers in Malaysia are negative about their smoking habit and would like to quit, youths are less incline to give up smoking or have not made plans to quit<sup>[10]</sup>. Tobacco Free Generation (TFG) that focuses on youths could be the solution to close this gap.

Support and training of health professional, NGOs and students leaders are not converging toward the goals and objectives of the WHO-FCTC, specifically Article 12, with regards to its recommended methods and strategies to educate and create awareness on the risks of smoking and benefits of quitting that are localise to the Malaysian population.

The ITC Malaysia survey is a cohort study conducted from 2005 to 2014 to monitor the existence of tobacco policy including the “Tak Nak” anti-smoking campaign. From these surveys, evaluation on the impact of implemented tobacco policies could be by monitoring the behavioural

change among smokers and adolescents. It is important that this nature of research be continuous to generate scientific evidence for the strengthening of existing policies and to ensure the TFG and National Strategic Plans achieve the endgame. Hence, in order to close the above gaps, it is recommended that;

1. Designing and developing media content and its production for anti-smoking campaign are critical besides being sustainable. Hence, networking and collaborations between organisations responsible for the development and production of anti-smoking media campaign together with local universities/ colleges should be encouraged and sustained. Within academic institutions, there may exist many talented students and staff, e.g. from the health faculty, arts faculty (design, communication, education etc.) who could contribute creative approaches to enhance media content thus bringing production to a greater and more sustainable level.
2. Focusing on educating children and young people are of paramount importance. In line with Tobacco Free Generation, media production should emphasise on the needs to protect the nation's children and youths. Multi-platform media channels should be utilised to provide wide access to all people in the country. Internet-based media such as face-book, tweeter, apps and mobile phone should be explored to the fullest to reach all walks of life. This medium is found to be most effective in engaging young people and promoting anti-smoking messages when compared to traditional media<sup>[11]</sup>. Nevertheless, traditional media in printed materials could be translated and conveyed in more interesting approaches in the form of storybooks, story-telling, songs, poem and drama.

3. Research in understanding needs and profile of people is essential in developing effective education. Ongoing research especially among youths is critical in determining smoking habit and problem, types of preferable media and message content. This also includes efficacy study of the media prototypes for various segments of people.
4. Health professionals, community leaders, youth associations such as GreenLung, and MySihat Tobacco Control Ambassadors, and engagement of students at various educational institutions to educate and promote a tobacco-free society and healthy lifestyles.
5. Evaluation of effectiveness of media on segments of people such as adult smokers, youths and young children should be carried out to measure the impact of knowledge, thinking, belief, attitude and behaviour towards pro-health. This also includes longitudinal study of cohorts of people in order to understand both proximal and distal mechanism of psychosocial behaviour change.

## E. POLICY RECOMMENDATIONS

Based on the situational and research analysis described above, some areas are important to strengthen the implementation of Article 12 in Malaysia. These recommendations are also in accordance to the recommendations by the Global Adult Tobacco Survey 2011:

1. The “Tak Nak Merokok” Campaign should continue albeit improved and intensified with adequate funding allocation at national, state and district levels annually. Research findings indicate that most Malaysians remember the tagline “Tak Nak” along with its health messages.
2. A national children and youth-oriented media campaign be funded on an ongoing basis as a permanent component of the nation's strategy of TFG to reduce tobacco use along with support from educational institutions through tapping on diverse talent of young people from various disciplines.
3. Apart from the Malaysian Ministry of Health (MOH), other entities within the government, private sectors and Non-Government Organisations (NGOs) and local television and radio should be encouraged to participate and/or organise activities to raise awareness on the harms of smoking and benefits of cessation.
  - (a) More local health organisations within universities and colleges as well including NGOs should be involved actively and trained on anti-smoking education and advocacy to support Malaysia's health promotion agenda.
  - (b) The Malaysian Health Promotion Board (MySihat) provision of financial assistance to NGOs and educational institutions should be continued and heightened.

- (c) Corporate organisations to receive incentive for embarking healthy lifestyle campaigns and promote smoking cessation among their employees and the public.
- 4. Regular monitoring and impact evaluation of campaign performances must be consistently maintained to ensure improvement and relevancy of the campaign content.

**F. SUMMARY**

Summarily and in conclusion, anti-smoking messages and continuing education on the harmful effects of smoking and benefits of quitting is an effective tool to reduce smoking prevalence in Malaysia and preventing smoking initiation among young children and youth. In compliance to the recommendations of the WHO-FCTC, Malaysia has achieved significant steps in strengthening Article 12 through its comprehensive nationwide launch of an anti-smoking media campaign “Tak Nak! Setiap sedutan membawa padah” “Say No! Every puff you take damages your body”. The campaign has achieved success through its impact on the psychosocial and behaviour change among smokers. This campaign also strengthened the efforts of its other interlinked components in the Framework namely, Article 11 and 13. Hence, such important and effective campaign should be maintained, improved and intensified with adequate sustainable funding and with the participation of organisations including impact evaluation.

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# ENFORCE BANS ON ADVERTISING, PROMOTION AND SPONSORSHIP (TAPS)

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## A. INTRODUCTION

The World Health Organization, Framework Convention on Tobacco Control (WHO- FCTC) in its preamble in Article 13 states, “Parties are seriously concerned about the impact of all forms of advertising, promotion and sponsorship aimed at encouraging the use of tobacco products” and “Parties recognise that a comprehensive ban on advertising, promotion and sponsorship would reduce the consumption of tobacco products”.

Tobacco advertising and promotion in this Article is defined as “any form of commercial communication, recommendation or action with the aim, effect or likely effect of promoting a tobacco product or tobacco use directly or indirectly” while tobacco sponsorship is defined as “Any form of contribution to any event, activity or individual with the aim, effect or likely effect of promoting a tobacco product or tobacco use either directly or indirectly”<sup>[1]</sup>.

Article 13 obligates Parties, within 5 years after entry into force of the WHO-FCTC, to implement a comprehensive ban on all forms of TAPS. In addition, FCTC recommends a comprehensive coverage of a comprehensive ban on TAPS as follows<sup>[2]</sup>:

1. All direct and indirect advertising, promotion and sponsorship without exemption;
2. Acts that aim promotion and acts that have or are likely to have promotional effects;
3. Promotion of tobacco products and the use of tobacco;
4. Commercial communications and commercial recommendations and actions;
5. Contribution of any kind to any event, activity or individual;
6. Advertising and promotion of tobacco brand names and all corporate promotion; and,
7. Traditional media print, television and radio and all media platforms, including internet, mobile telephones and other new technologies as well as films.

Malaysia ratified the WHO-FCTC convention in 2005 and by date, the TAPS ban deadline 2010 has passed. Malaysia has yet, however, to implement a comprehensive TAPS ban.

