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Smoke-Free Legislation in Malaysia: A comprehensive review

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ABSTRACT

Introduction: As a party to the World Health Organization - Framework of Convention on Tobacco Control (WHO FCTC), Malaysia has introduced steps in the control of tobacco use in public places through its smoke-free legislation (SFL).

Objective: The purpose of this review is to briefly summarise the implementation of SFL in Malaysia, the efforts from every angle of the community and to address the gaps and new challenges faced in ensuring the effectiveness of this well-constructed legislation.

Results: Well-structured and positive commitments in protecting the public from the health hazards of smoking and second-hand smoke (SHS) exposure have been shown by the Malaysian government. However, the level of compliance is an area of concern. Since e-cigarettes have been introduced to the market, it brings along new challenges in the implementation of the current SFL. Thus, treating e-cigarettes in the same manner with conventional cigarettes will help to maintain the strength of the current SFL and allowing the authority to focus on the enforcement for the successfulness of the implementation.

Conclusions: 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 suggested to help improve the effectiveness of the existing SFL.

Keywords: *smoke-free legislation, secondhand smoke, Malaysia, FCTC, effectiveness*

1. Introduction: History of Smoke-free Legislation in Malaysia

The WHO Framework Convention on Tobacco Control (FCTC), which entered into force on February 27th of 2005, aims to protect the present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke (WHO, 2015). With the latest addition of Zimbabwe, to date, there are 180 countries that have become parties to the FCTC. From the 38 Articles in the framework convention, Article 8 stressed the implementation of Smoke-Free Legislation (SFL) among its member countries. This can be seen by introduction of SFL in several countries after being members of FCTC treaty.

Malaysia previously signed the FCTC treaty on September 23rd of 2003 and had ratified it on September 16th of 2005. As one of the parties to the FCTC, Malaysia has put an effort to control tobacco use in public places by introducing the Control of Tobacco Product Regulation under the Food Act 1983 (Malaysia Act, 2004). The regulation which was issued in 2004 aimed to regulate, among other things, smoke-free environments; tobacco advertising, promotion and sponsorship; as well as tobacco packaging and labelling. Amendments of Regulation 11 were made in 2008 and 2010 and at present there are up to 21 public places listed as smoke-prohibited places. SFL in Malaysia are considered partially practiced as certain types of enclosed public venues still sanctioned smoking (Abidin et al., 2013). The timeline of tobacco control policies in Malaysia is as shown in Figure 1.1.

According to Part IV of the Control of Tobacco Product Regulation (2010), smoking are prohibited in hospital or clinic, public lift or toilet, air-conditioned restaurants or shop, public vehicle or public transport terminal, airport, government premise, educational institute, nursery, shopping complex, petrol station, stadium or sport complex, religious building, building specified by Minister, assembly activity area, service counter, library, internet café, national service training centre, air-conditioned workplace and entertainment centre except for casino, pub or discotheque. In comparison with SFL in Malaysia, countries such as in the United Kingdom (UK) and Ireland implement comprehensive SFL. Comprehensive SFL has been implemented since March 26th of 2006 in Scotland, UK in which smoking was prohibited in virtually all enclosed public places and workplaces, including bars, restaurants, and cafés (Haw & Gruer, 2007). Starting two years earlier than in UK, Republic of Ireland introduced a comprehensive SFL, covering all indoor workplaces, including bars and restaurants (Fong et al, 2006). Table 1.1 shows the changes in the Control of Tobacco Product Regulations and places where smoking are prohibited in Malaysia.

