GLOBAL ADULT TOBACCO SURVEY

MALAYSIA 2011

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FOREWORD

Tobacco kills up to half of those who use it and globally more than 5 million deaths each year are caused by using this lethal product. Experts predict that if current smoking patterns continue, smoking will kill about 8 million people every year by 2030 and 7 million of these deaths will occur in developing countries.

It is evident from the results of Global Adult Tobacco Survey (GATS) that tobacco consumption is still a major public health problem in Malaysia. About a quarter of Malaysians smoked tobacco-- 43.9% of men and 1.0% of women. In addition, a daily cigarette smoker smokes an average of 14 cigarettes per day.

I am proud that for the first time GATS was conducted in Malaysia. GATS as part of the Global Tobacco Surveillance System used international standardized methods. GATS was also the first survey in Malaysia conducted at a national level using electronic data collection devices. The decision to participate in GATS is very useful for Malaysia; the results will be useful for further strengthening the tobacco control planning and evaluation strategies.

The efficient design for data collection and management, and the standardized analysis of data have made the survey report a nationally representative account of the existing situation. The report has been able to capture important data on different aspects of tobacco use and tobacco control program in Malaysia.

I would like to congratulate the Institute for Public Health for leading the GATS Malaysia and a work well done! I would like to extend my gratitude and appreciation to all others who contributed to the Global Adult Tobacco Survey in Malaysia.

I am also sincerely grateful to the World Health Organization, the U.S. Centers for Disease Control and Prevention, Atlanta, Georgia USA, and the Bloomberg Philanthropies for their collaboration, financial and technical assistances in successfully conducting GATS Malaysia.

Dato' Sri Dr Hasan Bin Abdul Rahman

Director General of Health Malaysia

PREFACE

Tobacco consumption is the leading preventable cause of death and disease worldwide, causing more than 5 million deaths each year. In Malaysia, tobacco use accounts for a massive 35% of in-hospital deaths, with three (cancer, heart disease, stroke) out of the country's five leading killers accounting for a large share of these deaths. More than 10,000 Malaysians die from smoking-related illnesses every year. Given these alarming facts, the implementation and enforcement of evidence-based tobacco control measures and policies is urgently needed to stop the growing risk of smoking in Malaysia.

The Global Adult Tobacco Survey (GATS) was developed in 2007 by the World Health Organization (WHO) and the U.S. Centers for Disease Control and Prevention (CDC) with the main objective of estimating the prevalence of tobacco use in the general adult population at the national level and an important secondary objective of estimating the prevalence of exposure to secondhand smoke. Having this information allows the indirect estimation of the impact of national policies on tobacco control. GATS has an internationally standardized methodology, which facilitates comparisons between countries and the different regions where the survey has been implemented.

GATS Malaysia was implemented by the Institute for Public Health (IPH) in collaboration with the Disease Control and Health Education Divisions, Ministry of Health; Department of Statistics; University of Malaya and International Islamic University. It was a nationally representative household survey conducted via face-to-face interviews. Employing handheld devices, data was collected from randomly selected, noninstitutionalized men and women aged 15 years or older in 426 enumeration blocks throughout Malaysia. The first-ever use of handheld machines in this survey will equip the IPH to undertake future national surveys using digital technology.

This report comprises an introduction to the burden of tobacco use, the tobacco control policies and programs implemented in Malaysia, the GATS objectives and methodology, results from different sections, policy recommendations, and conclusions. In addition to the standardized core and optional questions, two country-specific sections were included to obtain relevant information for Malaysia: shisha/hookah and electronic cigarettes.

The report includes the most up-to-date statistics concerning tobacco use among Malaysian adults, information that can serve as an evidence base to strengthen tobacco control initiatives in the country. It will also serve as an authoritative reference source for policy makers, stakeholders, public health professionals, and others concerned with tobacco control in Malaysia. The reliable and updated information on tobacco use from this report will also help the country in fulfilling its obligations to the WHO Framework Convention on Tobacco Control (FCTC). Among others, these include supporting protection measures to prevent the exposure of the general population to the unhealthy effects of tobacco smoking, providing effective warnings about secondhand smoke, and promoting better strategies to motivate smokers to quit and overcome their nicotine addiction.

GATS Malaysia 2011
Research Team Members

CDC FOUNDATION

Helping CDC Do More, Faster

May 10, 2012

Dr. HJ. Tahir Aris
Director
Institute for Public Health
Ministry of Health
Jalan Bangsar,
50590 Kuala Lumpur, Malaysia

Dear Dr. Tahir:

In February 2011, the countries participating in the second phase of the Global Adult Tobacco Survey (GATS), including Malaysia, attended an orientation workshop for GATS in Atlanta, Georgia. This workshop introduced countries to the GATS process, laid the foundation for the survey's launch, and assisted countries with setting timelines that would allow for the completion of survey fieldwork within 12 months. As of today, four countries, including Malaysia, have completed the data collection.

The successful launch of GATS 2011 represents the tireless commitment of government agencies representing the participating countries. Without such partnerships, the sustainability of GATS and the evidence-base used for tobacco control activities would be significantly undermined. The World Health Organization (WHO), the US Centers Disease for Control and Prevention (CDC), and the CDC Foundation are all grateful for and honored by the ongoing support and collaboration offered by our country-level colleagues.

Moreover, with the completion of the survey in Malaysia, we want to offer our heartiest congratulations to all of our colleagues in the Institute for Public Health. Within the period of a year, the GATS team in Malaysia convened relevant partners and executed one of the most comprehensive household surveys being implemented in the world today. The completion of GATS is truly a remarkable accomplishment, which would not have been possible without the dedication of the Institute for Public Health.

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We deeply appreciate the support and commitment of your agency. Your efforts help make this survey a truly global surveillance system, and we look forward to continuing the fight against the tobacco epidemic both globally and in Malaysia.

Sincerely,

Charles Stokes
President and CEO
CDC Foundation

Samira Asma, DDS, MPH
Chief
Global Tobacco Control Branch
Centers for Disease Control
and Prevention

Douglas Bettcher, MD, PhD
Director
Tobacco Free Initiative
Director Ad Interim
Chronic Disease and Health
Promotion Department
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cc: Dr. Shin Young-soo, Regional Director, World Health Organization, Western Pacific Regional Office
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Dr. Chun Paul Soo, Program Officer, Malaysia

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The 2010-2011 Global Adult Tobacco Survey (GATS) in Malaysia was successfully completed, thanks to the committed efforts and support of numerous organizations and individuals at different stages of the survey. We would like to thank everyone who helped to make the survey a success.

The authors wish to thank the Director General of Health and the Deputy Director General of Health (Research and Technical Support) and the Deputy Director General of Health (Public Health) for their enduring support and confidence during the conduct of this survey. We would like to express our gratitude to the Director of the Institute for Public Health for his guidance and support throughout the survey.

GATS Malaysia would like to thank the Bloomberg Philanthropies for initiating this project to strengthen tobacco surveillance in high-prevalence countries. We extend our appreciation to all collaborative partner organizations, World Health Organization (WHO), U.S Centers for Disease Control and Prevention (CDC), the CDC Foundation, RTI International, and Johns Hopkins Bloomberg School of Public Health (JHSPH) for providing financial and technical support toward the successful conduct of the GATS in Malaysia.

Gratitude is extended to all the members of the GATS questionnaire review committee, the sample review committee, and the analysis review committee for their technical reviews to ensure that the results for GATS in Malaysia are internationally acceptable and comparable to other countries implementing GATS.

We sincerely acknowledge the collaborative exchange and technical support from the CDC in Atlanta. We acknowledge the outstanding partnership and support extended by Dr. Samira Asma, Chief of the Global Tobacco Control Branch at CDC. We would like to express our special thanks to Mr. Jeremy Morton, CDC Focal Point for Malaysia, for his continuous technical guidance and valuable support throughout all the stages of the survey. We would also like to thank statisticians Mr. Luhua Zhao and Dr. Linda Andes for their invaluable help in analyzing the GATS Malaysia 2011 data.

We would also like to acknowledge the contributions of Mr. Sameer Pujari and Ms Lubna Bhatti from WHO, Geneva, who provided technical support and coordination, especially questionnaire programming, staff training, and data aggregation. Gratitude is extended as well to Mr. James Rarick of WPRO (WHO Western Pacific Region), and Dr. Corrine Capuano and Dr. Paul Soo from the WHO Malaysia Country Office for providing technical and management assistance.

Many thanks are due to the CDC Foundation. Special mentions are due to Mr. William Parra for his coordination and involvement in the survey and Mr. Brandon Talley for his guidance with respect to administrative and budget issues.

This acknowledgement cannot be concluded without expressing appreciation for the hard work of field supervisors and field interviewers in collecting data for the GATS in Malaysia.

Last but not least, sincere appreciation is extended to all respondents who contributed their time and information to the survey, without them, the Global Adult Tobacco Survey in Malaysia would not have been possible.

EXECUTIVE SUMMARY

The 2011 Malaysian Global Adult Tobacco Survey (GATS) was a nationally representative household survey of noninstitutionalized men and women aged 15 years or older. The survey was designed to produce internationally comparable data on tobacco use and indicators of tobacco control by using a standardized questionnaire, sample design, data collection, and management procedures.

GATS Malaysia was conducted by the Institute for Public Health (IPH) in collaboration with the Disease Control and Health Education Divisions, Ministry of Health; Department of Statistics; University of Malaya and International Islamic University. Technical assistance was provided by the World Health Organization (WHO) and the U.S. Centers for Disease Control and Prevention (CDC). Financial support for the survey was provided by the WHO and the Ministry of Health Malaysia.

GATS Malaysia used a three-stage stratified cluster sampling design to produce key indicators for the country as a whole as well as by residence (urban or rural) and gender. GATS Malaysia was the first nationwide survey in this country in which electronic handheld devices were used for data collection and management. A total of 5112 households were sampled; 4389 households completed screening and 4250 individuals were successfully interviewed (one individual was randomly chosen from each selected household to participate in the survey). The overall response rate for GATS Malaysia was 85.3%. The household response rate was 88.1% (83.2% urban, 93.4% rural), while the individual response rate was 96.9% (95.6% urban, 98.1% rural). The survey provided information on tobacco use (smoking and smokeless), cessation, exposure to secondhand smoke, economics, media, and knowledge, attitudes, and perceptions.

WHO has developed MPOWER, a technical package to assist countries to implement selected demand reduction measures contained in the WHO FCTC. The major objectives of the survey were to systematically monitor adult use of tobacco (smoking and smokeless) by using a nationally representative sample of Malaysian adults to track these MPOWER indicators. Policy recommendations in this document are based on the MPOWER model and consistent with the FCTC.

Key Findings

Tobacco use

In 2011, 23.1% or 4.75 million Malaysian adults aged 15 years or older were current smokers of tobacco: 43.9% (4.64 million) of men and 1.0% (0.10 million) of women. Overall, 22.9% of adults (43.6% of men and 1.0% of women) were current smokers of cigarettes, including manufactured, hand-rolled, or kreteks. The 25-44 age group had the highest percentages of smokers of any smoked tobacco products (29.0%), any type of cigarette (28.9%), and manufactured cigarettes (26.2%).

Out of all the current tobacco smokers, 20.9% (4.28 million) were daily smokers (39.9% of men, 0.7% of women) while 2.3% (0.46 million) were occasional smokers (4.1% of men and 0.4% of women). Smokeless tobacco products were used by just 0.7% of adults (0.9% of men and 0.6% of women).

On average, a daily Malaysian adult smoker smoked 14 cigarettes per day. More than half (51.8%) of those aged 20-34 years who had ever smoked on a daily basis had started smoking daily before the age of 18. Amongst those who had ever smoked on a daily basis, only 9.5% (9.4% of men, 10.0% of women) had quit

smoking. Overall, 47.6% of current daily smokers had their first cigarette of the day within 30 minutes of waking up. Men (48.1%) were more likely than women (16.8%) to have their first cigarette within 30 minutes of waking up.

Smoking Cessation

Almost half (48.6%) of adult smokers (current smokers plus former smokers who had been abstinent for less than 12 months) had tried to quit smoking in the past 12 months. Four out of five smokers who had attempted to quit smoking in the past 12 months had tried to do so without any assistance.

Overall, only 1 in 7 (14.3%) current smokers planned to or were thinking about quitting smoking in the next 12 months.

More than half (52.6%) of adult smokers (current smokers plus former smokers abstaining less than 12 months) had been advised by their health care provider to quit smoking in the past 12 months.

Exposure to Secondhand Smoke

An estimated 39.8% (2.3 million) of adults who worked indoors had been exposed to secondhand smoke in their workplace in the past 30 days; for non-smokers the estimate was 33.9% (1.4 million).

An estimated 38.4% (7.6 million) of adults in Malaysia were exposed to secondhand smoke at home. Among non-smokers, the estimated prevalence of such exposure was 27.9% (4.2 million): 19.5% for men (1.1 million) and 32.8% for women (3.1 million).

Among adults who had visited different public places in the past 30 days, 84.9% (84.1% of non-smokers) were exposed to secondhand smoke in cafes / coffee shops / bistros; 78.7% (70.3%, non-smokers) in bars / nightclubs; 71.0% (68.3%, non-smokers) in restaurants; 28.2% (27.9%, non-smokers) in public transportation, 20.0% (19.0%, non-smokers) in government buildings; 13.6% (14.6%, non-smokers) in indoor shopping complexes; and 8.7% (8.6%, non-smokers) in health-care facilities.