Currently, virtually all forms of tobacco advertising and promotion are prohibited in Malaysia except for display of tobacco product at point-of-sale. The CTPR 2004 states that “The CTPR 2004 shall not apply to any tobacco product advertisement in or on a packing containing a tobacco product”. Notwithstanding, all forms of tobacco sponsorship are prohibited under this regulation. In addition, WHO-FCTC recommends “Parties should

introduce a total ban on any display and on the visibility of tobacco products at point-of-sale, including fixed retail outlet and street vendors. Only the textual listing of products and their prices without any promotional elements would be allowed”<sup>[1]</sup>

However, there is a lack of specific definition of “tobacco promotion” in the CTPR 2013 that states, “No person shall promote the sale of any tobacco product directly or indirectly; or engage any person whether by way of contract, agreement, understanding or undertaking, whether binding or otherwise, promote the sale of any tobacco product directly or indirectly” is inadequately defined.

This has led to some forms of tobacco promotion that are not covered or partially covered under the ban. Such examples include (a) tobacco products or services using non-tobacco brand names as in reverse brand stretching or brand sharing; (b) unpaid depiction of tobacco use or tobacco products in TV, film or other media that is not legitimate, journalistic, artistic, or academic expression or legitimate social or political commentary; (c) Global or international internet and new media communication including digital communication platforms, such as, chats on Facebook or blogs, mobile phones and other internet sites; (d) Toys or candies resembling tobacco products<sup>[3]</sup>; (e) Promoting tobacco companies image and products through corporate social responsibility (CSR) concept activities to reach out to consumers; (f) Cross border advertising, promotion and sponsorship especially from Non-Party countries such as in sports tournament.<sup>[4]</sup>

WHO FCTC Guidelines states that “Parties should ensure that any cross-border tobacco advertising, promotion and sponsorship originating from their territory is banned or restricted in the same manner as domestic tobacco advertising, promotion and sponsorship”.

Partial bans on TAPS are ineffective since the tobacco industry will attempt to look for new advertising platforms through loopholes or even create new platforms to recruit new customers such as internet sales and person-to-person sales<sup>[5]</sup>.

B. CURRENT POLICY AND SITUATIONAL ANALYSIS

The objective of this strategy is for the Government of Malaysia to enact and enforce a comprehensive ban on all forms of TAPS according to Article 13 of the WHO Framework Convention on Tobacco Control (FCTC) and its guidelines.

The 2004 Regulations prohibit most forms of direct and indirect tobacco advertising and promotion. Although tobacco advertising and promotion at point-of-sale is banned, the continual display of cigarettes and tobacco products remain a clear circumvention of the spirit of the advertising ban. Tobacco advertising, promotion, and sponsorship (TAPS) ban policies are listed in table 1.0 below:

Table 1.0: Status of Ban on TAPS<sup>[4]</sup>

No	Forms	Ban	Partial	No Ban
1.	Advertising	✓		
2.	Advertising at POS	✓		
3.	Ad via social media	✓		
4.	Promotion	✓		
5.	Sponsorship	✓		
6.	Pack display			X
7.	CSR other than direct sponsorship			X
8.	Cross border		X	

- i. Implementation of Control of Tobacco Product Regulations (CTPR) 2004  
Prior to FCTC, the Malaysian Government had enacted the Control of Tobacco Product Regulation (CTPR) 1993. This was reinforced in 2004 to include the prohibition of tobacco product advertisements, sponsorships and promotions previously not cited under the Regulations, exempting auto-racing events until 31 December 2005<sup>[6]</sup>. The International Tobacco Control (ITC) Policy Evaluation Malaysia study surveys, (Wave 1 – 2005) and Wave 2 (2006-2007) reported that the existence of tobacco advertisements and promotions continue to be present despite the 2004 ban and were noticed by adult smokers and quitters<sup>[7]</sup>. This could be due to the lack of enforcement action by the authorities in its early stage. However as enforcement strengthened, a declining trend of noticing TAPS on media channels was reported in the ITC-Wave 3 (2008) survey, except for cigarette packs display at Point-of-Sale (POS)<sup>[7]</sup>.
- ii. Non-comprehensive ban of TAPs  
Currently it is permissible to display and promote cigarette packs inside store shelves at point-of-sales (POS). This loophole has given an opportunity for the tobacco companies to exploit TAPS to the fullest. According to ITC Malaysia survey, high percentage of adult smokers and adolescents from Wave 2 (2006-2007) to Wave 6 (2013-2014) reported noticing tobacco advertisements at POS<sup>[7]</sup>. This gives strong evidence that tobacco industry has shifted their marketing strategies to POS with the aim to dilute the effects of the existing tobacco control policy. This has resulted in increasing trend of noticing cigarette packs at POS including other channels such as at shops and around street vendor<sup>[7]</sup>.
- iii. Displayed health messages or warnings on TAPS  
Prior to WHO FCTC, all cigarettes packs in Malaysia carried a general health warning in text form “AMARAN OLEH KERAJAAN MALAYSIA-MEROKOK MEMBAHAYAKAN KESIHATAN” (Warning by the Government of Malaysia, Smoking Endangers Health). This was replaced in 2009 with pictorial health warning (PHWs)<sup>[8]</sup>. A new set of PHWs was added to existing PHWs in January 2014<sup>[9]</sup>. Despite this

preventive measure, the prevalence of TAP did not lessen, as the pictorial warning is limited only to 50% front and 60% back of the cigarette pack. The integration of the old and new text warning may also hamper the prominence of the message or affect sighting the new ones.

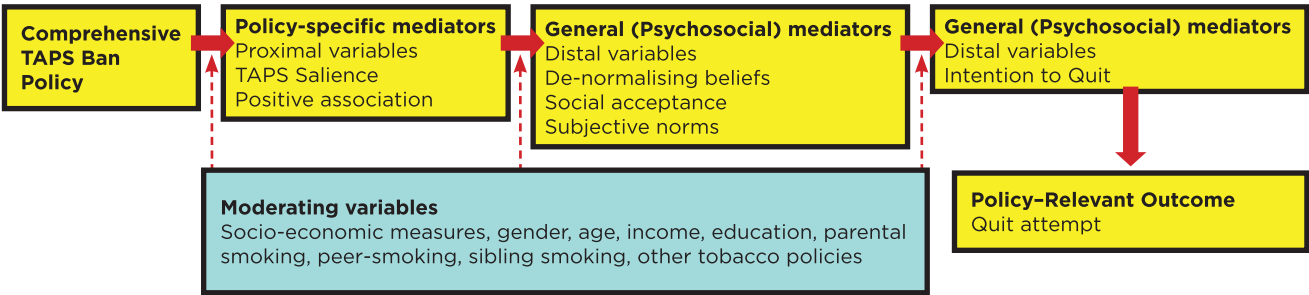
- iv. Tobacco Industry has shifted their market strategies to social media  
Challenges in implementing comprehensive ban are prevalent in internet and digital based communication. Tobacco companies have shifted their strategies and are rigorously focusing TAPS including promoting new unregulated products such as e-cigarettes and vapes along with their cigarette brands through various online marketing platforms with an aim to reach the masses particularly the adolescents. Platforms popularly used in Malaysia to promote e-cigarettes are social media sites (Facebook, Instagram and Twitter at 18.4%), followed by other sources on the Internet (16.3%) and vape shops (13.4%)<sup>[10]</sup>.
- v. Corporate Social Responsibility  
Corporate Social Responsibility (CSR) has become one of the key strategies employed by the industry to enhance its image and maintain legitimacy in both public and corporate spheres. Since CSR are generally encouraged in Malaysia for the public’s benefit, the tobacco industry is seizing this opportunity and using loopholes to continue its TAPS activities. In its quest to maintain and recruit minors, many CSR activities focus on education offering grants for building schools, scholarships and sponsorship of educational programmes. Huge publicity are often accorded to such activities which indirectly gives the tobacco companies a respectable image.<sup>[11]</sup>