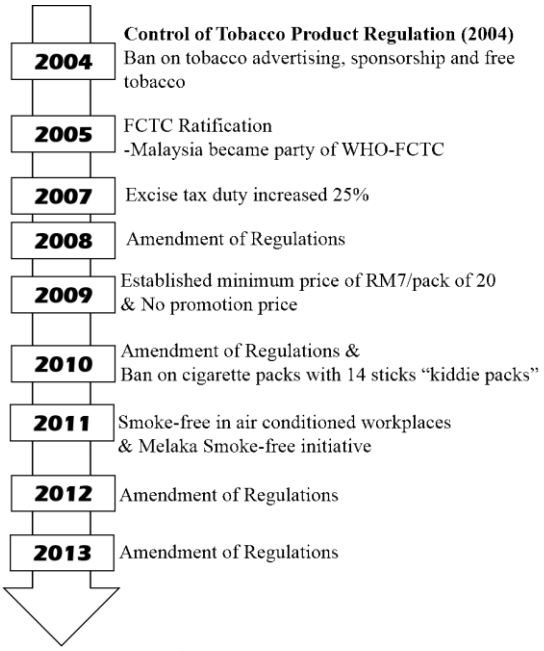

Figure 1: Timeline of Malaysia's tobacco control policies

Melaka was the first state in Malaysia to gazette a large smoke-free area specifically to protect not only women and children but the public from the dangers of cigarette smoke (Murali, 2011). The smoke-free area was formally announced on June 15th of 2011, in which five areas in Melaka measuring a total of 338 hectares were declared as smoke-free zones. These areas involved the Malacca World Heritage City, Melaka Raya, Malacca International Trade Centre (MITC), Alor Gajah and Jasin. The introduction of Melaka Smoke-Free Zone was announced by the Minister of Health during the opening of *World Without Tobacco Day* held in Melaka. With the declaration of Melaka Smoke-Free Zone, smoking prohibition was implemented in Melaka and anyone caught smoking in any of the zone could be fined up to RM 10,000 and face two years of imprisonment.

In order to increase the awareness and educate the residents of Melaka on the implementation of SFL in its five areas, programs and activities were actively planned and conducted by the state government. Among the programs were exhibitions, forums, talks, workshops and carnivals that promote smoking cessation in order to increase knowledge on the adverse health effects of exposure to second-hand smoke towards non-smokers and to reduce smoking prevalence among the locals. Participation in these activities also includes hoteliers, tourism agencies and tourist guides as these organisations play a role in delivering the messages regarding the Smoke-Free Zone to the tourists who visited Melaka (MBAR, 2013). Workshops such as *Kem Melaka Bebas Asap Rokok* (KeMBAR) involved school and university students in raising their awareness on the harmful effects of smoking as well as exposure to tobacco smoke. As part of the workshop activities, the students conducted street health promotions to the public in which they disseminate brochures and articles on smoke-free zone campaigns to the residents of Melaka. A series of forums and exhibitions were also held in conjunction with the programs and were conducted by religious organisation based in Melaka. Religious forum on *Jauhi Rokok Amalan Bersama* conducted in Al-Azim mosque in Melaka was an example of the effort to educate the locals on the negative consequences of smoking and tobacco smoke exposure within the religious perspective.

Apart from Melaka, Penang implemented Smoke-Free Zones under the program known as *Penang Bebas Asap Rokok* (PeNBAR) since October 2012 (The Star, 2011). Botanical Garden, Youth Park, Air Itam dam, Mengkuang dam, Teluk Bahang dam and Ampang Jajar Municipal Park are among the six recreational parks that were announced as Smoke-Free Zones. The latest addition of Smoke-Free Zone was the George Town UNESCO World Heritage Site. Anyone caught smoking in these areas will be fined up to RM2,000 and RM500 for discarding cigarette butts carelessly.

Johor has also shown its commitment in becoming a smoke-free state by introducing seven areas in the state as smoke-free since June 2014 (Malay Mail, 2014). These areas are Town Park Two and Three, parks in Taman Seri Austin, Gunung Ledang National Park, Endau Rompin National Park, Endau Rompin Tambahan National Park, Pulau Kukup National Park and Tanjong Piai National Park. Those who were found smoking in the prohibited areas can be given a compound of RM250 or fined up to RM10,000 or jailed not more than two years should they be convicted in court.