Economics of Tobacco Smoking

The five most purchased brands by current smokers of manufactured cigarettes (not including kreteks) were Dunhill (42.7%), Winston (11.2%), Marlboro (5.0%), Mild Seven (3.8%), and Salem (2.8%).

Almost 80% of current smokers of manufactured cigarettes (not including kreteks) purchased their cigarettes from grocery stores. On average, current smokers of manufactured cigarettes spent RM (Malaysian Ringgit) 10.1 for a pack of 20 cigarettes and RM 178.8 per month on manufactured cigarettes. For an estimated 7% of current smokers of manufactured cigarettes, spending money on cigarettes had resulted in their not having enough money for food sometime in the last 6 months.

Media

In the previous 30 days prior to the interview, 94% of Malaysian adults had noticed anti-cigarette information, mostly on television (85.2%), billboards (72.0%), posters (70.4%), and in newspapers or magazines (68.9%).

An estimated 88% of current smokers and non-smokers had seen or heard about the “Tak Nak” anti-smoking campaign in the last 12 months.

Among current smokers, 92.8% (93.2% of men, 74.7% of women) had noticed health warnings on cigarette packages, but only 45.8% of current smokers (45.7% of men, 51.7% of women) thought about quitting smoking because of these messages. A quarter of current smokers had not thought at all in the past 30 days about the health risks of smoking as a result of seeing health warnings on cigarette packages. Similarly, 59.9% of current smokers who had noticed health warnings on cigarette packages in the past 30 days had not stopped smoking even once because of these warnings. Overall, 35.6% of Malaysian adults had noticed cigarette marketing through advertisements or promotions.

Knowledge, Attitudes, and Perceptions

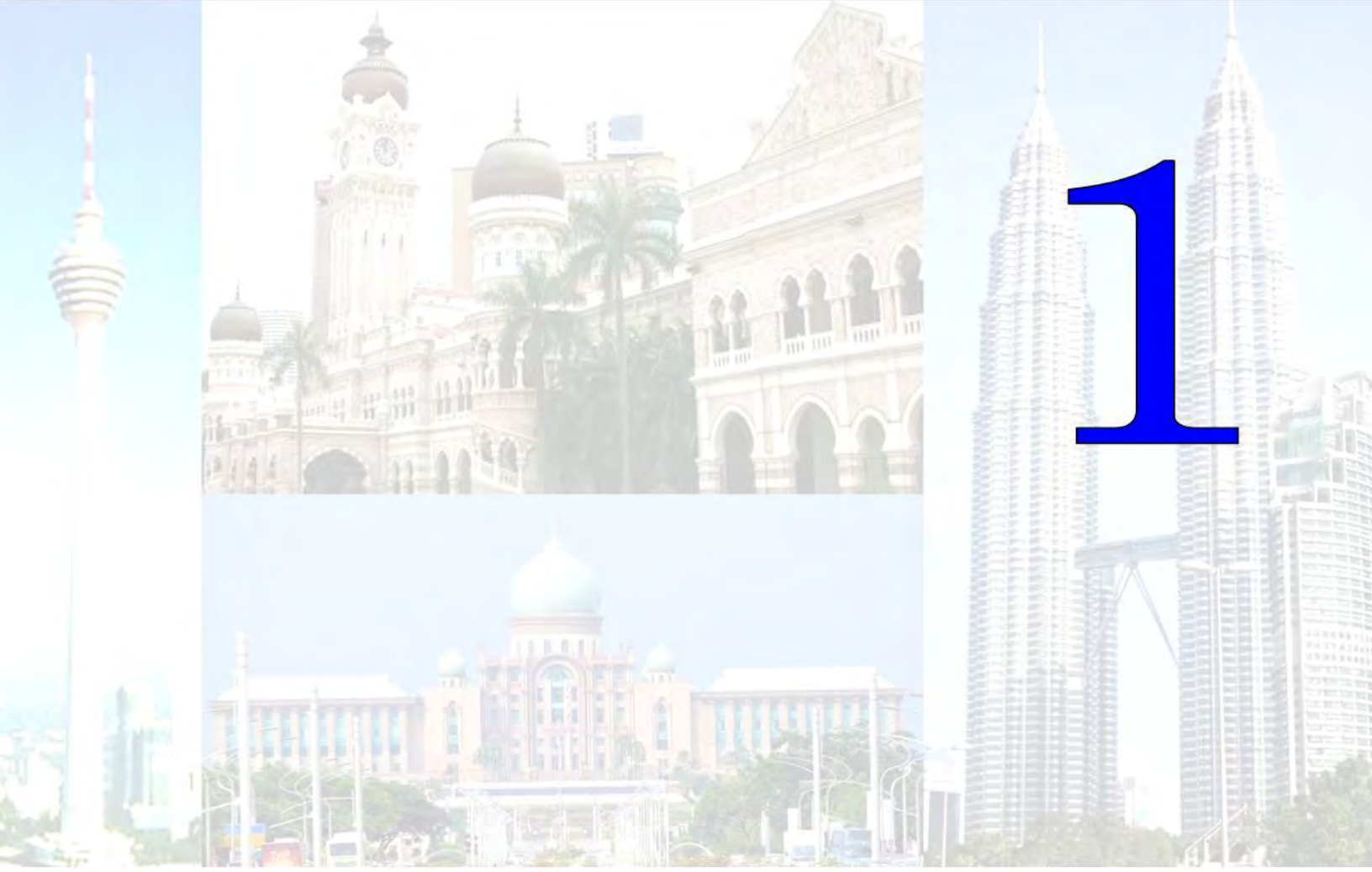
More than 90% of Malaysian adults (88.1% of current smokers, 93.5% of non-smokers) believed that smoking causes serious illness. A lower proportion of Malaysian adults believed that breathing other people's smoke cause serious illness in non-smokers (79.8% of current smokers, 87.7% of non-smokers).

The level of support for the prohibition of smoking in different public places varied by the type of place: shopping center (94.4%), workplaces (90.4%), public transportation (85.2%), restaurants (83.5%), hotels (78.7%), karaoke centers (50.3%), bars (43.9%), casinos (40.0%), and discos (37.8%).

More than 70% of Malaysian adults were in favor of increasing taxes on tobacco products, but this attitude varied significantly by smoking status (current smokers, 32.0%; non-smokers, 82.0%). Similarly, variations were observed by smoking status in attitudes towards prohibiting the display of tobacco products at points-of-sale (approved by 47.9% of current smokers but disapproved by 83.8% of non-smokers).

Policy Implications and Recommendations

As the most detailed survey on tobacco and tobacco control ever conducted by the Ministry of Health, the Global Adult Tobacco Survey Malaysia (GATS Malaysia) provides special insights into the scale of tobacco problems in the country. Correspondingly, the results of GATS Malaysia offer indications for appropriate actions to be taken in response to the problems revealed. Recommendations are based on the WHO's MPOWER framework and based on the FCTC. GATS Malaysia has shown that the magnitude of tobacco consumption and burden in this country is fairly high (23.1%, or 4.75 million, adults are smokers) and thus signals an urgency for continuous effective efforts to be carried out to curb and significantly reduce that burden. Given the importance of measuring tobacco consumption and trends, it is important that GATS be carried out on a regular basis, suggested every 4 years. Making cessation services and treatments available to all smokers is important given that almost half of all smokers had tried to quit smoking. Exposure to secondhand smoke in public places, especially eating outlets, is very high (70%-85%), and the level of support for a ban on smoking in restaurants is also very high (83.5%). These findings indicate that the move towards 100% smoke-free eating outlets, especially restaurants, can be successful. From GATS, it is known that the penetration of the *Tak Nak* media campaign as well as pictorial health warnings on cigarette packs is very high (about 90%), but the impact on levels of awareness, attitudes, and behavior change is not as high. More in-depth analyses are needed, followed by identifying and implanting the most effective tobacco control strategies.



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INTRODUCTION

1. INTRODUCTION

Tobacco use, a major preventable cause of premature death and disease, presently causes more than 5 million deaths globally each year and is expected to cause over 8 million deaths annually by 2030. Unless current trends are changed, the vast majority of these deaths will occur in the developing world. Clearly, an efficient and systematic surveillance mechanism to monitor the epidemic is an essential component of a comprehensive tobacco control program.

The World Health Organization (WHO) aims to reduce the global burden of disease and death caused by tobacco thereby protect both present and future generations from the devastating health, social, environmental, and economic consequences of tobacco consumption and exposure to tobacco smoke. These objectives can be reached by providing global policy leadership – including the promotion of the WHO Framework Convention on Tobacco Control (FCTC) and the MPOWER package[1] of tobacco policies as a key entry point to the FCTC. The FCTC encourages countries to adhere to its principles, and WHO supports countries in their efforts to implement provisions of the FCTC and MPOWER.

In August 2006, WHO and the United States Centers for Disease Control and Prevention (CDC) convened an expert consultation to discuss adult tobacco surveillance and to make recommendations for the development of a standard survey protocol. The expert consultation recognized the challenges of limited funding and methodological complexities when conducting systematic adult tobacco surveys and identified a lack of comparability in ongoing national surveys.

The Bloomberg Initiative to Reduce Tobacco Use offers resources to fill the data gap for measuring adult tobacco use globally and to optimize the reach and results of the ongoing Global Tobacco Surveillance System (GTSS), which is comprised of three school-based surveys, the Global Youth Tobacco Survey (GYTS), the Global School Personnel Survey (GSPS), and the Global Health Professions Students Survey (GHPSS), and a household-based survey, the Global Adult Tobacco Survey (GATS).

GATS, which was launched in February 2007, enables countries to collect data on key tobacco control indicators in the adult population. Results from GATS will assist countries in formulating, tracking, and implementing effective tobacco control interventions, and participating countries will be able to compare the results of their survey with the results from other participating countries.

The CDC, CDC Foundation, Johns Hopkins Bloomberg School of Public Health, RTI International (a research institute in North Carolina, USA), WHO, and countries throughout the world are working together to implement GATS.

[1] The MPOWER package is a series of six proven policies aimed at reversing the global tobacco epidemic that include: **M**onitor tobacco use and prevention policies; **P**rotect people from tobacco smoke; **O**ffer help to quit tobacco use; **W**arn about the dangers of tobacco; **E**nforce bans on tobacco advertising, promotion, and sponsorship; and **R**aise taxes on tobacco.

1.1 Tobacco Control in Malaysia

1.1.1 History of Tobacco Control in Malaysia

Tobacco control initiatives in Malaysia began in the 1970s with several small studies on the prevalence of smoking among certain groups of the general population. In 1983, the Ministry of Health (MOH) Malaysia, in collaboration with the Malaysian Medical Association, carried out the country's first major anti-tobacco effort[2]. A workshop on smoking and health was followed by the launch of the nationwide 'No Smoking Day' campaign.

The first national-level 'World No Tobacco Day' in Malaysia was celebrated in 1993 when the Prime Minister's wife launched the theme 'Health Service: Our Window to A Tobacco Free World'.[2] That year also saw Malaysia's leading tobacco control legislation, the Control of Tobacco Product Regulations (CTPR) 1993 enacted under section 36 of the Food Act 1983.[3] This law came into force in 1994. Earlier, there was no specific legislation in the country except for the prohibition of smoking in cinemas and the requirement for a health warning label on cigarette packs and in advertisements, both mandated by the Trade Description Act 1972. Another significant development was observed in 1996 when Malaysia's national carrier, the Malaysian Airlines System (MAS) banned smoking on all its domestic flights. Four years later, in October 2000, all MAS flights, both domestic and international, became smoke-free.

The chronology of major tobacco control events in Malaysia is presented in **Table 1.1**

Tobacco control is an integral component of the Public Health Programme in Malaysia and is one of the priorities of the Ministry of Health. The Cancer and Tobacco Control Unit established in 1995 under the Disease Control Division used the National Tobacco Control Programme in Malaysia to plan, coordinate, and monitor tobacco control activities within the jurisdiction of the health sector at the national, state, district, and local levels. To date, the health sector has been the key player for tobacco control activities in Malaysia.

Table 1.1: Major events and studies in the history of tobacco control in Malaysia.

Year	Event or Study
1971	Prevalence study conducted of smoking among public health doctors.
1972	Practice of providing free cigarettes to military personnel on operations is abolished. Prevalence study of smoking among medical students is conducted.
1973	Smoking is banned in cinemas (Banning of Smoking Rules 1972).
1975	Ministry of Health and Ministry of Defense ban smoking in all of their hospitals, clinics, and health centers.
1977	Health warning, 'Merokok Membahayakan Kesihatan', on cigarette packs and advertisements is made mandatory under the revised Trade Description Act 1972. However, international magazines are exempted from this requirement.
1980	World Health Theme 'Smoking or Health'.
1981	Smoking banned on air-conditioned train coaches and in buses.
1982	Cigarette advertisements banned on radio and television and in government publications.
1986	No Smoking Day Campaign.
1987	No Smoking Week Campaign.
1988	5% increase in tobacco tax.
1992	100% increase in tobacco tax.
1993	Gazettement of Control of Tobacco Product Regulations 1993.
1994	Tobacco legislation comes into force
1995	National Fatwa Council rules smoking to be "HARAM" (prohibited/illegal in Islam).
1996	Smoking is banned on all domestic flights.
2000	Smoking is banned on all international flights.