C. TOBACCO CONTROL RESEARCH IN MALAYSIA

- i. Evaluation on the Effectiveness of TAPS Ban Policy on Smokers’ Behaviour  
  
The International Tobacco Control (ITC) Policy Evaluation Malaysia Survey has the most extensive evidence on tobacco advertising, promotion, and sponsorship in Malaysia. The ITC findings presented here derives from the 2012 ITC Malaysia Survey National Report covering Waves 1-4 (2005 to 2009) including data from the Waves 5 & 6 (2012 and 2014) surveys.  
  
The evaluation of the effects of TAPS on smokers by the ITC study is based on the conceptual framework for the evaluation of TAPS Policy (Figure 1.0) derived from the IARC Methods of Evaluating Tobacco Control Policies, Handbooks of Cancer Prevention 2007<sup>[12]</sup>.  
  
This framework assumes that policy has an influence on tobacco related-behaviours through a causal chain of psychological mediators. The most immediate effects

are those on policy-specific mediators, i.e. those that are proximal to the policy (conceptual closest) or most specifically related to the policy itself. The more-downstream effects are the psychosocial mediators to measure smokers’ perception on the norms of smoking. This articulates the goal of understanding the psychosocial processes that explain how and why TAPS ban policy may lead to changes in attitudes and behaviour of smokers. The policy-relevant outcomes for measuring include smoking attitude, quit attempt, successful quitting and support for TAPS ban policy and other tobacco control policies.  
  
Thus, based on the framework depicted in Figure 1.0 below, TAPS Ban should reduce salience of TAPS, decrease awareness on tobacco-favoured messages that may lead to reduction of perceptions that smoking is a socially acceptable behaviour as oppose to the idea that subjective and societal norms are more negative towards smoking, which is theorized to lead to quit intentions and quitting behaviour.

Figure 1.0: Conceptual Framework for Evaluation of Effectiveness of TAPS Ban on Smokers’ Behaviour

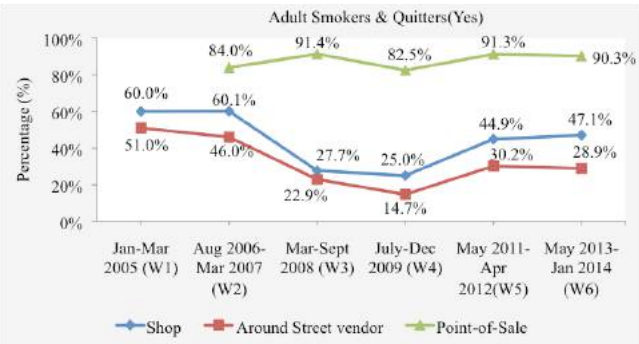


Despite the prohibition of tobacco advertisements, the product remains highly visible inside stores where they are sold. Given that the display of cigarette packs at point of sale (POS) is permissible in Malaysia, it is therefore not surprising that over 80% of adult smokers/quitters have reported seeing the cigarette packs. This percentage rose from Wave 2 to the Wave 6 surveys. The statistic is almost similar for adolescents.

Additionally, tobacco advertisements are still observed in shops, on windows or inside the shop, and around street vendors although such an act has been totally banned except at the point-of-sale (POS).

When the Malaysian government amended the CTPR 2004 banning all forms of TAPS, with the exception of sporting events until the end of 2005, sightings of tobacco advertisements in stores and around street vendors was reported as high in the ITC Wave 1 survey (41.8%, 42.1%) and Wave 2 (52.5%, 44.8%). When the total ban took effect, a declining trend was evident during the Wave 3 (23.9%, 21.1%) and at Wave 4 surveys (33.6%, 17.3%). However, due to lack of enforcement and monitoring, tobacco advertisements are more likely to be noticed at these places (shops and street vendors) with an increasing trend reported for the Wave 5 survey (54.0%, 34.0%) and Wave 6 (56.3%, 31.8%) while sighting (noticing) at POS continued to be persistently high.

**Figure 2.0:** Percentage of adult smokers and quitters who noticed display of cigarette advertisement (point-of sale) in shops and around street vendors



ii) Comprehensive Ban on Indirect Tobacco Advertising, Sponsorships and Promotion (TAPS)

Although events sponsorship by the tobacco industry is banned in Malaysia, findings from the ITC Malaysia Survey suggest that despite the ban, tobacco companies were able to draw attention to their presence through sponsorship of sporting events that appeal primarily to adult audiences.

For the Wave 4 survey (2009), just 21.2% of adult smokers and quitters saw or heard about a sporting event connected with a cigarette brand or tobacco company in the past six months. The percentage slightly decreased for Wave 5 (14.7%) and Wave 6 (18.4%). An average 6.7% of adolescents across the six Waves said that they had seen or heard of tobacco advertisements at sport or cultural events.

The distribution of free tobacco samples for promotional purposes is prohibited in Malaysia. However, findings from the ITC Malaysia Surveys suggest a high level of non-compliance to this restriction. Almost 13.2% of adult smokers and quitters in the ITC Wave 5 survey (2011-2012) reported having noticed distributions of free promotional tobacco items. This percentage is higher than other survey. Overall, an average of 7.7% adolescents has reported noticing competitions or award of prizes associated with cigarettes throughout the six Waves surveys.

Although the 2004 Regulations did not include the ban of tobacco brand stretching in Malaysia, it is surprising, that tobacco products merchandise is scarcely visible and noticed only by few adults and adolescents. After the complete ban of tobacco advertisement and promotion took effect, ITC Malaysia surveys reported a decline of noticing tobacco brand and logo promotion on clothing or other items as follows: Wave 2 (2006-2007) (22.3%), Wave 4 (2009) (8.8%). However, the noticing increased in Wave 5 (2011-2012) (20.5%) and Wave 6 (2013-2014) (29.2%). As for adolescents owning articles of tobacco-branded clothing, a declining trend was noted between Wave 2 (2006-2007) (18.3%) and Wave 6 (2013-2014)(4.6%).