The recreational park of Batu Burok and its surrounding area of approximately 1 km^2 radius in the east-coast Peninsular of Malaysia was announced as smoke-free zone since June 2014 (Nor, 2014) by the state government of Terengganu. As a start, the state government set a period of probation of 6 months to enable the public and food handlers to familiarize themselves and adapt to the legislation. Besides Batu Burok, Primula Hotel, Al-Muktafil Billah Shah mosque and areas near to the official residency of the Chief Minister in Sri Iman were also included in the smoke-free zones and these areas were collectively known as Terengganu Bebas Asap Rokok (TBAR).

The neighboring state of Kelantan had also taken the initiative in introducing smoke-free zones. The smoke-free zones were introduced in April 2014 as the outcome of the *Inisiatif Kelantan Bebas Asap Rokok* (IKBAR) program (Utusan Malaysia, 2014). The local authorities were given the task to identify selected smoke-free zones in their respective administrative areas. Initially, IKBAR was started in the administrative area of Kota Bharu Municipality, Islamic City involving two zones which are Dataran Ilmu and location from the Kota Bharu Bus Station until Tambatan Diraja. Billboards and banners publicizing the smoke-free zones were placed around the areas to help increase the public aware of the initiative.

2. Other efforts: National Tobacco Control Program

In Malaysia, the National Tobacco Control Program (NTCP) was formulated with the aim to decrease the prevalence of tobacco consumption, reduce the uptake of smoking by young generation, increase the number of smokers who quit, minimize and eliminate exposure to tobacco smoke in all public and work places. It was also targeted to reduce tobacco-related deaths and diseases throughout the country and eliminate the economic and social dependence on tobacco and tobacco products for sustainable livelihood (GATS, 2012). In achieving these objectives, six strategies were introduced covering legislative control, health promotion and public advocacy, tobacco tax policy, smoking cessation services, research, monitoring and evaluation to multi-sectoral collaboration and capacity building.

Health promotion had been recognised as the best approach in educating people, creating awareness and helping to nurture the society towards a better and healthier lifestyle (Kumar & Preetha, 2012). Under NTCP, tobacco-related campaigns focusing on smoking cessation were organized. *Tak Nak* campaign which was launched in February 2004 was one of the major campaign that were covered by most of the mass media (Zawahir et al., 2012; Lee et al., 2015). The campaign which focused on teenagers aged 13 to 21 years old was aimed to change the behavior of smokers as well as to protect non-smokers. *"Kempen Nafas Baru Bermula Ramadan"* was conducted using the religious approach to help Muslim smokers to quit during the fasting month (Maznan, 2005). In conjunction with the World No Tobacco Day, Malaysia plays an active role in celebrating the day with many society-based activities with specific aim to spread knowledge on tobacco and to increase awareness of the public on the harms of smoking.

Through National Quit Smoking Program under NTCP, there are currently more than 300 Quit Smoking Clinics available throughout the country. The main objectives of the clinics are to provide knowledge and skills for smokers to quit, motivate and rehabilitate smokers who intend to quit and prevent relapse and maintain the non-smoking status among those who have quit (Wee et al., 2010). *Quitlines* are telephone-based tobacco cessation services that provide advice to smokers on how to quit smoking. Callers will be attended on a one-to-one basis and will receive materials tailored to individual needs (Yasin et al., 2012). The toll-free telephone-based smoking-cessation service also provides advice to non-smokers to help their loved ones quit.