1.1.2 WHO Framework Convention on Tobacco Control (WHO FCTC)

The WHO Framework Convention on Tobacco Control, the world's first and only health convention, is an evidence-based treaty that reaffirms the right of all people to the highest optimum standards of health. The FCTC was adopted by the World Health Assembly on 21 May 2003 and entered into force on 27 February 2005. It provides legal dimensions for international health cooperation and sets high standards for compliance.[4]

Malaysia became a signatory on 23 September 2003, ratified the WHO FCTC on 16 September 2005, and officially became a party to the convention 90 days later on 15 December 2005. This momentous step led to the formation of Malaysia's national FCTC Secretariat, as approved by the Cabinet. Thus, the Tobacco Control & FCTC Unit was established in Malaysia in 2006 within the Non-communicable Disease Section of the Disease Control Division, Ministry of Health. Among the main functions of this unit is to oversee proper WHO FCTC implementation and progress.

Another important objective of this unit is to reduce the impact of tobacco use so that it will no longer remain a major public health burden. The key approaches are to prevent smoking uptake, particularly among youth, promote tobacco cessation, and protect the public from the threats of secondhand smoke. The unit facilitates progress in tobacco control so as to ensure compliance with the WHO FCTC provisions by relevant agencies. The national FCTC Secretariat collaborates with and participates in WHO FCTC-related activities that are bilaterally and/or multilaterally carried out at regional and international levels.

The Tobacco Control & FCTC Unit, which serves as a focal point for WHO FCTC and all issues related to tobacco control, coordinates the submission of periodic reports to the Convention Secretariat as determined by the Conference of Parties. The unit also provides feedback and reports on FCTC implementation to tobacco control stakeholders in Malaysia.

1.1.3 Current Initiatives in Tobacco Control

a. Legislation

Multipronged strategies are required to curb the tobacco crisis; by themselves, health promotion and public education may not be successful. Establishing laws and enforcing them constitute one of the important components of tobacco control. Beginning in 1991, efforts to establish specific legislation to regulate the production and consumption of tobacco started to take off, and the issue then became an interest of the public. The CTPR 1993 prohibits all direct advertising and sponsorship and requires fixed health warnings and fixed maximum levels of tar (20 mg) and nicotine (1.5 mg). Numerous public places and other designated areas have been gazetted as 'no smoking zones', while tobacco sales, possession, and smoking by any person under the age of 18 years are prohibited.

In 2004, a major amendment was made to the CTPR 1993 to tighten most of its provisions. CTPR 2004 became the basis for Malaysia's readiness to ratify the WHO FCTC, as many of its provisions were then consistent with the Articles in the Convention.

Among the elements in the CTPR 2004 are:

- Prohibition of the advertising and sponsorship of tobacco products
- Control of the sale of tobacco products, and
- Prohibition of smoking in certain areas through the designation of smoke-free areas

Under the CTPR 2004, direct and indirect advertising of tobacco products, as well as the use of brand names and associated sponsorships are prohibited. The placement or display of a tobacco brand name on any object for the purpose of advertising is also prohibited under the regulations[5]. The sale of cigarettes in loose form (i.e., individual sticks, not in packs) and the use of vending machines for tobacco products were made illegal. Designation of smoke-free areas was expanded to include more public places like institutions for worship, libraries, and Internet cafes[5]. In June 2010, the prohibition of smoking in certain areas was expanded to include a total of 21 places, e.g. any air-conditioned workplace with a centralized air-conditioning system.

The CTPR amendment of 2008[6] successfully enacted legal provisions for placing pictorial health warnings on cigarette packs and packets that became enforceable in phases beginning in December 2009. In addition to pictorial health warnings, the CTPR 2008[6] included provisions for expansion of designated smoke-free areas to include the National Service Training Centre (PLKN) and pedestrian walkways in shopping complexes.

Recognizing the need to develop legislation specific to tobacco control, realizing that there are constraints involved in enforcing the regulations under the Food Act 1983, and understanding the commitment to fully comply with the FCTC provisions, efforts are now being made, following approval by the Cabinet, to enact a stand-alone Control of Tobacco Products Act. With this Act, it can be expected that the MOH will carry out legislation activities more effectively and will be able to comply with all FCTC provisions for protecting people from exposure to tobacco smoke, regulating the content of tobacco products, and regulating of tobacco product disclosures, the packaging and labeling of tobacco products, tobacco advertising, promotion and sponsorship, and sales to and by minors.

A list of other Malaysian laws related to tobacco control is shown in **Table 1.2**.

Table 1.2: Malaysian laws related to tobacco control

Name of Law	Responsible Agency
Custom Act 1967	Royal Malaysian Customs
Excise Act and Regulations	Royal Malaysian Customs
Sales Tax Act 1972	Royal Malaysian Customs
Industrial Co-ordination Act 1975	MITI and MIDA
Local Government Act 1976	Local government
Akta Perihal Dagangan 1972	Kementerian Perdagangan Dalam Negeri Dan Hal Ehwal Pengguna
Akta Lembaga Kenaf dan Tembakau Negara	Lembaga Kenaf dan Tembakau Negara

b. Enforcement Activities

Law enforcement is crucial for effective tobacco control. Implementation of the CTPR 2004 throughout the country is being carried out by over 2000 enforcement officers posted at the State and District Health Offices within all 14 states in Malaysia. These local enforcement activities are conducted routinely and continuously. However, about once every 1–2 months, thematic enforcement activities are being carried out simultaneously nationwide. In 2010, five Enforcement Information Blast (E-Info Blast), were successfully carried out.

c. Anti-tobacco Promotion

Many tobacco control measures have been undertaken in concert with the anti-tobacco media approach to promote awareness among the public about the harmful effects of tobacco. In Malaysia, the national anti-smoking media campaign is known as the "*Tak Nak Merokok*" (Say No) Campaign[7], and the icon created for it was made highly visible through various mass media channels to both the rural and urban populations. There is documented evidence that this "*Tak Nak*" campaign has raised concerns about smoking and has influenced the thoughts of smokers about quitting. This campaign has reduced the likelihood of smoking uptake among non-smokers, particularly in the adolescent age groups, and encourages quitting among adult smokers.

d. Smoking Cessation Services

As of December 2010, there were 326 quit-smoking clinics and 32 hospitals within the MOH facilities throughout the country that provided smoking cessation services, which include the counseling and pharmacotherapy for quitting smoking. These heavily subsidized cessation services use an algorithm set included in the Clinical Practice Guidelines (2003)[8], which are in the process of being reviewed and updated with the inclusion of varenicline (Champix) for use as pharmacotherapy .

Varenicline (Champix) was registered within the Pharmaceutical Division, MOH, in late 2011. The establishment of the tobacco 'Infoline' and 'Quitline' by the Minister of Health and the National Poison Centre respectively, has provided further accessibility to cessation assistance for smokers who intend to stop the habit of smoking.

e. Tobacco Taxation

Raising the price of tobacco products is one of the most effective methods of combating the consumption of tobacco consumption[9]. Until 2004 in Malaysia, taxes were levied according to the weight of the tobacco, but in 2005 that changed to a specific excise tax per stick. There has been a fairly steady increase in the tobacco tax from 1990. At the same time, the tobacco industry has raised cigarette prices, which in turn caused sales volumes to drop initially[10].

According to Article 6 of the WHO Framework Convention on Tobacco Control – ***Price and tax measures to reduce the demand for tobacco***, member countries are required to implement effective price and tax measures in order to reduce tobacco consumption among various segments of the population, in particular to focus on the young, vibrant teenagers.

With an emphasis on these commitments, the Malaysian government had been increasing the cigarette tax almost every year in the past few years (but is not doing so in 2012). The tobacco industry has

claimed that the rate of smuggling would significantly increase and that the government would lose revenue if tobacco taxes were raised [11].

1.2 Burden of Tobacco Use in Malaysia

1.2.1 Prevalence of Tobacco Smoking

The second National Health and Morbidity Survey (NHMS I) estimated an overall adult smoking prevalence of 24.8%[12] in Malaysia in 1996; 10 years later, the third National Health and Morbidity Survey (NHMSIII) estimated a prevalence of 22.8%[13] in 2006.

By gender during this 10-year period, the male smoking prevalence decreased just 0.8%, from 49.2% to 48.8%, while for women the prevalence decreased from 3.5% to 1.9%, a 46% reduction. Current smoking decreased across all levels of education, with the greatest declines among the non-educated (from 21.7% to 16.7%) and primary-educated (28.0% to 23.1%) groups. Prevalence increased among the non-married (26.5% to 28.9%) but declined among the married (25.1% to 22.3%) and divorced (20.5% to 17.2%). A decrease in smoking prevalence of 7% was observed in urban areas (21.7% to 20.2%) and of 3.5% in rural areas (28.6% to 27.6%) areas. A decline in smoking prevalence was observed in every state in Malaysia except for Perlis, which showed an increase of 4.9%. The declining trend was most notable in the Federal Territory of Kuala Lumpur and in Selangor, Malacca, and Kelantan[12,13].

1.2.2 Smoking among Youth

The GYTS was conducted in both 2003 and 2009 on boys and girls aged 13 to 15 years in the school setting. Over the 6-year interval the overall prevalence of ever being a tobacco user dropped from 33.1% to 30.0%, while the prevalence of current smokers decreased from 20.2% to 18.2%[14,15].

1.2.3 Patterns and Trends in Tobacco Consumption

A comparison of the NHMS II (1996) and NHMS III (2006) surveys shows a lowering in the mean age of smoking initiation for both men and women over a 10-year period. The overall mean age of initiation dropped from 19.9 to 18.6 years; among men from 19.5 to 18.3 years and among women from 24.7 to 22.6 years[12,13].

Current smokers in Malaysia smoked an average of 12.1 cigarettes per day in 2006, 1.2 sticks fewer than the 13.3 cigarettes per day reported in 1996, with men consuming 12.3 sticks per day in 2006, versus 8.7 sticks per day among women. Urban smokers (12.4 sticks per day) smoked slightly more than rural smokers (11.9). By ethnicity, Chinese consumed the highest number of cigarettes per day (14.3), followed by Malays (12.2) and Indians (11.2) [12,13].

Most current smokers in 2006 were light smokers (fewer than 10 cigarettes daily): 56.3%, 95% confidence interval [CI] 55.1-57.5%); 20.1% (95% CI 19.1-21.0%) were moderate smokers (10-20 sticks per day), and 23.6% (95% CI 22.6-24.7%) were heavy smokers (more than 20 cigarettes per day). The proportion of light smokers in 2006 was 81% higher than in 1996 (31.1%, 95% CI 29.8%-32.2%), while the 2006 percentages for moderate and heavy smokers were 45% (1996: 36.3%, 95% CI 35.0-37.5) and 28% lower (1996: 32.7%, 95% CI 31.5-33.9%), respectively, than those reported 10 years earlier[12,13].

1.2.4 Health Effects of Smoking

Statistics from the MOH in 2006 revealed that diseases related to smoking remained the top causes of death in MOH hospitals, accounting for more than 15% of hospitalizations and 35% of in-hospital deaths. Heart diseases and diseases of pulmonary circulation ranked first, accounting for 15.7% of these deaths, followed by malignant neoplasms, 10.6%, and cerebrovascular diseases, 8.5%.[16]

Cardiovascular diseases were identified as the leading cause of years of life lost and disability-adjusted life years (DALYs) in Malaysia[17] accounting for one-third of total years of life lost and one-fifth of DALYs. That study also found that half of the total burden of top cancers among men - cancers of the trachea, bronchus and lung, and mouth and oropharynx was attributable to smoking[17].

1.2.5 Economic Impact of Tobacco Use

Studies on the economic burden of cigarette smoking have been conducted in the United States and other high-income countries; it was reported that annual smoking-attributable health-care costs accounted for 6-15% of national health-care expenditures in the United States and other high-income countries.[18,19] Malaysia, for its part, has undertaken a study to estimate the cost of health care incurred for treating three selected smoking-related diseases: cancer of the lung, ischemic heart disease (IHD), and chronic obstructive pulmonary disease (COPD). The cost analysis was undertaken by combining all available information on various components of the health-care costs of smoking in Malaysia. The study relied on inpatient surveys to estimate the costs incurred on each visit and included loss of productivity, the cost of traveling to primary care, the costs of specialist clinics, including admission, follow-up and palliative care[20].

Economic analyses of hospitals were conducted and an expert group discussion held to impute the cost of the whole spectrum of health care in managing the three diseases of interest, including the cost of personnel, investigations, drugs, and procedures in specialist clinics, admission, and follow-up. The annual cost per patient for each disease (borne by the patient) was RM 7,758 for lung cancer, RM 1,362 for IHD, and RM 12,757 for COPD. The annual cost to the provider per patient for each disease was RM 34,529 for lung cancer, RM 20,314 for IHD, and RM 19, 415 for COPD. The total cost (taking into account the number of patients) for each disease was RM 132.7 million for lung cancer, RM 544.5 million for IHD, and RM 2247.6 million for COPD to make a grand total of RM 2.92 billion. This amount is equivalent to 0.7% of the Malaysia's gross domestic product (GDP) and 26.1% of the MOH budget[20].