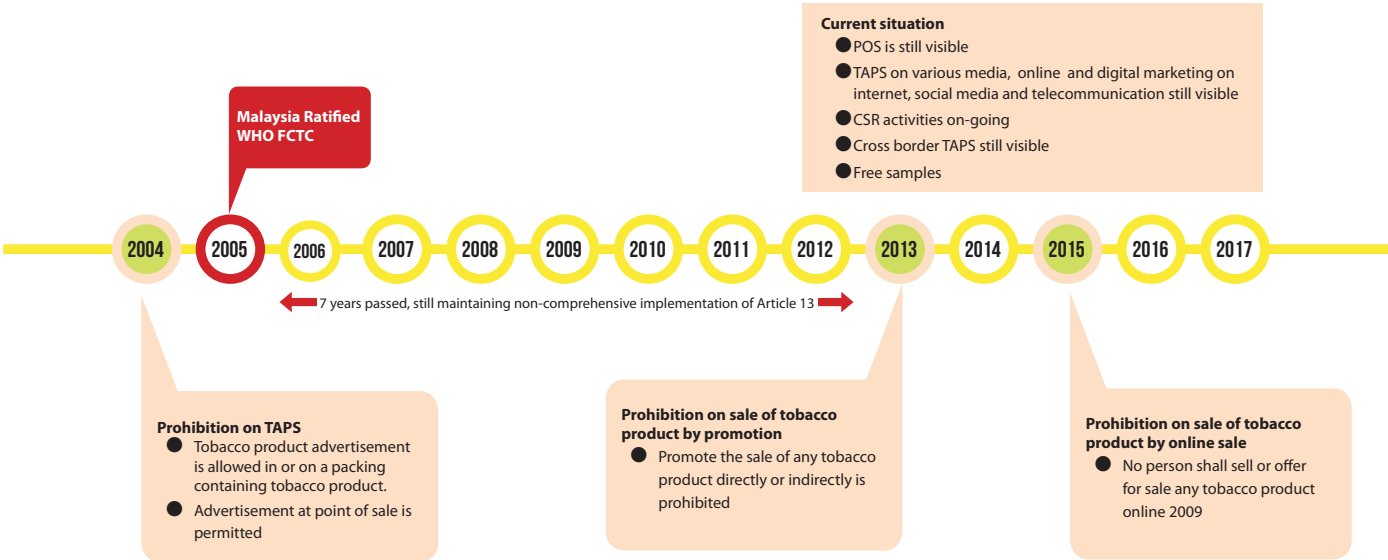
In Malaysia, the ban on advertising tobacco products covers promotion on television, film, radio, and the print media. Despite the ban, the tobacco industry continues to use indirect advertising across different forms of mass media to advertise their products. Findings from the ITC

Malaysia Survey provide further evidence that cigarette smoking continue to be prevalent the entertainment media. Based on the survey, the percentage of adult smokers and quitters who saw people smoked “often” or “very often” in the entertainment media increased from Wave 1 (20.5%) to Wave 6 (41.5%). Correspondingly, an average 29.3% adolescent reported, throughout the six Waves, that they have seen actors smoking on television, in videos and movies.

In conclusion, the ITC findings show that regardless of the TAPS ban, these activities remain visible:

- Point-of-sale (not prohibited)
- At shops and street vendors
- Distribution of free samples
- Brand stretching
- In media communication platforms such as TV, film, radio and print

**Figure 3.0:** Malaysia’s progress in implementing Article 13





**Table 4.0:** Current Research of tobacco advertisements, promotions and sponsorships in Malaysia

Year	Study	Study Population	Main findings
2015	Li, L., Borland, R., Yong, H.-H., Sirirassamee, B., Stephan Haman, & Omar, M. (2015). Impact of point-of-sale tobacco display in Thailand: Finding from the International Tobacco control (ITC) Southeast. <i>International Journal of Environmental REsearch and Public Health</i> , 12, 9508-9522.	ITC: International 2,000 adult smokers in Malaysian & Thailand respectively	Overall the proportions of smokers reporting having noticed displays in stores in Thailand were lowest (about 17%) in 2006 shortly after the ban was enforced, but increased at later survey waves, compared to Malaysia (where over 82% noticed displays across the waves.  For noticing tobacco advertising at POS, smokers in Thailand consistently reported lower levels (less than 11% in both stores and around street vendors) than those reported in Malaysia (at least 26% in stores and higher than 16% around street vendors.
2013	Omar, M., Awang, R., Rani, N. A. A., Hashim, H., Khan, H. R., Samsudin, S., et al. (2013). <i>Adolescents Awareness of Tobacco Promotion in Malaysia and Thailand; Findings form the ITC SEA Project</i> . Paper presented at the The 10th Asia Pacific Conference on Tobacco or Health, Chiba, Japan, Chiba, Japan.	ITC: International 1,000 adolescents in Malaysia & Thailand respectively	Tobacco advertisement and promotion continue to be present and noticed by adolescents in both Malaysia and Thailand especially through point-of-sales in Malaysia and electronic media.
2012	Rani, N. A. A., Omar, M., Awang, R., Khan, H. R. M., Borland, R., & Quah, A. C. K. (2012). <i>Awareness of Tobacco Advertisement and Promotion among Adult Smokers in Malaysia after Implementation of Control of “Tobacco Product Regulation (CTPR) 2004”: Findings from the International Tobacco Control Policy Evaluation SEA- Malaysia</i> . Paper presented at the 15th World Conference on Tobacco or Health Singapore.	ITC: International 2,000 adult smokers in Malaysian	Noticing tobacco advertisements in various media has not changed much from 2004-2008 given the prohibition of direct and indirect advertisements and promotion stipulated in the Malaysia’s Control of Tobacco Product Regulation Act 2004.  More than 80% adult smokers reported of noticing cigarette packages displayed inside stores at point of sale.
2008	Lim, K. Y., Kin, F., Lian, T. Y., & Goh, G. (2008). <i>Surveillance of Tobacco Industry Marketing Strategies at Retail Outlets</i> . Penang, Malaysia: National Poison Center, Universiti Sains Malaysia.	Interviewed of 60 owners/managers/ assistant manager of 60 retail outlet	Various strategies have been used by tobacco companies to obtain visual dominance at the POS.  Given the ban on advertising brand name and trademark, the industry use special editions cigarette using any pretext (brand anniversary) and create of reason of special edition.  Another promotion techniques are cigarette display either it is incorporated into a table top or stands alone. This followed by introduction of ‘gift’ pack.  Innovative promotional gimmicks and strategies are mainly found the rural retail stores.
2007	Yong, H.-H., Borland, R., Hammond, D., Sirirassamee, B., Ritthiphakdee, B., Awang, R., et al. (2008). Levels and Correlates of awareness of tobacco promotional activities among adult smokers in Malaysia and Thailand: findings from the International Tobacco Control Southeast Asia (ITC-SEA) survey. <i>Tobacco Control</i> 17, 46-52.	ITC: National and International (Malaysia & Thailand)	Unprompted awareness of any tobacco marketing activities was very low in Thailand (20%) but significantly higher in Malaysia (53%).  Compared to Thailand, Malaysian adult smokers reported significantly higher level of awareness of tobacco advertisement in all locations (range=17.7%) noticing in disco lounges to 59.3% on posters).