In support of Article 8 of the WHO FCTC, the Malaysian Health Promotion Board (MySihat) introduced The Blue Ribbon Campaign which recognize and honour individuals and organizations that have made significant contributions in protecting the lives of civilians from the danger of smoking and tobacco smoke exposure by creating a 100% smoke-free areas. This kind of program was first used in Canada and Japan (MOH, 2014). There are three categories of the Blue Ribbon Campaign awards; 1) certification of Blue Ribbon to premises

that shows excellent initiative in implementation of smoke-free, 2) the media Blue Ribbon award given to the mass media that significantly has increase the awareness of the public on smoke-free related issues and 3) the excellence achievement Blue Ribbon award to individuals or collective (groups, institutions, civil society, local government or the corporate sector) that contribute to tobacco control. The certification for premises is valid for two years and it may be revoked if the premises were found to be in violation of the compliance audit criteria. The recognition will be awarded by MySihat, a statutory body under the Ministry of Health (MOH) and the selection criteria will be carried out in consultation with the WHO. To date, there are 15 venues which have received the blue ribbon certificate covering educational institutes, religious buildings, hotels and restaurants.

3. Studies related to the implementation of SFL in Malaysia

A study was conducted in 2013 to determine the effectiveness of the SFL implemented in Malaysia (Abidin et al., 2013). The study selected particulate matter with aerodynamic diameter of less than 2.5 micron ($PM_{2.5}$) as an indicator of tobacco smoke exposure which was measured in a selected range of public venues. It was found that Second-Hand Smoke (SHS) were reported in most of the venues and high level of $PM_{2.5}$ (33.4 $\mu g/m^3$; more than the WHO limit of 25 $\mu g/m^3$ for a 24 hours exposure) were measured in these venues most likely indicating exposures arising from tobacco smoke combustion. One-third of these venues were listed as smoking prohibited places by law while two-third of these venues were mechanically-ventilated spaces exposed to the outdoor air and have high public occupancy. Despite the 8 years of SFL implementation, poor compliance with the legislation was clearly observed especially in entertainment centres and Internet cafés. In order to increase the compliance to the SFL, better enforcement were suggested to help improve the existing partial SFL implementation. An earlier study conducted in 2009 in 22 hospitality-related venues around Melaka, Malaysia have shown that the average concentration of $PM_{2.5}$ was 46 $\mu g/m^3$ which was nearly two times higher than standard permitted by WHO (Lee et al., 2010). Compared to the study by Abidin et al. (2013), this was reported following 5 years of the partial SFL implementation in Malaysia. Although the level of $PM_{2.5}$ is still more than the standard permitted by WHO, Malaysia has the lowest average of $PM_{2.5}$ compared to other neighbouring Asian countries.

It was also found that living in selected zones where comprehensive-SFL was implemented was not associated with a lower risk of reporting asthma symptoms among adolescents (Zulkifli et al., 2014). This study went further to show that exposure to SHS in public transportation were linked to increased risk of reporting wheezing among the adolescents by 16 times (Adjusted Odds Ratio: 16.6; 95% CI: 2.69-101.7) compared to those without such exposure. This finding supported the fact that there was still exposure to SHS despite the implementation of SFL that clearly covers public transportation. The adolescents in the study also reported that they were exposed to SHS in the past month while occupying a venue where smoking was prohibited. The study reiterates the fact that better enforcement is crucial in order to reduce the exposure of adolescents to SHS.

A study involving 1,064 schoolchildren aged 10-11 years old were performed to identify the factors influencing exposures to SHS in Malaysia (Abidin et al., 2011). This cross-sectional study which measured salivary cotinine concentration expressed in geometric means (GM) as the objective measurement of SHS exposures showed that Malaysian children had relatively higher salivary cotinine concentrations compared to other populations of similar age elsewhere. This may be due to the partial nature of the SFL practiced in Malaysia. Similarly, concern on the enforcement of the existing legislation was highlighted. The authorities need to ensure smoking prohibited premises abide by the legislation. Since this study showed children living with at least one parent had a higher salivary cotinine concentration compared to those living with non-smoking parents (0.65 ng/ml vs. 0.32 ng/ml), it was suggested that SFL-related programs needs to be effective enough in promoting and encouraging the society to voluntarily practice smoking restrictions at home.

Apart from the studies above, limited number of research has been done on the local SFL implementation either at the national or state levels. There is a need for more studies to be conducted in order to identify the effective step needed in protecting the public from SHS exposure.