1.3 Survey Objectives

The objectives of GATS Malaysia were:

- To systematically monitor tobacco use (smoking and smokeless) among adults and track key indicators of tobacco control using a nationally representative sample of adults.
- To track the implementation of FCTC-recommended policies outlined in the MPOWER package.

2

METHODOLOGY

2. METHODOLOGY

2.1 Study Population

The target population for GATS 2011 in Malaysia included all men and women aged 15 years or above who, per the GATS protocol, considered Malaysia to be their usual place of residence. A 'usual' member of a sampled household is any otherwise-eligible resident who has no other residence, or who has multiple residences but has been living in the selected household for at least half of the time during the past 12 months. The sampling did not include those who were visitors (e.g. tourists), institutionalized in hospitals, or residing in an assisted living facility / nursing home, on a military base, or in group quarters or a prison.

2.2 Sampling Design

The sampling strategy of the survey was designed to generate precise cross-sectional estimates at the national level and by gender and geographical (urban/rural) localities and to allow for comparison of the estimates between the different countries conducting the survey. A multistage stratified cluster sampling was adopted for GATS in Malaysia (see **Appendix B** for details).

According to the GATS sampling protocol, a sample of at least 4000 respondents is required (2000 males and 2000 females, with 2000 adults each from urban and rural areas). The GATS sample size of households was then adjusted upward to allow for potential ineligibility and non-response in order to get the required number of respondents. After the adjustment, the final sample size was 5112 respondents, of whom 2664 were from urban areas and 2448 from rural areas. Based on our experience, in Malaysia the response rate is usually lower in urban than in rural areas. By gender, the sample was allocated equally between men and women.

Sample weights were calculated according to standard procedures in the GATS Sample Design and Sample Weight manuals[21]. Calculation involved three steps: (1) the determination of a base weight, which was calculated from the probability of selection at all steps in the sample design; (2) an adjustment for non-response for household and individual samples; and (3) a post-stratification calibration for the population size aged 15 years or above by residence, gender, and age groups (see **Appendix B** for details).

2.3 Questionnaire

GATS Malaysia included a household questionnaire and an individual questionnaire, both based on the GATS Core Questionnaire with Optional Questions[22], which was designed for use in countries implementing GATS. The GATS Malaysia 2011 questionnaire was finalized on August 2011 based on the results of a small pretest in July 2011. A request for informed consent was included separately. The GATS Malaysia 2011 questionnaire is as shown in **Appendix A.**

Household Questionnaire

The household questionnaire, which solicited information on household members who considered the selected household as their usual place of residence, was used to randomly select an eligible household member (aged 15 years or above) to complete the individual questionnaire. The head of the household was the preferred respondent, but any adult who had sufficient knowledge of all the members of the

household could be chosen in the absence of the head of the household. The household questionnaire included basic information on age, gender, current smoking status, and the respondent's relationship with the head of the household (if not the same person).

Individual Questionnaire

The individual questionnaire, which was administered to the randomly selected adult through handheld machines, had 10 sections:

- ***Background Characteristics***: Questions on gender, age, education, employment status, possession of household items, type of house, ethnicity, marital status, religion, and literacy.
- ***Tobacco Smoking:*** Questions covered patterns of use (daily consumption, less than daily consumption, not at all), former/past tobacco consumption, age at initiation of daily smoking, consumption of different tobacco products (cigarettes, kreteks, pipes, cigars, shisha/hookah, and other smoked tobacco), nicotine dependence, frequency of quit attempts, and visits to a doctor or other health care provider.
- ***Shisha/Hookah:*** Questions on pattern of use (daily consumption, less than daily consumption, not at all), age at initiation of smoking as well as smoking behavior relative to shisha/hookah.
- ***Smokeless Tobacco:*** Questions on patterns of use (daily consumption, less than daily consumption, not at all), former/past use of smokeless tobacco and consumption of different smokeless tobacco products (snuff, chewing tobacco, betel quid, etc.).
- ***Electronic Cigarettes:*** Questions on pattern of use (daily consumption, less than daily consumption, not at all), motive for using, and perceived health effects of using electronic cigarettes
- ***Cessation:*** Questions related to advice to quit smoking by health care provider and method used to try to stop smoking.
- ***Secondhand Smoke:*** Questions about rules of smoking in the home; exposure to secondhand smoke at home, indoor smoking policy at the workplace, exposure to secondhand smoke in the last 30 days in public places (workplace, government buildings/offices, health care facilities, restaurants, bars / nightclubs, cafes / coffee shops / bistro, indoor shopping complex, and public transportation), and knowledge about the harms of secondhand smoke. Questions assessing opinion on smoking bans in public places were also included.
- ***Economics:*** Questions covering the most recent purchase of manufactured cigarettes, including quantity bought, cost, brand, and source of purchase.
- ***Media:*** Questions on exposure to information on smoking through various media: newspapers/magazines, television, radio, billboards, posters, cinema and Internet; reaction to health warning labels on cigarette packages; exposure to anti-tobacco advertising and information. The reference period for questions on media was 30 days.
- ***Knowledge, Attitudes, and Perceptions:*** Questions regarding knowledge about the health effects of both smoking and smokeless tobacco; questions regarding increasing the tax on tobacco products, restrictions of sales of tobacco products, and anti-smoking actions.

2.4 Programming of the Questionnaire and the Preparation of Handheld Computers

GATS was the first national community survey conducted by the Institute for Public Health in Malaysia to use electronic data collection for both the household and individual questionnaires. General Survey System (GSS) software, developed by RTI International was used: GSS software includes a variety of software tools developed to facilitate the design, administration, collection, and management of survey data on handheld computers, specifically a Microsoft Windows-based platform running Windows Mobile 5.0 or Mobile 6.0, often called Pocket PC systems. The software system is designed to support the collection of data in the field where interviewers collect data using handheld computers. The systems were developed and tested using Hewlett-Packard iPAQ 210 handheld devices and subsequently employed for data collection. Collecting data electronically facilitated the complex skip patterns used in the GATS Malaysia questionnaire as well as the use of some built-in validity checks during the process of data collection.

The programming was supported mainly by RTI International and WHO. The programming of the questionnaire using GSS was carried out in collaboration with information technology personnel associated with GATS Malaysia. Repeated quality control mechanisms were employed to test the quality of questionnaire programming, in accordance with the GATS Programmer's Guide to General Survey System manual[23].

The main steps involved in checking quality control were version control/verification for the household and individual questionnaires, date and time verification, verification of skip patterns, and validation checks. The entire process, including administration of the questionnaires, data collection using handheld machines, and data management and aggregation (preparing raw data for analysis), was pretested before the actual survey process began.

Handheld programming was finalized and the final questionnaire for data collection was uploaded to the handheld devices in July 2011. The electronic case file (used to identify the selected household addresses) was finalized in October 2011 and uploaded to the handheld devices during the training program for the field staff held in the same month.

2.5 Data Collection

2.5.1 Implementing Agency for GATS Malaysia

The Institute for Public Health was nominated by MOH Malaysia as the implementing agency for GATS Malaysia. The Institute was responsible for overall coordination and management of the survey and collaborated with the MOH Disease Control Division and Health Education Division; the Department of Statistics, University Malaya and International Islamic University in conducting GATS in Malaysia.

The Institute for Public Health outsourced the process of data collection to a local company specializing in research. The Institute worked closely with this company throughout the data collection period, which included the implementation of joint quality control checks in the field.

Financial assistance was provided by WHO, Geneva, through Project HQTFI1003729. WHO also provided technical support and in-country coordination. The U.S. CDC and CDC Foundation provided technical

assistance for the implementation of the survey. (Refer to **Appendix D** for details on the technical committee and all personnel involved in survey implementation.)

2.5.2 Pretest

GATS Malaysia carried out a pretest in both urban and rural settings on 19−20 July 2011 using a sample of 120 respondents who were equally distributed by gender and smoking status and with individuals from all relevant age groups. The pretest was conducted with close cooperation from CDC and WHO experts, especially in terms of wording and comprehensibility, inconsistencies in skip patterns, the sequencing of questions, completeness of response categories, workload, interview time, availability and callbacks, and other issues. Other important objectives of the pretest were to test procedures for handheld data collection, assess problems in the process of data transfer and aggregation, and develop a data management system for implementation of the GATS Malaysia.

Pretest training took place on 15−18 July 2011, and the training of trainers, especially for the IT/data management staff, was conducted on 15–16 July 2011. The training of field interviewers and field supervisors was conducted concurrently from 16-18 July 2011. In all, 17 field staff were trained (13 interviewers and 4 supervisors). Training was based on standard GATS manuals and procedures and included class sessions, paired mock interviews, and role-playing. Field interviewers had the opportunity to practice various scenarios in multiple combinations.

2.5.3 Training

To standardize the survey procedures and minimize non-sampling errors, three manuals and a picture book were prepared. All the manuals were developed first in English and then translated into the Malay language.

1. Field Interviewer's Manual[24]

The field interviewer's manual provided instructions to interviewers regarding interviewing techniques, procedures in the field, methods of asking questions, and the use of handheld devices. The manual was adapted from GTSS-GATS: Field Interviewer Manual.

2. Field Supervisor's Manual[25]

The field supervisor's manual, which was intended to help field supervisors in supervising the collection of data contained a detailed description of supervisors' roles and responsibilities as well as information on data aggregation and transfer procedures. The manual was adapted from GTSS-GATS: Field Supervisor Manual.

3. Question-by-Question Specification[26]

A third manual provided question-specific instructions to the field interviewers for administering the GATS household and individual questionnaires using the handheld devices. This manual also provided information on range checks, response options, purpose, and instructions for each survey question. The manual was adapted from GTSS-GATS: Question-by-Question Specifications.

4. Picture Book

The picture book provided visual depictions of types of tobacco products, both smoking and smokeless, methods used to quit smoking, and pictorial health warnings.

The Institute for Public Health subcontracted the Info Survey Group, a local market research company, to conduct the data collection. A total of 8 field managers, 23 field supervisors (field supervisors also interviewed respondents) and 41 field interviewers were selected to participate in the training. A centralized training workshop held in Kuala Lumpur from 17 to 21 October 2011 included lectures on the contents of the questionnaire, how to complete the questionnaires on paper as well as by using handheld devices, paired mock interviews between participants, and role-plays. After the training workshops, all field interviewers and supervisors were provided with iPAQs loaded with lists of assigned household addresses.

2.5.4 Fieldwork

Fieldwork took place from 24 October to 18 December 2011. All field interviewers and field supervisors who had participated in the training workshop were posted throughout the country as stated in **Appendix D** to carry out data collection.

The field interviewers were responsible for collecting survey information using the handheld devices and submitting the data saved on a secured digital card (SD card) to their respective field supervisor on a daily basis. Field supervisors were responsible for the overall operation of the field team and for maintaining the time schedule of data collection in the field; they were also responsible for transferring data to the national data coordinating center via the Internet at least twice a week. The IT/data management team at the Institute for Public Health was responsible for providing technical support with respect to concerns raised during fieldwork and for troubleshooting any issues with the handheld devices. Field-level data were aggregated on a daily basis and analyzed twice a week to identify data collection errors, problems with skip patterns, and conduct consistency checks. Field-level feedback forms were analyzed, and the information was provided to interviewers and supervisors to improve their performance.

The GATS Malaysia protocols were approved by the Medical Research and Ethics Committee, MOH Malaysia. During data collection, field interviewers were required to obtain the written consent of the respondents. For persons aged less than 17 years, written consents from their parents or a guardian were required in addition to a written consent from the interviewee. Interviewers were required to respect the confidentiality of the data they had collected and had to sign the GATS statement on confidentiality.

The two quality control techniques implemented were (a) direct observation and assessment of interview process in the field by Institute for Public Health supervisors and (b) short telephone interviews for verification with 10% of the completed households.

2.6 Statistical Analysis

Complex survey analysis was used to obtain prevalence and population estimates with 95% confidence intervals. To improve the representativeness of the sample in terms of the size, distribution, and characteristics of the study population, sample weights were calculated for each respondent prior to the

analysis. The analysis was carried out using SPSS version 19 and SUDAAN version 10.1 software; standard errors were calculated using Taylor series linearization (see **Appendix C** for details). Statistical tests were performed by comparing the 95% confidence intervals of two estimates to determine whether they were differently statistically. This report states two estimates are different, either higher or lower, only if their confidence intervals are non-overlapping.

3

SAMPLE & POPULATION CHARACTERISTICS

3. SAMPLE AND POPULATION CHARACTERISTICS

This chapter presents characteristics of the selected samples and population. The population estimates were based on the population census taken in 2010 by the Department of Statistics in Malaysia.

3.1 Household and Person-Level Response Rate

Table 3.1 presents the number of households and persons interviewed and the response rate by residence. Of the 5112 sampled households, 4389 completed the screening, and the calculated total household response rate was 88.1% (see footnotes to **Table 3.1** for methods of calculating response rates). In urban areas, 2160 of 2676 sampled households (calculated response rate: 83.2%) completed the screening. In rural areas, the response rate was much better: 2229 of 2436 sampled households completed the screening, and the calculated response rate was 93.4%.

There were 4389 persons who completed household screening, and 4250 completed the interview (calculated total response rate was 96.9%). From 2160 completed household screenings in urban areas, there were 2065 completed interviews (calculated person-level response rate of 95.6%). Again, the response rate was higher in rural areas, where 2185 persons completed the individual questionnaire after 2229 had completed the household questionnaire (calculated response rate of 98.1%).