D. RESEARCH GAPS AND RECOMMENDATION FOR RESEARCH

- Lack of studies to examine the psychosocial behaviour towards TAPS  
There is a lack of study on the effectiveness of TAPS policy ban among the Malaysian population. It is difficult, therefore, to determine to what extent partial comprehensive banning of TAPS can influence psychosocial behaviour and policy-outcome behaviour, both for adult smokers and adolescents, and specifically, the impact of TAPS at point-of-sale on people’s behaviour. The ITC Malaysia survey managed to study the impact of TAPS policy from 2005 to 2014 but a longitudinal study was not possible due to the absence of funding. Such a study is critical to provide comprehensive evidence on the impact of all tobacco control policies. An example would be a study on the influence of the available percentage areas on cigarette pack design since tobacco companies may use this loophole advantageously to counter TAPS within the 50% front and 40% back available on cigarette packs. More importantly, a study on plain packaging is imperative as an alternative to reduce the influence of cigarette pack design in favour of the tobacco industry.
- Monitoring tobacco Industry TAPS activities: Enhancing the benefits of consumer tobacco control research (CTCR) survey  
The benefits of consumer surveys are enhanced when complementary methods are used to measure both marketing and policy inputs; a clear notion of what is happening out there will enhance the ability to measure its effectiveness. The policy and marketing areas need to be systematically monitored in order to gauge the effect of development especially issue relating to tobacco industry’s compliance and their subtle ways to counter newly imposed restriction. Such surveys may also include a series of marketing surveillance activities to provide information on the marketing approaches used by the tobacco industry before and after the

ban. As an example, brand stretching, reverse brand stretching or brand sharing, free sample, depiction of tobacco use or tobacco products in TV, film or other media, internet and social marketing and cross border advertising.

The studies should also include monitoring websites carrying dominant tobacco theme. The content analysis may look for the presence or absence of five features: site category, online purchasing for tobacco products and consumer-awareness information, portrayal of human characters, lifestyle and message appeals, and interactive site features to determine whether the media is an unmonitored or unregulated source of tobacco marketing targeting young people.

Policy tracking rating system through analysis of tobacco industries’ internal documents could also provide strong evidence to support TAPS activities and their potential influence. More detail on the methodology for CTCR is documented in IARC (2007). Method for Evaluating Tobacco Control Policies.<sup>[12]</sup>

- Lack of study on Corporate Social Responsibility (CSR)  
Up to present, Malaysia has yet to comply wholly to Article 13 WHO-FCTC since “Corporate Social Responsibility” (CSR) is not a component in the comprehensive banning of TAPS. A local study had examined the association between CSR activities by British America Tobacco (BAT) and their impact (image and reputation, customer purchase intention, attract potential employees, increase loyalty and commitment from customers). The study found significant relationships between community (support education, assist hard-core people, controlling under-age access of buying cigarettes, providing product information and product safety at the packaging) and workplace (diversity and inclusion, good health and safety, equal opportunity) and the impact of CSR activities<sup>[13]</sup>. There is still currently a lack of comprehensive study in Malaysia to examine the extent the tobacco industry has used CSR activities to circumvent the existence of tobacco policy.

## E. POLICY RECOMMENDATION

- The ITC Malaysia Survey findings indicate that tobacco product and brand advertising and promotion of smoking are still highly visible in Malaysia to both adults and youths. Although the 2004 Regulations have banned many forms of tobacco advertising, promotion, and sponsorship in Malaysia, findings show that Malaysians are still exposed to tobacco marketing through tobacco product displays in stores where they are sold in attractive packaging to lure consumers. A strong-enforced ban on the display of tobacco products at point of sale, paired with legislation on plain packaging to counter tactics by the industry is direly needed to tighten any loopholes there may be on TAPS legislation towards reducing smoking prevalence in Malaysia.
- The following are recommendations by the WHO-FCTC [1-2] to strengthen the implementation of Article 13 in Malaysia:
  - i. Comprehensive banning of TAPS
    - Comprehensive ban should cover both direct and indirect tobacco advertising. This includes print, broadcast, billboards and outdoor advertising (such as transit vehicles and stations) and the internet and social media platforms;
    - Legislation should include bans on in-coming and out-going cross-border advertising, such as tobacco advertising on international television and Internet site and sponsorship;
  - ii. Ban Point-of-Sale advertising and Promotion
    - It should cover point of promotion (price discount and free samples) and point of sale advertising through in-store of tobacco products;
    - Keeping tobacco behind the counter and out of public view;
    - Introduction of plain packaging (without colour, images or distinctive typeface other than health warnings) reportedly can neutralise the value of individual brands.
  - iii. Ban all forms of direct and indirect advertising. This includes:
    - Sponsorship of music, cultural and sporting events;
    - Use of non-tobacco products to promote tobacco brands or companies;
    - Endorsement by celebrities;
    - Restriction on tobacco imagery in entertainment media such as films and television;
    - Prohibition on the use of tobacco branding on clothing and other items;
    - Prohibition of free giveaways of tobacco and tobacco-related products; and
    - Banning “Corporate Social Responsibility” including sponsorship of research, charities and community projects.
  - vi. Comprehensive bans on TAPS must be periodically updated taking into account innovations and strategies by the industry and media technology.

## vii. Monitoring and enforcement

- Tobacco industry advertising, promotion and sponsorship activities require constant monitoring and surveillance to ensure compliance with bans especially in shops and street vendors.
- Monitoring should cover traditional media and marketing strategies as well as new technologies and social media such as text messaging, chat groups and underground nightclub advertised through word-of-mouth.

## viii. Strong legislation is required

- Government should act to ban tobacco advertising, promotion and sponsorship through well-drafted and well-enforced laws

## F. SUMMARY

Partial ban is not effective enough to improve and change smokers’ smoking behaviour i.e. quit intention, quit attempt and quitting. Comprehensive ban is our way forward. With regards to partial ban of TAPS Malaysia, there are several loopholes/violations that could be used by tobacco companies to implement TAPS.