4. The knowledge gap

SFL implemented in other countries such as the United Kingdom (UK) have shown the contribution of successful SFL in reducing SHS exposure among workers as well as the public (Callinan et al., 2010; Apsley et al., 2012), decrement in hospital admission due to coronary

heart disease (Pell et al., 2008; Lightwood & Glantz, 2009) and respiratory conditions (Naiman et al., 2010). There were also evidence on the increment in reported home-smoking restriction implementation and reduced smokers' population (Hovell et al., 2000) post SFL implementation.

To date, the implementation of SFL in Malaysia has yet to show its success as in the UK in terms of reducing exposures and detrimental health effects. The biggest challenge in Malaysia may likely be due to the lax enforcement by related authorities in ensuring the compliance to the SFL in premises as listed out in the Control of Tobacco Product (Amendment) Regulations, (2010). In order to enhance the positive effects of either partial or comprehensive SFL, the enforcement must be consistent and monitoring are performed on a regular basis. This is to portray full and serious commitment by the government in making sure that the SFL is successful for the society involved to reap its benefits. Thus far, local authorities have shown evidence of commitment towards implementing SFL as the environmental officers performs monitoring of premises and issue fines to offenders who smoke in smoking-prohibited places. However the shortage of manpower to enforce the legislation may be the critical issue as environmental health officers in Malaysia is present in numbers insufficient relative to the areas of public spaces that needs to be covered.

Sufficient number of environmental health officers will enable active monitoring to be performed in premises and this will indirectly educate and compel the person in-charge of these premises to play their roles in ensuring the compliance with the legislation. For the public, warnings should be given for those who smoke in places where smoking are prohibited and repeated offenders should be liable for legal action.

5. New challenges

New challenges in SFL implementation is found with innovation of tobacco products. The most recent is the introduction of electronic cigarettes (e-cigarettes) to the market. The new phenomena of e-cigarettes usage had been observed in Malaysia since 2009. The usage is becoming more popular as the e-cigarette users perceived that the use of e-cigarette is *'healthier'* compared to conventional cigarettes despite the lack of sufficient evidence. E-cigarettes produce very small exposures relative to conventional cigarettes (McAuley et al., 2012) and no conclusive risk to human health from e-cigarette emissions have been identified. No particulate matter is produced when e-cigarette is inhaled but instead it releases water vapour containing carbonyl compounds with established toxic properties (formaldehyde, acetyldehyde, acrolein and acetone), nicotine, 1,2-propaniediol, glycerin, aluminum and polycyclic aeromatic hydrocarbons (PAH) (Bekki et al., 2014; Kosmider et al., 2014, Schober et al., 2014, Geiss et al., 2015). Through a survey by International Tobacco Control (ITC) which was conducted in 10 countries in regards to the awareness, trial and current use of e-cigarettes, it has been found that Malaysia was one of the countries with the glaringly high percentage of e-cigarettes current users, accounted at 14% and the percentage was followed by the Republic of Korea (7%), Australia (7%) and United States (6%) (Gravely et al., 2014). The data revealed that the use of e-cigarette among Malaysian population is not uncommon by observing the high percentage of e-cigarette users compared with other countries including developed countries.

The rapid increment of e-cigarette users has posed a new challenge towards the SFL implementation. In the local context, since the current SFL only covers conventional cigarettes and smoking activities, the use of e-cigarettes and vaping could not be restricted in smoking prohibited places. This is proven by a study reviewing the reasons of e-cigarette use which stated that among the most popular claims of its usage is that it can be smoked anywhere and can be used to circumvent smoke-free policies (Grana & Ling, 2014). Until today, much effort has been done to raise awareness and educate the public on the implementation of SFL especially in creating a social stigma of smoking in public places. However, the lack coverage by the current SFL on the use of e-cigarettes weakens the whole implementation by the renormalisation of smoking behaviour in public places. Since e-cigarettes can be used without any restrictions, it jeopardizes the effectiveness of the current SFL. The ultimate consequences of e-cigarettes use on public health very much depend on changes in policies. Thus, adding the use of e-cigarettes and vaping in the framework of the current SFL and prohibiting its usage in similar places where the use of conventional cigarettes is not allowed will guarantee the success of SFL implementation.