The overall response rate was computed as the product of the household response rate and the person-level response rate. This rate was 85.3%, where the response rate was 79.6% and 91.7% for urban and rural areas respectively.

3.2 Sample and Population Characteristics

Table 3.2 presents the unweighted sample size and the weighted population estimates by selected demographic characteristics. The total unweighted sample was 4250. Based on the population census in 2010, the weighted number of adults aged 15 years or above was 20.53 million. By gender, 2104 men and 2146 women completed the survey, but the weighted proportions by gender were 51.5% male and 48.5% female. The weighted samples yielded estimates of 10.57 million men and 9.96 million women respectively. By residence, the number of unweighted respondents was 2065 for urban areas and 2185 for rural areas, but the weighted population was much higher in urban areas than in rural areas with 14.81 million and 5.72 million, respectively. By age group, the number of unweighted respondents was 742 for ages 15-24 years, 1768 for 25-44 years, 1326 for 45-64 years, and 414 for ≥65 years, but the weighted percentages for these age groups were 27.7%, 41.5%, 23.7%, and 7.1%, respectively. The weighted percentage completing primary school was 30.1%; completing secondary/high school, 44.2%. Categorized by race/ethnicity, the majority of the population (weighted) was Malay (58.9%), followed by Chinese (18.6%) and Indian (9.4%). The remaining 13.2% were from other ethnicities. Two-thirds (66.9%) of the population was Muslim.

Table 3.1: Number and percent of households and persons interviewed and response rates by residence (un-weighted) – GATS Malaysia, 2011.

	Residence				Total	
	Urban		Rural			
	Number	Percent	Number	Percent	Number	Percent
Selected Household						
Completed (HC)	2,160	80.7	2,229	91.5	4,389	85.9
Completed – No one eligible (HCNE)	0	0.0	0	0.0	0	0.0
Incomplete (HINC)	11	0.4	5	0.2	16	0.3
No screening respondent (HNS)	5	0.2	3	0.1	8	0.2
Nobody home (HNH)	221	8.3	56	2.3	277	5.4
Refused (HR)	158	5.9	62	2.5	220	4.3
Unoccupied (HUO)	68	2.5	48	2.0	116	2.3
Address not a dwelling (HAND)	11	0.4	2	0.1	13	0.3
Other[1] (HO)	42	1.6	31	1.3	73	1.4
Total households selected	2,676	100	2,436	100	5,112	100
Household Response Rate (HRR) (%)[2]	**83.2%**		**93.4%**		**88.1%**	
Selected Person						
Completed (PC)	2,065	95.6	2,185	98.0	4,250	96.8
Incomplete (PINC)	2	0.1	0	0.0	2	0.0
Not eligible (PNE)	1	0.0	2	0.1	3	0.1
Not at home (PNH)	38	1.8	9	0.4	47	1.1
Refused (PR)	38	1.8	18	0.8	56	1.3
Incapacitated (PI)	13	0.6	12	0.5	25	0.6
Other[1] (PO)	3	0.1	3	0.1	6	0.1
Total number of sampled persons	2,160	100	2,229	100	4,389	100
Person-level Response Rate (PRR) (%)[3]	**95.6%**		**98.1%**		**96.9%**	
Total Response Rate (TRR) (%)[4]	**79.6%**		**91.7%**		**85.3%**	

[1] Other includes any other result not listed.

[2] The Household Response Rate (HRR) is calculated as:

$$\frac{HC * 100}{HC + HINC + HNS + HNH + HR + HO}$$

[3] The Person-level Response Rate (PRR) is calculated as:

$$\frac{PC * 100}{PC + PINC + PNH + PR + PI + PO}$$

[4] The Total Response Rate (TRR) is calculated as: (HRR x PRR) / 100

Notes:

— An incomplete household interview (i.e., roster could not be finished) was considered a non-respondent to the GATS. Thus, these cases (HINC) were not included in the numerator of the household response rate.

— The total number of sampled persons should be equal to the number of completed [HC] household interviews.

— A completed person interview [PC] includes respondents who had completed at least question E01 and who provided valid answers to questions B01/B02/B03. Respondents who did not meet these criteria were considered as incomplete (PINC) or incapacitated (PI) non-respondents to GATS and thus were not included in the numerator of the person-level response rate.

Table 3.2: Distribution of adults aged ≥15 years by selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Weighted			Unweighted Number of Adults
	Percentage (95% CI[1])		Number of Adults (in Thousands)	
Overall	100		20,530	4,250
Gender				
Male	51.5	(49.5, 53.4)	10,568	2,104
Female	48.5	(46.6, 50.5)	9,962	2,146
Age (years)				
15-24	27.7	(25.7, 29.8)	5,690	742
25-44	41.5	(39.4, 43.7)	8,526	1,768
45-64	23.7	(22.0, 25.5)	4,860	1,326
65+	7.1	(6.1, 8.2)	1,454	414
Residence				
Urban	72.1	(70.6, 73.6)	14,808	2,065
Rural	27.9	(26.4, 29.4)	5,722	2,185
Education level[2]				
Less than primary	13.5	(11.9, 15.3)	1,988	635
Primary	30.1	(28.0, 32.3)	4,444	1,138
Secondary/high school	44.2	(41.7, 46.6)	6,517	1,391
College or above	12.2	(10.5, 14.3)	1,807	324
Race/ethnicity				
Malay	58.9	(54.8, 62.8)	12,083	2,531
Chinese	18.6	(15.7, 21.8)	3,809	641
Indian	9.4	(7.5, 11.6)	1,923	263
Other	13.2	(11.0, 15.8)	2,715	815
Religion				
Muslim	66.9	(63.1, 70.6)	13,722	2,985
Non-Muslim	33.1	(29.4, 36.9)	6,775	1,261

Note: The number of missing observations was as follows: 0 for age, 0 for gender, 0 for residence, 21 for education, 0 for race/ethnicity, and 4 for religion.

[1] 95% confidence interval.

[2] Education level is reported only among persons aged ≥ 25 years.

4

TOBACCO USE

4. TOBACCO USE

National estimates of tobacco use in the general population are essential for monitoring the tobacco epidemic in a country and provide the evidence-based, concrete analysis needed to develop policies for the effective implementation of a comprehensive program in tobacco control. As the provisions of the Malaysia Control of Tobacco Products Regulations 2004 cover tobacco products in general, it is necessary to have reliable estimates of the prevalence of both smoking and the use of smokeless tobacco.

The use of smoking tobacco is prevalent in Malaysia. Here, smokers use various types of tobacco products, including manufactured cigarettes (not including kreteks), hand-rolled cigarettes, kreteks, tobacco-filled pipes, curut, cigars or cigarillos, shisha/hookah and bidis.

There is minimal use of smokeless tobacco among Malaysian adult smokers. Smokeless tobacco is used by either chewing or applying it to the teeth and gums or by sniffing it. Smokeless tobacco products in Malaysia include chewing tobacco products, such as betel quid with tobacco, gutkha, paan masala, and other products such as snuff.

This chapter presents the prevalence of smoking and smokeless tobacco use in Malaysia. It also describes smoking behaviors in the Malaysian adult population: 1) the status of tobacco use, 2) the use of various tobacco products, and 3) demographic and behavioral patterns of smoking, including number of cigarettes smoked daily, average age and distribution by age of initiation of daily smoking, the prevalence of quitting tobacco use, and indicators of tobacco dependence.

Key Findings

- *43.9% of men, 1.0% of women, and 23.1% of adults overall (4.7 million) currently smoked tobacco.*
- *43.6% of men, 1.0% of women, and 22.9% of adults overall (4.7 million) currently smoked cigarettes, including manufactured, hand-rolled, and kreteks.*
- *39.9% of men, 0.7% of women, and 20.9% of adults overall (4.3 million) currently smoked tobacco on a daily basis.*
- *Daily cigarette smokers smoked an average of 14 cigarettes per day.*
- *More than half of those aged 20-34 years who had ever smoked on a daily basis started smoking daily before the age of 18.*
- *Among those who had ever smoked on a daily basis, only 9.5% had quit smoking.*
- *Almost half of all current daily smokers had their first smoke of the day within 30 minutes of waking up.*

4.1 Tobacco Smoking

Table 4.1 presents percentage distributions of Malaysian adults by tobacco use status, with two major categories of smokers used: current tobacco smokers and non-smokers. Current tobacco smokers included current daily and current occasional (less than daily) smokers, with occasional smokers subclassified as former daily smokers and never daily smokers. Non-smokers were divided into former daily and never daily tobacco smokers, with the latter subdivided into former occasional smokers and never smokers.

Less than one-quarter (23.1%) of Malaysian adults smoked tobacco in some form: manufactured cigarettes (not including kreteks), hand-rolled cigarettes, kreteks, tobacco-filled pipes, curut, cigars or cigarillos, shisha/hookah and bidis. Most current tobacco smokers (20.9% of all adults) smoked on a daily basis, with only 2.3% of Malaysian adults being occasional smokers. The prevalence of current tobacco smokers among men was 43.9%, compared with just 1.0% among women.

Regarding non-smokers, 2.3% of Malaysian adults were former daily smokers; 4.4% of males and 0.1% of females. An additional 1.7% of Malaysian adults were former occasional smokers who had stopped smoking completely. Of all Malaysian adults, 72.9% had never smoked tobacco in their lifetimes; 49.1% of men and 98.1% of women.

Table 4.1: Percentage of adults aged ≥15 years, by detailed smoking status and gender – GATS Malaysia, 2011.

Smoking Status	Overall	Male	Female
	Percentage (95% CI)		
Current tobacco smoker	23.1 (21.2, 25.2)	43.9 (40.6, 47.3)	1.0 (0.7, 1.6)
Daily smoker	20.9 (19.0, 22.9)	39.9 (36.6, 43.3)	0.7 (0.4, 1.2)
Occasional smoker	2.3 (1.7, 3.0)	4.1 (3.1, 5.3)	0.4 (0.2, 0.8)
Occasional smoker, formerly daily	1.4 (1.0, 2.0)	2.4 (1.6, 3.5)	0.3 (0.1, 0.8)
Occasional smoker, never daily	0.9 (0.6, 1.4)	1.7 (1.1, 2.6)	0.1 (0.0, 0.2)
Non-smoker	76.9 (74.8, 78.8)	56.1 (52.7, 59.4)	99.0 (98.4, 99.3)
Former daily smoker	2.3 (1.8, 2.9)	4.4 (3.5, 5.6)	0.1 (0.0, 0.3)
Never daily smoker	74.6 (72.5, 76.5)	51.7 (48.3, 55.0)	98.8 (98.3, 99.2)
Former occasional smoker	1.7 (1.1, 2.5)	2.6 (1.7, 3.8)	0.7 (0.2, 2.4)
Never smoker	72.9 (70.8, 74.9)	49.1 (45.7, 52.5)	98.1 (96.8, 98.9)

Note: Current smoking includes both daily and occasional (less than daily) smoking.

Table 4.1a presents the estimated number of users of any type of tobacco classified by detailed smoking status and gender. There were 4.747 million tobacco smokers aged 15 years or above in Malaysia. Of this group, 4.642 million were men and 0.14 million were women. GATS Malaysia estimated the number of daily tobacco smokers to be 4.282 million (4.213 million men and 69 thousand women). In addition to these 4.282 million daily tobacco smokers, 464 thousand adults smoked tobacco occasionally.

Table 4.1a: Number of adults aged ≥15 years by detailed smoking status and gender – GATS Malaysia, 2011.

Smoking Status	Overall	Male	Female
		Number in thousands	
Current tobacco smoker	4,747	4,642	104
Daily smoker	4,282	4,213	69
Occasional smoker	464	429	35
Occasional smoker, formerly daily	281	251	30
Occasional smoker, never daily	183	178	5
Non-smoker	15,784	5,926	9,858
Former daily smoker	477	466	11
Never daily smoker	15,307	5,460	9,846
Former occasional smoker	345	272	74
Never smoker	14,961	5,189	9,773

Note: Current smoking includes both daily and occasional (less than daily) smoking.

Among the 15.784 million non-smokers, 0.822 million had smoked tobacco, either daily or occasionally, in the past, and 14.961 million had never smoked tobacco in their lifetimes.

4.2 Smokeless Tobacco

Table 4.2 presents the percentage of adults aged 15 years or older who currently used smokeless tobacco. The use of such products was very low, just 0.7% overall, 0.9% of men, and 0.6% of women. The majority of smokeless tobacco users were daily users (0.5% of Malaysian adults).

Table 4.2: Percentage of adults aged ≥15 years by smokeless tobacco use status and gender – GATS Malaysia, 2011.

Smoking Status	Overall	Male	Female
		Percentage (95% CI)	
Current user of smokeless tobacco	0.7 (0.5, 1.2)	0.9 (0.5, 1.7)	0.6 (0.3, 1.0)
Daily smoker	0.5 (0.3, 0.8)	0.4 (0.2, 1.0)	0.5 (0.3, 1.0)
Occasional smoker	0.3 (0.1, 0.7)	0.5 (0.2, 1.2)	0.1 (0.0, 0.3)
Non-user of smokeless tobacco	99.3 (98.8, 99.5)	99.1 (98.3, 99.5)	99.4 (99.0, 99.7)

Note: Current use includes both daily and occasional (less than daily) use.