These are:

1. Pack display at Point-of-sale (not prohibited)
2. Pack design (loophole/violations)
3. CSR other than direct sponsorship (not ban)
4. Cross border (partial ban)
5. In media communication platforms such as TV, film, radio and print (violations)
6. Online marketing such as on internet, social media, and digital telecommunication (loophole/violations)
7. At shops and street vendors (loophole/violations)
8. Distribution of free samples (loophole/violations)

9. Brand stretching and reverse brand stretching and brand sharing (loophole/violations)

In addition, passing a comprehensive ban is not enough. To protect people effectively from exposure to TAPS, the ban needs to be enforced. If it is not properly enforced, the tobacco industry will try to circumvent its provisions. A clear and unambiguous ban can be easily enforced, provided it includes minimal but essential efforts to detect possible violations. Enlisting the support of civil society and of the public in observing and reporting violations of the ban helps the overall enforcement and monitoring efforts of governments.

Hence, continuing policy evaluation research such as the ITC longitudinal comprehensive study and monitoring is crucial to determine policy effectiveness and help strengthening the current policy.

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# RAISE THE PRICE OF TOBACCO

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## A. INTRODUCTION

The most effective approach to control the spread of tobacco use is through policies that directly reduce the demand for it. There are many valuable ways of going about this, from advertising bans to public smoking prohibitions, but the most potent and cost-effective option for governments is the simple elevation of tobacco prices through tobacco taxes. Article 6 of the WHO Framework Convention on Tobacco Control, "Price and Tax Measures to Reduce the Demand for Tobacco", recognises the importance of this policy and calls on governments to implement tax and price policies to reduce consumption and smoking prevalence in contributing to their national health objectives.

Implementation of Article 6 of the WHO FCTC is an essential element of tobacco-control policies and thereby efforts to improve public health. Tobacco taxes should be implemented as part of a comprehensive tobacco-control strategy in line with other articles of the WHO FCTC. The WHO recommends that tobacco excise taxes account at least 70% of the retail prices of tobacco products. As with many consumer products, people tend to buy less of a product when the real price increases and it becomes less affordable. Increase of 10% in tobacco prices reduces 4% consumption of tobacco in high income countries and 5% in low and middle-income countries.



Most governments levy taxes on tobacco products, including excise taxes, value added taxes (VAT) or general sales taxes and import duties. Of these, tobacco-product excise taxes are most important for achieving the health objective of reduced tobacco consumption since they are uniquely applied to tobacco products and raise their prices relative to the prices of other goods and services. Next, the Article 6 also emphasises on prohibition or restriction sales and/or importation by international travellers of tax-and duty-free tobacco product which is yet to be implemented.

Industry claims that increase in tobacco tax will increase illicit trade and reduce government revenue. However, the claims by the tobacco industry that tax is the main determinant of the illicit cigarette trade are not fully supported by empirical studies. For example, in the period 2000-2014, cigarette prices had risen more than doubled in the United Kingdom due to increase in excise tax, but the smoking prevalence and illicit trade decreased and tobacco excise tax revenues increased.<sup>4</sup>

Other than the argument on the impact of taxes on the illicit cigarette trades, there are other important factors influencing the illicit trade, which include industry participation, poor law enforcement due to limited resources, the absence of tracking and monitoring of the illicit cigarette distribution chain and the level of corruption. The World Bank's analyses have shown that high levels of illicit cigarettes are closely linked to corruption and tolerance of contraband sales.<sup>5</sup> Therefore, although differences in cigarette taxes and prices can be an incentive for illicit trade, other factors can also be of equal or greater importance in determining the illicit cigarette trade in Malaysia.

B. CURRENT POLICY AND SITUATIONAL ANALYSIS

Current Policy

In Malaysia, cigarette tax is collected from cigarette manufacturers or cigarette importers. Until 2003, taxes on tobacco were levied according to their weight. In 2004, Malaysia adopted a specific excise tax per stick, which was easier to administer. However, in 2005, the Ad valorem excise tax was introduced, which has added complexity to the system and the broad-based consumption tax, the Goods and Services Tax (GST), was introduced in April, 2015 which increased the sales tax from 5% to 6%. Later in November 2015, the Malaysian government decided to abolish the Ad Valorem tax, and imposed an increase of 42.8% of specific tax. Therefore, the total excise tax per stick of cigarette is increased from 0.28 cent per stick to 0.40 cent per stick from 2014 to 2015, representing a large increase in excise tax since 2004. Currently, the proportion of excise tax is 49.4% of retail cigarette price which is far below the recommended rate by the WHO. Table 1.0 displays the cigarette taxes imposed by the Malaysian government from 1990 until 2015.

Table 1.0: Tobacco taxation in Malaysia (1990 – Current)

Year	Specific excise Tax (RM/kg or RM/stick)	Sales Tax (%)	Ad Valorem Excise tax (%)
1990	13	15	-
1991	14	15	-
1992-1998	28.6	15	-
1999-2000	40	15	-
2001	40	25	-
2002	48	25	-
2003	58/kg	25	-
2004	0.081/stick*	25	-
2005	0.11	5	20
2006	0.12	5	20
2007	0.15	5	20
2008	0.17	5	20
2009	0.18	5	20
2010	0.21	5	20
2011	0.21	5	20
2012	0.21	5	20
2013	0.26	5	20
2014	0.28	5	20
2015 - Current	0.40	6	0

\*Specific tax per stick has been imposed (1 kg = 1100 sticks)

Source: The Royal Malaysian Customs Department and The Confederation of Malaysia Tobacco (CMTM), (various years).

Table 1.0 reveals that the increase in the tax rate is not adequately structured and in line with the changes in inflation rate and economic growth.

Besides tax, Malaysia had introduced the minimum price law (MPL) in 2009 at RM6.40 per pack. The latest minimum price on cigarette has been imposed in 2016 at RM10.00 per pack.

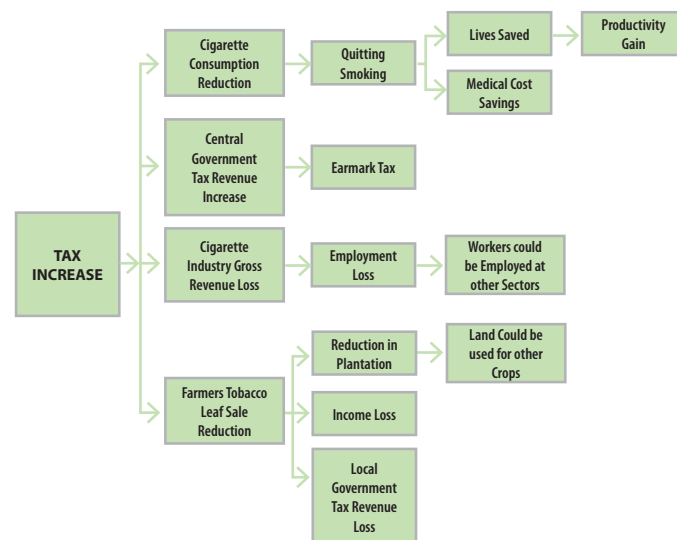
Problem statement for Malaysia

Despite the commitment of the government to increasing tobacco excise tax, the current tax rate is still far below the recommended WHO's rate. Until now the government has still not adopted a structured tobacco tax policy. The minimum price law imposed only on manufactured cigarettes is inefficient and not meaningfully changes the cigarette price in Malaysia.