Apart from that, desire to quit smoking were also among the common reason for trying e-cigarettes by novice users (Li et al., 2015). Compared to other available nicotine replacement therapy (NRT) such as nicotine patches or nicotine

chewing gum, e-cigarettes were similar to the conventional cigarettes as it still involves the hand-to-mouth repetitive motion and the visual cue of smoke-like vapour (Polosa et al., 2013). Thus, use of e-cigarettes may prove to be a more attractive long-term alternative for those who intend to quit smoking or even simply to reduce smoking the conventional cigarettes. In Malaysia, although nicotine is categorized under Poison Act 1952 as one of the controlled poison listed, there has not been any massive enforcement actions against the distributors and retailers of e-cigarette particularly e-liquid containing nicotine. With regards to selling or purchasing of e-cigarettes locally, there has been no specific clause of regulation that control or ban such activities as of yet. Thus, it has becoming a norm to see people who use e-cigarettes in smoking prohibited public places releasing the vapour as there is no law against it until now.

With the existing problems related to smoking such as high health burden due to smoking and exposures to SHS, the addition of e-cigarettes to the available market and within the public reach needs to be emphasised. Dealing with the population of new smokers, enforcing the existing SFL and reducing SHS exposure is already a continuous challenge for the government and public health practitioners. Thus, there is a need for greater focus on the current SFL implementation practiced in Malaysia especially by the local authorities. Enforcing legislation without the enforcement agencies seeing it as a high priority may as well delay the positive effects of the legislation. With a greater enforcement, it is hoped that the level of compliance by the public will increase in which high compliance to the SFL have shown to lead to an immediate and sustained reduction in SHS exposure by the non-smoking population in other recent study (Gruer et al., 2012). The active enforcement by the authorities together with the compliance by the public will undeniably make the SFL a success and achieves the objectives of the legislation for the benefit of the economy, social and health of the Malaysian citizens.

6. Conclusion

Malaysia has taken a proactive action in protecting its people from the adverse effects of smoking and SHS exposure by signing the WHO FCTC treaty. The implementation of SFL was enhanced by the introduction of comprehensive SFL in selected states of Malaysia. However, the compliance level from the public has been low as local SFL-related studies performed were unable to show its positive effects. Empowering the enforcement by local authority and increasing education and awareness through strategized health promotion programs are among the best approaches in helping to improve the effectiveness of the existing SFL.

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CONFLICT OF INTEREST

None of the authors had any conflicts of interest, and there was no corporate sponsorship of this research.

ETHICAL ISSUES

No ethical concern needed.

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Table 1.1: SFL implementation in Malaysia

Control of Tobacco Product Regulations (2004)	**Control of Tobacco Product (Amendment) Regulations (2008)**	**Control of Tobacco Product (Amendment) Regulations (2010)**
Premises with smoking prohibition:		
1. Entertainment centre or theatre 2. Hospital and clinic 3. Public lift or toilet 4. Air conditioned restaurants or shop 5. Public vehicle or public transport terminal 6. Airport 7. Government premises 8. Area of assembly 9. Educational institute 10. Nursery 11. School bus 12. Floor with service centre 13. Shopping complex 14. Petrol station 15. Stadium 16. Sport complex 17. Fitness centre 18. Gymnasium 19. Religious places 20. Library 21. Internet café	Addition of: 22. Any area of national service	Addition of: 23. Any air conditioned place of work with a centralized air conditioned system
Premises exempted from smoking prohibition:		
1. Pub 2. Discotheque 3. Night club 4. Casino 5. Open-air restaurants	Remains unchanged	Remains unchanged