4.3 The Prevalence of Various Smoked Tobacco Products

Table 4.3 presents the prevalence of different types of smoked tobacco products by gender and selected demographic characteristics. These products consisted of cigarettes (manufactured, hand-rolled, and kreteks) and other smoked tobacco products (including pipes, curut, cigars or cigarillos, shisha/hookah, bidis, and any other reported smoked tobacco products). The corresponding population estimates can be found in **Table 4.4**, which presents the number of current smokers aged 15 years or above by the same characteristics.

Overall, 23.1% of Malaysian adults were current smokers of any smoked tobacco product; 22.9% had smoked any cigarettes; 20.1% had smoked manufactured cigarettes; 4.0% had smoked hand-rolled cigarettes; and 4.4% had smoked kreteks. Of Malaysian men, 43.9% had smoked any tobacco product, 43.6% had smoked any cigarettes (38.3% of men had smoked manufactured cigarettes, 7.4% had smoked hand-rolled, and 8.4% had smoked kreteks) and 1.9% had smoked other tobacco products. Among Malaysian women, only 1.0% had smoked any tobacco product and the same proportion (1.0%) had smoked any cigarettes (0.7% had smoked manufactured cigarettes; 0.4% had smoked hand-rolled cigarettes; and 0.1%, kreteks) and 0.1% had smoked other tobacco products.

By age, overall, the 25-44 age group had the highest percentage of smokers of any smoked tobacco products (29.0%), any type of cigarette (28.9%), and manufactured cigarettes (26.2%). Among men, the highest percentage of smokers was also found in the 25-44 age group where 54.9% smoked tobacco. This age group for men also had the highest prevalence of smoking any type of cigarette (54.6%), and manufactured cigarettes (49.4%). The next highest percentage of male smokers was found for the age group of 45-64, where 43.8% smoked tobacco. Among women, the oldest age group (≥65) had the highest prevalence of current smokers (5.0%), any cigarette smokers (5.0%) and hand-rolled cigarettes (2.6%).

Overall, the percentage of adults who smoked tobacco products was 24.3% in rural areas and 22.7% in urban areas, while the use of manufactured cigarettes was 20.3% in urban areas and 19.4% in rural areas.

The smoking of various tobacco products was in most cases inversely related to the educational level if the analysis began with the primary level. For example, the prevalence of smoking any tobacco product decreased from 54.1% among men and 2.0% among women with a primary education to 30.5% among men and 0.0% among women with a college education or more.

By race/ethnicity, adults of “other” ethnicity had a higher prevalence than other groups of smoking any tobacco product, any cigarette, manufactured cigarettes, and kreteks, but these differences were not significant. Generally, similar patterns were seen among men and women considered individually.

Overall, Muslim current smokers had a higher prevalence than their non-Muslim counterparts in all comparisons, with most of these differences significant. This was also true for men considered individually. For women the differences by religion were very small, consistent with their low prevalence of smoking.

Table 4.3: Percentage of adults aged ≥15 years who were current smokers of various smoked tobacco products, by gender and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Any Smoked Tobacco Product	Any Cigarette[1]	Type of Cigarette			Other Smoked Tobacco[2]
			Manufactured	Hand-rolled	Kretek	
			Percentage(95% CI)			
Overall	23.1 (21.2, 25.2)	22.9 (21.0, 25.0)	20.1 (18.2, 22.0)	4.0 (3.2, 5.0)	4.4 (3.6, 5.4)	1.0 (0.6, 1.6)
Age (years)						
15-24	16.7 (13.6, 20.3)	16.6 (13.5, 20.3)	15.3 (12.2, 18.9)	3.3 (2.1, 5.1)	4.3 (2.8, 6.3)	2.0 (1.0, 4.0)
25-44	29.0 (26.1, 32.2)	28.9 (25.9, 32.0)	26.2 (23.3, 29.2)	3.2 (2.3, 4.5)	4.7 (3.5, 6.5)	0.7 (0.3, 1.5)
45-64	22.7 (19.8, 25.9)	22.5 (19.7, 25.7)	18.2 (15.6, 21.2)	5.4 (4.0, 7.3)	4.1 (3.0, 5.7)	0.4 (0.2, 0.9)
65+	15.0 (11.2, 19.9)	13.9 (10.3, 18.5)	8.9 (5.9, 13.2)	6.1 (3.8, 9.5)	3.6 (1.8, 7.3)	1.2 (0.2, 5.8)
Residence						
Urban	22.7 (20.2, 25.4)	22.4 (19.9, 25.1)	20.3 (17.9, 22.9)	3.0 (2.0, 4.3)	3.9 (2.9, 5.2)	1.1 (0.6, 2.0)
Rural	24.3 (22.0, 26.7)	24.2 (21.9, 26.6)	19.4 (17.4, 21.7)	6.6 (5.1, 8.4)	5.8 (4.5, 7.3)	0.8 (0.5, 1.4)
Education level[3]						
Less than primary	19.6 (15.7, 24.2)	19.2 (15.4, 23.8)	13.2 (9.7, 17.7)	6.1 (4.2, 8.9)	5.8 (3.6, 9.2)	0.5 (0.2, 1.2)
Primary	29.3 (25.4, 33.5)	28.6 (24.8, 32.8)	24.8 (21.2, 28.9)	5.4 (3.7, 7.8)	4.5 (3.2, 6.4)	1.1 (0.4, 2.8)
Secondary/high school	26.8 (23.7, 30.1)	26.8 (23.7, 30.1)	23.7 (20.8, 27.0)	3.5 (2.5, 4.9)	4.9 (3.4, 6.8)	0.6 (0.3, 1.2)
College or above	18.5 (13.9, 24.2)	18.5 (13.9, 24.2)	17.2 (12.6, 23.1)	2.0 (0.9, 4.3)	1.4 (0.5, 3.7)	0.0 (-, -)
Race/ethnicity						
Malay	24.6 (22.1, 27.3)	24.3 (21.9, 27.0)	20.9 (18.5, 23.4)	5.2 (4.0, 6.7)	5.2 (4.1, 6.5)	1.3 (0.7, 2.2)
Chinese	15.4 (12.0, 19.5)	15.3 (11.9, 19.4)	15.0 (11.7, 19.1)	1.0 (0.3, 3.1)	0.2 (0.0, 0.8)	0.7 (0.1, 3.8)
Indian	19.6 (14.2, 26.4)	19.2 (13.9, 26.0)	18.4 (13.3, 24.7)	1.8 (0.6, 5.8)	1.7 (0.7, 4.2)	0.7 (0.2, 2.4)
Other	30.0 (25.2, 35.3)	29.9 (25.1, 35.2)	24.7 (20.1, 29.9)	4.2 (2.6, 6.8)	8.7 (5.8, 12.9)	0.6 (0.2, 1.4)
Religion						
Muslim	25.6 (23.2, 28.1)	25.3 (23.0, 27.9)	21.6 (19.4, 24.1)	4.9 (3.8, 6.3)	5.9 (4.7, 7.3)	1.1 (0.7, 1.9)
Non-Muslim	18.3 (15.4, 21.7)	18.1 (15.2, 21.5)	16.9 (14.1, 20.1)	2.1 (1.3, 3.5)	1.4 (0.9, 2.4)	0.8 (0.3, 2.1)

Note: Current smoking includes both daily and occasional (less than daily) smoking.

[1] Includes manufactured, hand-rolled, and kretek cigarettes.

[2] Includes pipes, cigars, shisha, bidis, and any other reported tobacco smoking products.

[3] Education level is reported only for persons aged ≥ 25 years.

Table 4.3 (cont.): Percentage of adults aged ≥15 years who were current smokers of various smoked tobacco products, by gender and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Any Smoked tobacco Product	Any Cigarette[1]	Type of Cigarette			Other Smoked Tobacco[2]
			Manufactured	Hand-rolled	Kretek	
	Percentage(95% CI)					
Male	43.9 (40.6, 47.3)	43.6 (40.3, 46.9)	38.3 (35.1, 41.7)	7.4 (5.8, 9.3)	8.4 (6.9, 10.2)	1.9 (1.2, 3.1)
Age (years)						
15-24	32.0 (26.4, 38.3)	32.0 (26.4, 38.3)	29.5 (23.9, 35.8)	6.4 (4.1, 9.9)	8.3 (5.5, 12.2)	3.7 (1.8, 7.6)
25-44	54.9 (50.4, 59.2)	54.6 (50.1, 59.0)	49.4 (44.9, 53.9)	6.0 (4.3, 8.4)	9.1 (6.7, 12.2)	1.3 (0.6, 2.8)
45-64	43.8 (38.4, 49.4)	43.4 (38.1, 49.0)	35.3 (30.3, 40.5)	10.2 (7.6, 13.7)	8.0 (5.8, 11.0)	0.7 (0.3, 1.7)
65+	25.3 (18.1, 34.2)	23.0 (16.1, 31.8)	16.5 (10.5, 24.9)	9.7 (5.4, 16.8)	6.1 (2.7, 12.9)	2.5 (0.5, 11.2)
Residence						
Urban	43.4 (39.1, 47.9)	43.0 (38.7, 47.4)	39.0 (34.8, 43.4)	5.7 (3.9, 8.2)	7.4 (5.5, 9.8)	2.1 (1.1, 3.8)
Rural	45.1 (41.3, 49.1)	44.9 (41.0, 48.9)	36.6 (32.8, 40.5)	11.7 (9.1, 15.1)	11.0 (8.7, 13.8)	1.6 (0.9, 2.6)
Education level[3]						
Less than primary	46.6 (37.7, 55.7)	45.7 (36.9, 54.8)	33.8 (25.3, 43.4)	12.8 (8.2, 19.6)	13.8 (8.5, 21.7)	1.3 (0.5, 2.9)
Primary	54.1 (48.1, 60.0)	52.8 (46.7, 58.7)	45.7 (39.8, 51.7)	10.1 (7.0, 14.5)	8.6 (6.0, 12.0)	2.0 (0.7, 5.2)
Secondary/high school	50.7 (45.8, 55.6)	50.7 (45.8, 55.6)	44.9 (40.0, 49.9)	6.5 (4.7, 9.0)	9.3 (6.6, 12.9)	1.1 (0.5, 2.3)
College or above	30.5 (22.5, 39.9)	30.5 (22.5, 39.9)	28.4 (20.3, 38.1)	3.3 (1.5, 7.2)	2.2 (0.8, 6.0)	0.0 (-, -)
Race/ethnicity						
Malay	46.8 (42.7, 50.9)	46.3 (42.2, 50.5)	40.1 (36.0, 44.2)	9.8 (7.6, 12.6)	9.8 (7.8, 12.3)	2.4 (1.3, 4.1)
Chinese	29.7 (23.2, 37.1)	29.6 (23.1, 37.0)	29.0 (22.5, 36.5)	1.9 (0.6, 6.0)	0.4 (0.1, 1.5)	1.4 (0.3, 7.3)
Indian	36.7 (26.5, 48.2)	36.1 (26.1, 47.5)	34.4 (24.9, 45.4)	3.4 (1.1, 10.5)	3.2 (1.3, 7.7)	1.3 (0.4, 4.5)
Other	56.7 (49.5, 63.6)	56.6 (49.4, 63.4)	46.7 (39.3, 54.2)	7.0 (4.1, 11.9)	17.3 (11.6, 25.0)	1.0 (0.4, 2.7)
Religion						
Muslim	48.5 (44.6, 52.3)	48.1 (44.2, 52.0)	41.3 (37.4, 45.2)	9.2 (7.0, 11.9)	11.2 (9.0, 13.9)	2.1 (1.2, 3.7)
Non-Muslim	34.9 (29.5, 40.7)	34.6 (29.2, 40.4)	32.4 (27.3, 38.0)	3.8 (2.2, 6.3)	2.7 (1.7, 4.5)	1.5 (0.6, 4.0)

Note: Current smoking includes both daily and occasional (less than daily) smoking.

[1] Includes manufactured, hand-rolled, and kretek cigarettes.

[2] Includes pipes, cigars, shisha, bidis, and any other reported tobacco smoking products.

[3] Education level is reported only for persons aged ≥ 25 years.