The annual growth rate of GDP in Malaysia which averaged 4.75% from 2000 until 2016 has impacted the purchasing capabilities of Malaysians at large. This increase in income coupled with the tobacco industry's strategy to keep prices as profitable as possible and low excise tax rate have increased the affordability of cigarette consumptions in Malaysia over time. This implies that cigarettes have become relatively cheaper and more affordable over the past decade, contributing to tobacco consumption.

## C. TOBACCO CONTROL RESEARCH IN MALAYSIA

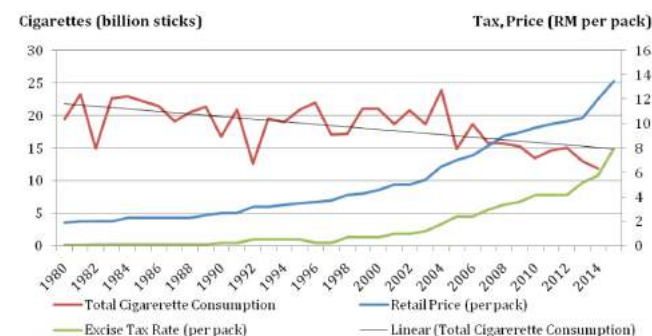
To evaluate the tobacco tax policy, we need to adopt the following framework:



**Figure 1:** The conceptual framework for the population health and economic impact of tobacco taxation

From Figure 1, the impact of tax increase will lead to; reduction in cigarette consumption, increase government tax revenue, loss in cigarette industry gross revenue and reduction in sale of farmers tobacco leaf. However, the current studies in Malaysia focus on the impact of cigarette tax increase on a reduction in cigarette consumptions and increase in government revenue. Besides that, there is also a study on the impact of increase cigarette tax on demand for illicit cigarettes.

As suggested by WHO taxation is the most effective measure to reduce cigarette consumption, and Malaysia shares the same scenario as shown in Figure 2.



**Figure 2:** The relationship between excise tax rate per pack, retail price and total consumption of cigarettes

**Source:** The Royal Customs Malaysia (various years)

Figure 2 shows a fluctuation in total consumption of cigarettes from 1980 until 2014, but a downward linear trend line plotted through the total consumption graph indicates a reduction in the consumption of cigarette when the excise tax increases. Since the demand for cigarettes in Malaysia is inelastic, there has been small changes in reduction of cigarettes since 1980. The inelastic demand for cigarettes indicates that a price increase results in less than proportional decline in cigarette demand.<sup>1,2</sup> Therefore, a relatively large increase in the tax/price is required to reduce cigarette consumptions substantially.

The excise tax has proven to be successful not only in reducing cigarette consumption through increased price, but also in increasing national revenue in many developing as well as developed countries.<sup>1,3</sup> It was predicted that the impact of a 25% increase in cigarette excise tax in Malaysia would result in 20.8% increase in cigarette tax revenue.<sup>1</sup>

The Malaysia Abridged SimSmoke model has been developed to project the impact of increase in excise tax and other MPOWER policies on smoking prevalence

rates, number of smokers and the associated smoking attributable deaths. The model demonstrates that higher tobacco excise taxes together with comprehensive ban on marketing/promotion of cigarettes, a fully funded mass media campaign informing about the dangers of tobacco use and improving enforcement of no smoking in smoke free areas will allow the government of Malaysia to achieve its goal of 15% and less than 5% of smoking prevalence in 2025 and 2045 respectively.

Findings from the study of 'The Relationship between Tobacco Taxation and Demand Determinants to Reduce Cigarette Consumptions and Smoking Prevalence in Malaysia' suggest that the government should implement the optimum tobacco excise tax policy to reduce consumption of cigarettes and smoking prevalence and at the same time to maximise the tax revenue. The current excise tax rate which is 49.4% of the retail price should be increased to 61% of the retail price or the price per stick of cigarette to be increased from RM0.40 to RM0.64. With this new optimal tax rate, the new proposed price for the current premium cigarettes will increase from RM16.20 to RM21 per box and potentially bring a maximum excise tax revenue of RM6,247,340 to the government. It is suggested some portion of the generated tax income should be ploughed back to the appropriate authority to support the tobacco control health promotion and/or health related activities and programs for combating tobacco use/misuse in the future. This suggestion is consistent with the simulation results from the Abridged SimSmoke model. When the excise tax is increased to 61% of the retail price and combined with non-price tobacco control

policies, smoking prevalence will be reduced by 18.8% (from the current prevalence rate) in the year 2020, 24.3% in 2030 and 28.9% in 2055, parallel to the objectives which have been decided by the Ministry of Health, Malaysia.

With regards to the impact of increase in cigarette excise taxes on illicit cigarettes, we have developed an illicit cigarette demand model. This model investigates the relationship between demand for illicit cigarettes and retail excise tax rate of legal cigarettes. We have also investigated other factors that might affect the demand for illicit cigarettes such as income (GDP per capita), corruption index dummy variables to capture the government's efforts to curb illicit cigarette trades. The finding shows that the GDP per capita is the only significant variable and increased in cigarette excise tax is not a significant factor in determining the demand for illicit cigarettes. Therefore, the fear that demand for illicit cigarettes may increase when excise taxes increase, is therefore baseless. With more intensive government interventions through existing and more comprehensive tobacco control policies, it is anticipated that the demand for illicit cigarettes will continue to decline in future.

Malaysia adopted the minimum price law (MPL) in January 2010 with the minimum retail price of RM6.40 per pack. However, findings from the ITC Malaysia Survey revealed that the MPL was inefficient and not meaningfully changes the cigarette price in Malaysia as illicit brand prices remained below the minimum price level before and after the MPL's implementation. Therefore, continuous increases in excise tax would be the best policy to decrease consumption of cigarettes.

The following Table 2 illustrates some related studies in Malaysia on the impact of increase in tax and other non-price policies on demand for cigarettes and tax revenue earned by the government.