Table 4.3 (cont.): Percentage of adults aged ≥15 years who were current smokers of various smoked tobacco products, by gender and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Any Smoked Tobacco Product	Any Cigarette[1]	Type of Cigarette			Other Smoked Tobacco[2]
			Manufactured	Hand-rolled	Kretek	
			Percentage(95% CI)			
Female	1.0 (0.7, 1.6)	1.0 (0.6, 1.6)	0.7 (0.4, 1.2)	0.4 (0.2, 0.6)	0.1 (0.0, 0.6)	0.1 (0.0, 0.3)
Age (years)						
15-24	0.5 (0.1, 1.6)	0.3 (0.1, 1.5)	0.3 (0.1, 1.5)	0.0 (-, -)	0.0 (-, -)	0.2 (0.0, 1.1)
25-44	1.0 (0.5, 2.3)	1.0 (0.5, 2.3)	1.0 (0.5, 2.3)	0.2 (0.0, 1.0)	0.0 (0.0, 0.3)	0.0 (0.0, 0.3)
45-64	0.5 (0.3, 1.0)	0.5 (0.2, 1.0)	0.2 (0.1, 0.6)	0.4 (0.2, 0.8)	0.0 (-, -)	0.0 (0.0, 0.2)
65+	5.0 (2.4, 10.1)	5.0 (2.4, 10.1)	1.6 (0.4, 5.7)	2.6 (1.2, 5.3)	1.3 (0.2, 8.7)	0.0 (-, -)
Residence						
Urban	0.9 (0.5, 1.7)	0.9 (0.4, 1.7)	0.7 (0.4, 1.4)	0.2 (0.1, 0.6)	0.2 (0.0, 0.8)	0.1 (0.0, 0.4)
Rural	1.4 (0.8, 2.3)	1.4 (0.8, 2.3)	0.6 (0.2, 1.5)	0.9 (0.5, 1.6)	0.0 (-, -)	0.0 (0.0, 0.2)
Education lLevel[3]						
Less than primary	3.0 (1.5, 5.7)	2.9 (1.5, 5.6)	0.6 (0.2, 1.7)	2.0 (1.1, 3.7)	0.8 (0.1, 5.4)	0.1 (0.0, 0.4)
Primary	2.0 (1.0, 4.3)	2.0 (1.0, 4.3)	1.9 (0.8, 4.2)	0.2 (0.1, 0.7)	0.1 (0.0, 0.6)	0.1 (0.0, 0.6)
Secondary/high school	0.4 (0.1, 1.3)	0.4 (0.1, 1.3)	0.4 (0.1, 1.3)	0.2 (0.0, 1.5)	0.0 (-, -)	0.0 (-, -)
College or above	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)
Race/ethnicity						
Malay	1.1 (0.6, 2.0)	1.0 (0.5, 2.0)	0.6 (0.2, 1.5)	0.3 (0.2, 0.6)	0.2 (0.0, 1.0)	0.1 (0.0, 0.5)
Chinese	0.2 (0.0, 1.7)	0.2 (0.0, 1.7)	0.2 (0.0, 1.7)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)
Indian	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)
Other	2.7 (1.5, 4.7)	2.6 (1.5, 4.6)	2.2 (1.1, 4.2)	1.3 (0.5, 3.2)	0.0 (-, -)	0.1 (0.0, 0.4)
Religion						
Muslim	1.3 (0.8, 2.1)	1.2 (0.7, 2.0)	0.8 (0.4, 1.6)	0.3 (0.2, 0.7)	0.2 (0.0, 0.9)	0.1 (0.0, 0.4)
Non-Muslim	0.6 (0.2, 1.4)	0.6 (0.2, 1.4)	0.4 (0.1, 1.3)	0.4 (0.1, 1.2)	0.0 (-, -)	0.0 (0.0, 0.2)

Note: Current smoking includes both daily and occasional (less than daily) smoking.

[1] Includes manufactured, hand-rolled, and kretek cigarettes.

[2] Includes pipes, cigars, shisha, bidis, and any other reported tobacco smoking products.

[3] Education level is reported only for persons aged ≥ 25 years.

4.4 Number of Users of Various Smoked Tobacco Products

Table 4.4 presents the number of users of different smoked tobacco products classified by age, residence, gender, and other demographic characteristics. There were 4.747 million current adult tobacco smokers in Malaysia, 4.642 million men and 0.104 million women. Most of the current smokers smoked manufactured cigarettes; in all, 0.780 million men and 0.036 million women smoked hand-rolled cigarettes. A total of 0.209 million current smokers used other forms of smoked tobacco, which included pipes, curut, cigars or cigarillos, shisha/hookah, and bidis.

Overall, the 25-44 age group had the highest number of current smokers in all categories except for other smoked tobacco, with estimates of 2.474 million for any smoked tobacco product, 2.232 million for manufactured cigarettes, 0.276 million for hand-rolled, and 0.404 million for kreteks. A similar pattern was seen for male smokers. Among female smokers, the highest numbers were seen in the 25-44 group for any smoked tobacco product, for any cigarette, and for manufactured cigarettes, while for hand-rolled cigarettes and kreteks the highest numbers were in the ≥65 age group.

By residence, the overall number of smokers for any smoked tobacco product, for any cigarette, and for manufactured cigarettes was almost three times as high in urban areas as in rural areas.

In terms of education, the highest numbers for use of any type of smoked tobacco product, of any cigarette, of manufactured cigarettes, and of kreteks were found among those with a secondary/high school education.

By race/ethnicity, the highest number for any types of smoked tobacco product was 2.971 million for Malays, followed by 0.814 million for “other,” 0.586 million for Chinese, and 0.376 million for Indians.

By religion, the number of Muslim adults who smoked any tobacco product, any cigarette, and manufactured cigarettes was more than twice the number for non-Muslims. For hand-rolled cigarettes and kreteks, the numbers of Muslims were more than four times and more than eight times, respectively, the numbers for non-Muslims.

Table 4.4: Number of adults aged ≥15 years who were current smokers of various smoked tobacco products, by gender and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Any Smoked Tobacco product	Any Cigarette[1]	Type of Cigarette			Other Smoked Tobacco[2]
			Manufactured	Hand-rolled	Kretek	
			Number in thousands			
Overall	4,747	4,704	4,118	816	900	209
Age (years)						
15-24	949	945	870	187	242	113
25-44	2,474	2,462	2,232	276	404	60
45-64	1,105	1,096	885	264	201	18
65+	218	202	130	88	53	18
Residence						
Urban	3,357	3,322	3,005	441	571	161
Rural	1,389	1,382	1,112	375	329	48
Education level[3]						
Less than primary	389	382	263	122	114	10
Primary	1,303	1,272	1,104	241	201	47
Secondary/high school	1,746	1,746	1,547	229	317	38
College or above	334	334	311	36	24	0
Race/ethnicity						
Malay	2,971	2,940	2,523	629	622	153
Chinese	586	583	572	38	7	28
Indian	376	370	353	35	33	13
Other	814	811	670	114	238	15
Religion						
Muslim	3,506	3,476	2,970	671	804	155
Non-Muslim	1,240	1,229	1,147	146	96	54

Note: Current smoking includes both daily and occasional (less than daily) smoking.

[1] Includes manufactured, hand-rolled, and kretek cigarettes.

[2] Includes pipes, cigars, shisha, bidis, and any other reported tobacco smoking products.

[3] Education level is reported only among persons aged ≥ 25 years.

Table 4.4 (cont.): Number of adults aged ≥15 years who were current smokers of various smoked tobacco products, by gender and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Any Smoked Tobacco Product	Any Cigarette[1]	Type of Cigarette			Other Smoked Tobacco[2]
			Manufactured	Hand-rolled	Kretek	
			Number in thousands			
Male	4,642	4,605	4,050	780	888	202
Age (years)						
15-24	936	936	862	187	242	109
25-44	2,432	2,420	2,190	268	402	58
45-64	1,093	1,084	880	255	201	18
65+	181	165	118	69	43	18
Residence						
Urban	3,290	3,260	2,954	428	559	155
Rural	1,352	1,345	1,096	352	329	47
Education level[3]						
Less than primary	353	346	256	97	105	10
Primary	1,260	1,229	1,064	236	199	46
Secondary/high school	1,735	1,735	1,535	222	317	38
College or above	334	334	311	36	24	0
Race/Ethnicity						
Malay	2,907	2,880	2,489	611	611	147
Chinese	581	578	568	38	7	28
Indian	376	370	353	35	33	13
Other	778	776	640	97	238	14
Religion						
Muslim	3,421	3,394	2,915	648	792	149
Non-Muslim	1,221	1,211	1,135	132	96	53

Note: Current smoking includes both daily and occasional (less than daily) smoking.

[1] Includes manufactured, hand-rolled, and kretek cigarettes.

[2] Includes pipes, cigars, shisha, bidis, and any other reported tobacco smoking products.

[3] Education level is reported only among persons aged ≥ 25 years.

Table 4.4 (cont.): Number of adults aged ≥15 years who were current smokers of various smoked tobacco products, by gender and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Any Smoked Tobacco Product	Any Cigarette[1]	Type of Cigarette			Other Smoked Tobacco[2]
			Manufactured	Hand-rolled	Kretek	
			Number in thousands			
Female	104	99	68	36	11	7
Age (years)						
15-24	13	9	9	0	0	4
25-44	43	43	43	8	2	2
45-64	12	11	5	9	0	1
65+	37	37	11	19	10	0
Residence						
Urban	67	62	51	13	11	6
Rural	38	37	16	23	0	1
Education level[3]						
Less than primary	37	36	7	25	10	1
Primary	43	43	40	5	2	2
Secondary/high school	12	12	12	7	0	0
College or above	0	0	0	0	0	0
Race/ethnicity						
Malay	64	60	34	18	11	6
Chinese	5	5	5	0	0	0
Indian	0	0	0	0	0	0
Other	36	35	30	18	0	1
Religion						
Muslim	85	81	55	23	11	6
Non-Muslim	19	18	13	14	0	1

Note: Current smoking includes both daily and occasional (less than daily) smoking.

[1] Includes manufactured, hand-rolled, and kretek cigarettes.

[2] Includes pipes, cigars, shisha, bidis, and any other reported tobacco smoking products.

[3] Education level is reported only among persons aged ≥ 25 years.

4.5 Frequency of Smoking

Table 4.5 presents the percentage distribution of the adult population by the categories of daily use, occasional use (less than daily use) and non-smoker. Among Malaysian adults, 20.9% (39.9% of men and 0.7% of women) were daily smokers, 2.3% (4.1% of men and 0.4% of women) were occasional smokers, and the remaining 76.9% (56.1% of men and 99.0% of women) were non-smokers.

The proportion of daily smokers among men increased with age from 27.9% in the 15–24 age group to 49.8% among those aged 25−44, then dropped to 41.4% among those aged 45–64 and 22.1% in the ≥65 age group. Among women the prevalence of daily smokers exceeded 1% only in the highest age group (3.1%).

The percentage of daily smokers was 21.8% in rural areas and 20.5% in urban areas, and there was little difference by residence among occasional smokers (rural, 2.5%; urban, 2.2%). The percentage of non-smokers was 77.3% in urban areas and 75.7% in rural areas.

Among both men and women, education (beginning at the primary level) was inversely related to daily smoking. Among men, 49.7% of those with a primary education, 47.1% of those with a secondary/high school education, and 25.6% with a college education or above were daily smokers; among women the estimates were 2.0%, 0.1%, and 0.0%, respectively.

Among the three main racial/ethnic groups in Malaysia, 22.3% of Malays, 17.2% of Indians, and 14.2% of Chinese were daily smokers. For smoking occasionally the estimates were 2.4%, Indians; 2.3%, Malays; and 1.2%, Chinese. The proportions of non-smokers were 84.6%, Chinese; 80.4%, Indians; and 75.4%, Malays.

A significantly higher proportion of Muslims (23.2%) than non-Muslims (16.2%) smoked a tobacco product daily; correspondingly, the percentage of non-smokers was significantly higher for non-Muslims (81.7%) than Muslims (74.4%).

Table 4.5: Percentage distribution of adults aged ≥15 years by smoking frequency, gender, and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Smoking Frequency			Total
	Daily	Occasional[1]	Non-smoker	
	Percentage (95% CI)			
Overall	20.9 (19.0, 22.9)	2.3 (1.7, 3.0)	76.9 (74.8, 78.8)	100
Age (years)				
15-24	14.3 (11.4, 17.9)	2.4 (1.4, 3.9)	83.3 (79.7, 86.4)	100
25-44	26.3 (23.4, 29.3)	2.7 (1.8, 4.0)	71.0 (67.8, 73.9)	100
45-64	21.5 (18.8, 24.5)	1.2 (0.6, 2.6)	77.3 (74.1, 80.2)	100
65+	12.5 (8.9, 17.2)	2.5 (1.2, 5.2)	85.0 (80.1, 88.8)	100
Residence				
Urban	20.5 (18.1, 23.2)	2.2 (1.5, 3.1)	77.3 (74.6, 79.8)	100
Rural	21.8 (19.5, 24.2)	2.5 (1.8, 3.4)	75.7 (73.3, 78.0)	100
Education level[2]				
Less than primary	17.5 (13.8, 22.0)	2.0 (0.8, 5.0)	80.4 (75.8, 84.3)	100
Primary	27.0 (23.4, 31.0)	2.3 (1.3, 4.1)	70.7 (66.5, 74.6)	100
Secondary/high school	24.8 (21.8, 28.1)	2.0 (1.3, 3.1)	73.2 (69.9, 76.3)	100
College or above	15.5 (11.4, 20.8)	3.0 (1.1, 7.7)	81.5 (75.8, 86.1)	100
Race/ethnicity				
Malay	22.3 (19.8, 25.0)	2.3 (1.7, 3.1)	75.4 (72.7, 77.9)	100
Chinese	14.2 (11.0, 18.2)	1.2 (0.4, 3.3)	84.6 (80.5, 88.0)	100
Indian	17.2 (12.4, 23.3)	2.4 (0.8, 6.8)	80.4 (73.6, 85.8)	100
Other	26.3 (21.7, 31.5)	3.7 (2.0, 6.8)	70.0 (64.7, 74.8)	100
Religion				
Muslim	23.2 (20.9, 25.8)	2.3 (1.7, 3.1)	74.4 (71.9, 76.8)	100
Non-Muslim	16.2 (13.5, 19.2)	2.1 (1.2, 3.7)	81.7 (78.3, 84.6)	100

[1] Occasional refers to less than daily use.

[2] Education level is reported only for persons aged ≥ 25 years.