Table 2.0

Year	Study	Study Population	Main findings
	Cigarette Demand		
2016	The Relationship between Tobacco Taxation and Demand Determinants to Reduce Cigarettes Consumption and Smoking Prevalence in Malaysia, 2016. Ministry of Health Malaysia. <sup>6</sup>	Secondary Data Analysis (1984 to 2014)	Simulate that to achieve the End Game Target of 5% prevalence rate in 2045, the tax rate should increase to 85.5% with combination other three substantial non-price measures tobacco control policies.
2013	Cigarettes Demand and Tax Strategy in Malaysia. Norashidah M. N., et al (2013) <sup>7</sup>	Secondary Data Analysis (1980 to 2009)	Price elastic = -0.49 (long run), = -0.28(short run) Income effect =positive Hence the responsiveness of income changes in stronger than price effect. Predict increase of 25% in excise tax would reduce cigarettes consumption by 3.37% and generate an increase of RM434 million tax revenues.
2013	An Optimal Cigarette Tax in Malaysia tax. Mohamed Nor, et al. (2013). <sup>2</sup>	Secondary Data Analysis (1980-2009)	Excise tax rate in 2009 was not at the optimal level, so it doesn't obtain the maximum tax revenue.
2012	Cigarette Demand in Malaysia. Mohamed Nor, N. Universiti Putra Malaysia Press. <sup>3</sup>	Secondary Data Analysis	The estimated price elasticity of demand is inelastic and price is a significant determinant of demand for cigarette in the long run. Addiction of cigarette among Malaysian smokers is due to their myopic behaviour.
2007	Demand analysis of tobacco consumption in Malaysia. Ross, H. and Al-Sadat., N. A. M. Nicotine & Tobacco Research. <sup>1</sup>	Secondary Data Analysis (1990 to 2014)	Price elastic = -0.57 (long run), = -0.08(short run)
	Affordability		
2014	Tobacco Price and Taxation: ITC Cross-Country Comparison Report. ITC Project (May, 2014) University of Waterloo, Waterloo, Ontario, Canada. <sup>8</sup>	National Survey (2005 to 2011)	The affordability of cigarettes in Malaysia becomes more affordable, which increased as much 1.83%.
2012	ITC Malaysia National Report. Findings from Wave 1 to 4 surveys (2005-2009). ITC Project. University of Waterloo, Waterloo, Ontario, Canada; University Sains Malaysia, Pulau Pinang, Malaysia; and Ministry of Health, Putrajaya, Malaysia. <sup>9</sup>	National Survey (2005 to 2009)	Their results suggested that tobacco taxation and prices should be increased from 2005 to 2009, because that the cigarettes becoming more affordable, only about a third of smokers said they often think about the money they spend on smoking, and less than a quarter said that cigarette price is a reason to quit smoking.
	Minimum Price Law		
2015	The impact of the Malaysian minimum cigarette price law: findings from ITC Malaysia Survey. Liber, A. C. et al. (2015) Tobacco Control. <sup>10</sup>	ITC data analysis between 2005 and 2012.	The minimum price law seems to be inefficient in Malaysia where the proportions of illicit cigarettes were sold below the inflation-adjusted 2011 minimum price level.

D. RESEARCH GAPS AND RECOMMENDATION FOR RESEARCH

i. Structured tobacco tax policy and Willingness to Pay (WTP)

In a previous study, the researchers have suggested to increase the Malaysian tobacco taxation in a structured manner. It is important to conduct a study to determine the willingness to pay (WTP) for a pack of cigarettes. Findings from the WTP study will guide our policy makers to implement structured tobacco tax policy.

ii. Student daily pocket money and affordability in purchasing cigarette

Article 6, the WHO FCTC aims to reduce the affordability towards tobacco products especially by minors. By conducting a study in assessing school children's daily pocket money and its association in purchasing cigarette would help the policy maker to increase the tax and propose measures to curb this problem.

iii. The cost of smoking and the impact on government resources

Another study that we proposed is The Costs of Smoking in Malaysia. The costs of smoking consist of direct costs (e.g. medical costs) and indirect costs (e.g. productivity, quality of life). Specifically, the purpose of measuring costs of smoking is to evaluate the impact of smoking on healthcare delivery and financing, the productivity of the population, to guide health policy and health planning for tobacco control initiative and to provide an economic framework for tobacco control program evaluation. This study will demonstrate the 'net revenue' from smoking in Malaysia and the extent of financial loss that smoking contributes to this country.

iv. Illicit trade study and its association with cigarette tax

The tobacco industry would often alarm the government that raising tobacco tax would lead to rise in illicit cigarette trade. They would inform the Ministry of Finance that raising tax is ineffective as smokers would switch to illegal and cheaper alternatives. Research from the WHO and the World Bank have long disputed this claim and demonstrated how raising tobacco taxes has zero correlation with illicit trade. An in-depth study in Malaysia would be able to convince the policy makers that raising tobacco tax is probably the sharpest tool to combat smoking in this country.

E. POLICY RECOMMENDATIONS

Tax and price measures are very important in reducing the smoking prevalence in Malaysia. International and our very own Malaysian studies have shown that tobacco taxes are highly effective in reducing the demand for cigarettes. Nonetheless, in order to further strengthen the tobacco control measures, the government must implement a structured tobacco tax policy. This will ensure a steady and planned increment in tobacco taxes, without intervention from any vested interest.

Other important policy recommendation is to earmark a significant portion of tobacco tax revenue to support quit smoking program and other tobacco control policies. This 'sin tax' method has worked well in many countries like Thailand, Philippines and many other nations. Tobacco control policies and programmes require consistent and stable resources, and earmarking tobacco taxes will directly help smokers to gain access to affordable smoking cessation services. It will also be highly beneficial for smoking prevention programmes.

The government acknowledges that illicit cigarette trade is still an issue in Malaysia and it is hampering the effectiveness of tobacco control programmes. However, we must not compromise the implementation of Article 6 of the WHO FCTC. Raising tobacco tax and tackling illicit cigarette trade could be simultaneously pursued by all the relevant authorities.

The price of cigarettes in Malaysia has been increasing over the years. The value of cigarette tax per pack alone has almost touch the level of current minimum cigarette price policy (i.e RM8.00 taxation to RM10.00 of minimum price). Therefore, Malaysia has nearly reach a point where the Minimum Price Law could be abolished.

Furthermore, the minimum price policy is not the WHO FCTC recommendation and should be part of tobacco control practice. The best policy should be a minimum tobacco tax law where country should reach at least 75% of tobacco tax over the value of retail price for a pack of cigarette.

F. SUMMARY

Many studies have done globally including Malaysia, show that cigarette excise tax has been a powerful tobacco control policy instrument in reducing cigarette consumption. However, the minimum price law is found to be an ineffective price policy for reducing the cigarette consumption. Increase in excise tax also contributes to increase in government excise tax revenue which is contrary to the argument by the industry that higher excise tax will reduce government revenue due to increase in illicit cigarette trades. In sum, both studies on willingness to pay and costs of smoking are imperative for future tobacco control policy formulation.

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