Table 4.5 (cont.): Percentage distribution of adults aged ≥15 years by smoking frequency, gender, and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Smoking Frequency			Total
	Daily	Occasional[1]	Non-smoker	
	Percentage (95% CI)			
Male	39.9 (36.6, 43.3)	4.1 (3.1, 5.3)	56.1 (52.7, 59.4)	100
Age (years)				
15-24	27.9 (22.4, 34.1)	4.2 (2.4, 7.1)	68.0 (61.7, 73.6)	100
25-44	49.8 (45.2, 54.4)	5.1 (3.4, 7.4)	45.1 (40.8, 49.6)	100
45-64	41.4 (36.2, 46.8)	2.4 (1.1, 5.0)	56.2 (50.6, 61.6)	100
65+	22.1 (15.2, 31.0)	3.2 (1.3, 7.2)	74.7 (65.8, 81.9)	100
Residence				
Urban	39.5 (35.2, 44.0)	3.9 (2.7, 5.7)	56.6 (52.1, 60.9)	100
Rural	40.7 (36.9, 44.7)	4.4 (3.2, 6.1)	54.9 (50.9, 58.7)	100
Education level[2]				
Less than primary	43.0 (34.4, 52.1)	3.5 (1.1, 11.1)	53.4 (44.3, 62.3)	100
Primary	49.7 (44.0, 55.4)	4.4 (2.5, 7.8)	45.9 (40.0, 51.9)	100
Secondary/high school	47.1 (42.3, 52.0)	3.6 (2.2, 5.6)	49.3 (44.4, 54.2)	100
College or above	25.6 (18.5, 34.4)	4.9 (1.8, 12.5)	69.5 (60.1, 77.5)	100
Race/ethnicity				
Malay	42.8 (38.5, 47.1)	4.0 (2.9, 5.6)	53.2 (49.1, 57.3)	100
Chinese	27.4 (21.1, 34.8)	2.3 (0.8, 6.2)	70.3 (62.9, 76.8)	100
Indian	32.3 (23.2, 42.9)	4.4 (1.5, 12.4)	63.3 (51.8, 73.5)	100
Other	50.2 (42.9, 57.5)	6.5 (3.5, 11.8)	43.3 (36.4, 50.5)	100
Religion				
Muslim	44.3 (40.4, 48.4)	4.1 (3.0, 5.6)	51.5 (47.7, 55.4)	100
Non-Muslim	31.0 (26.0, 36.4)	4.0 (2.3, 6.8)	65.1 (59.3, 70.5)	100

[1] Occasional refers to less than daily use.

[2] Education level is reported only for persons aged ≥ 25 years.

Table 4.5 (cont.): Percentage distribution of adults aged ≥15 years by smoking frequency, gender, and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Smoking Frequency			Total
	Daily	Occasional[1]	Non-smoker	
	Percentage (95% CI)			
Female	0.7 (0.4, 1.2)	0.4 (0.2, 0.8)	99.0 (98.4, 99.3)	100
Age (years)				
15-24	0.0 (-, -)	0.5 (0.1, 1.6)	99.5 (98.4, 99.9)	100
25-44	0.8 (0.3, 2.0)	0.2 (0.0, 1.0)	99.0 (97.7, 99.5)	100
45-64	0.5 (0.3, 1.0)	0.0 (-, -)	99.5 (99.0, 99.7)	100
65+	3.1 (1.4, 7.0)	1.9 (0.5, 7.4)	95.0 (89.9, 97.6)	100
Residence				
Urban	0.6 (0.3, 1.3)	0.3 (0.1, 0.9)	99.1 (98.3, 99.5)	100
Rural	1.0 (0.6, 1.7)	0.4 (0.1, 1.4)	98.6 (97.7, 99.2)	100
Education level[2]				
Less than primary	1.9 (1.0, 3.5)	1.1 (0.3, 4.5)	97.0 (94.3, 98.5)	100
Primary	2.0 (1.0, 4.3)	0.0 (-, -)	98.0 (95.7, 99.0)	100
Secondary/high school	0.1 (0.0, 0.4)	0.3 (0.1, 1.3)	99.6 (98.7, 99.9)	100
College or above	0.0 (-, -)	0.0 (-, -)	100.0 (-, -)	100
Race/ethnicity				
Malay	0.7 (0.3, 1.5)	0.4 (0.2, 1.1)	98.9 (98.0, 99.4)	100
Chinese	0.2 (0.0, 1.7)	0.0 (-, -)	99.8 (98.3, 100.0)	100
Indian	0.0 (-, -)	0.0 (-, -)	100.0 (-, -)	100
Other	1.9 (1.0, 3.4)	0.8 (0.2, 2.9)	97.3 (95.3, 98.5)	100
Religion				
Muslim	0.8 (0.5, 1.6)	0.4 (0.2, 1.0)	98.7 (97.9, 99.2)	100
Non-Muslim	0.4 (0.2, 0.9)	0.2 (0.0, 1.4)	99.4 (98.6, 99.8)	100

[1] Occasional refers to less than daily use.

[2] Education level is reported only for persons aged ≥ 25 years.

4.6 Number of Manufactured Cigarettes Smoked per Day

The daily frequency of cigarette smoking (includes manufactured and hand-rolled cigarettes plus kreteks) is an important variable because the number of cigarettes smoked per day is an indicator of the degree of dependence on nicotine. Per **Table 4.6,** a typical daily cigarette smoker in Malaysia smoked 14 cigarettes per day. In all, 11.1% of daily cigarette smokers smoked fewer than 5 cigarettes a day, 16.2% smoked 5-9, 27.9% smoked 10-14, 36.7% smoked 15-24, and 8.1% smoked 25 or more cigarettes per day.

By residence, the average number of smoked cigarettes per day was 14.1 in urban areas and 13.5 in rural areas.

The average number of cigarettes smoked per day generally rose by age group, from 11.7 among smokers aged 15-24 years to 15.5 among those 45-64 years and then 15.4 in the oldest age group. By education, the average dropped from 16.0 cigarettes for those with less than a primary education to 14.0 for those with secondary/high school education, then increased to 15.5 among those who had a college education or above.

By race / ethnicity, averages were tightly clustered for daily smokers: 14.4 for Chinese, 14.1 for Malays, and 13.1 for Indians. Finally, Muslims smoked 14.0 cigarettes per day and non-Muslims smoked 13.5 cigarettes per day.

Table 4.6: Average number and percentage distribution of cigarettes smoked per day among daily cigarette smokers aged ≥15 years by selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Average Number of Cigarettes Smoked Per Day[1]	Distribution of Number of Cigarettes Smoked on Average Per Day[1]					Total
		<5	5-9	10-14	15-24	≥25	
	Mean (95% CI)	*Percentage (95% CI)*					
Overall	13.9 (13.1, 14.7)	11.1 (8.3, 14.7)	16.2 (13.0, 19.9)	27.9 (24.5, 31.6)	36.7 (32.5, 41.0)	8.1 (6.1, 10.7)	100
Gender							
Male	14.0 (13.2, 14.8)	11.0 (8.2, 14.6)	16.1 (12.9, 19.9)	27.7 (24.2, 31.4)	37.0 (32.8, 41.4)	8.2 (6.2, 10.8)	100
Female	--	--	--	--	--	--	100
Age (years)							
15-24	11.7 (9.7, 13.7)	20.1 (11.8, 32.0)	28.7 (18.7, 41.4)	13.1 (7.6, 21.8)	32.5 (21.5, 45.8)	5.6 (1.9, 15.1)	100
25-44	13.8 (13.0, 14.7)	8.6 (5.7, 12.8)	13.2 (9.4, 18.3)	32.5 (27.7, 37.8)	39.8 (34.4, 45.4)	5.9 (3.8, 9.0)	100
45-64	15.5 (13.8, 17.2)	9.1 (4.9, 16.1)	12.0 (7.8, 18.1)	31.1 (24.2, 39.0)	34.3 (26.4, 43.1)	13.5 (9.3, 19.2)	100
65+	15.4 (10.6, 20.2)	13.7 (5.9, 28.6)	19.4 (9.9, 34.3)	19.4 (10.8, 32.3)	30.7 (16.5, 49.9)	16.9 (5.4, 41.9)	100
Residence							
Urban	14.1 (13.1, 15.1)	9.7 (6.4, 14.2)	16.2 (12.1, 21.3)	28.6 (24.2, 33.4)	38.0 (32.6, 43.7)	7.6 (5.3, 10.9)	100
Rural	13.5 (12.3, 14.7)	14.7 (10.3, 20.5)	16.2 (12.7, 20.4)	26.4 (22.0, 31.3)	33.4 (28.1, 39.2)	9.3 (6.1, 14.0)	100
EducationlLevel[2]							
Less than primary	16.0 (12.1, 19.9)	20.4 (10.2, 36.6)	14.0 (7.6, 24.5)	13.7 (8.4, 21.6)	32.7 (22.5, 45.0)	19.2 (10.1, 33.6)	100
Primary	14.3 (12.8, 15.7)	11.2 (7.0, 17.3)	10.8 (6.9, 16.6)	34.6 (26.7, 43.5)	33.4 (26.0, 41.7)	10.0 (6.2, 15.6)	100
Secondary/high school	14.0 (12.9, 15.0)	6.4 (3.5, 11.1)	15.2 (10.3, 21.8)	34.4 (28.6, 40.6)	37.2 (31.1, 43.7)	6.9 (4.5, 10.5)	100
College or above	15.5 (13.5, 17.5)	1.6 (0.2, 10.5)	11.4 (4.6, 25.7)	25.2 (14.2, 40.7)	60.8 (43.5, 75.8)	1.0 (0.2, 4.6)	100
Race/ethnicity							
Malay	14.1 (13.0, 15.1)	10.6 (7.2, 15.3)	17.6 (13.6, 22.5)	26.6 (22.1, 31.6)	36.2 (30.7, 42.1)	9.0 (6.5, 12.4)	100
Chinese	14.4 (12.3, 16.6)	8.4 (3.1, 20.9)	9.9 (5.0, 18.5)	27.6 (17.2, 41.2)	47.3 (34.1, 60.8)	6.8 (2.6, 16.3)	100
Indian	13.1 (10.1, 16.0)	18.2 (7.4, 38.4)	14.9 (6.0, 32.6)	35.9 (20.8, 54.3)	23.3 (12.3, 39.6)	7.7 (3.2, 17.4)	100
Other	13.3 (11.6, 14.9)	11.9 (6.7, 20.2)	16.2 (8.2, 29.3)	29.6 (22.4, 38.1)	36.4 (27.8, 45.9)	6.0 (2.5, 13.3)	100
Religion							
Muslim	14.0 (13.1, 15.0)	10.6 (7.5, 14.7)	17.4 (13.5, 22.2)	26.4 (22.3, 31.0)	37.3 (32.1, 42.7)	8.3 (6.1, 11.2)	100
Non-Muslim	13.5 (11.9, 15.1)	12.7 (7.4, 21.0)	12.5 (7.9, 19.1)	32.4 (24.9, 40.8)	34.9 (26.6, 44.3)	7.5 (4.1, 13.5)	100

[1] Among daily cigarette smokers. Cigarettes include manufactured, hand-rolled, and kreteks.

[2] Education level is reported only among persons aged ≥ 25 years.

-- Estimate was suppressed because there were fewer than 25 unweighted cases.

4.7 Average Age at Initiation of Daily Smoking and Distribution of Initial Age

Table 4.7 presents for ever daily smokers aged 20–34 years their average age at initiation of daily smoking and the distribution of initial age, both by selected demographic characteristics. Overall, the mean age at initiation was 17.2 years. Of the group of interest, 12.7% started smoking daily before the age of 15, 39.1% at age 15–17, 28.6% at age 18–19, and 19.6% at 20 or older. In short, over half of all ever daily smokers started smoking tobacco on a daily basis before the age of 18, i.e., as minors.

For men, the mean age at initiation was 17.2 years. For men and women combined, those from urban areas started on average 1.0 years before those from rural areas. More than one-third (36.9%) of smokers in rural areas started daily smoking before the age of 18, versus 56.2% of urban smokers.

Average age at initiation was 18.3 years for Chinese, 17.2 years for Malays, and 16.1 years for those of another race / ethnicity. Finally, the average age at initiation was significantly higher among non-Muslims (18.3 years) than Muslims (16.9 years).

Table 4.7: Average age and percentage distribution of ever daily smokers aged 20-34 years by age at initiation of daily smoking, gender, and residence – GATS Malaysia, 2011.

Demographic Characteristic	Average Age (in Years) at Initiation of Daily Smoking[1]	Distribution of Age (in Years) at Initiation of Daily Smoking [1]				Total
		<15	15-17	18-19	20+	
	Mean (95% CI)	*Percentage (95% CI)*				
Overall	17.2 (16.6,17.8)	12.7 (8.7,18.3)	39.1 (32.9,45.7)	28.6 (22.7,35.3)	19.6 (14.7,25.5)	100
Gender						
Male	17.2 (16.6,17.8)	12.0 (8.0,17.7)	39.8 (33.5,46.4)	28.8 (22.9,35.7)	19.4 (14.5,25.5)	100
Female	--	--	--	--	--	100
Residence						
Urban	17.0 (16.3,17.7)	14.2 (9.2,21.3)	42.0 (34.3,50.1)	25.2 (18.4,33.6)	18.5 (12.8,25.9)	100
Rural	18.0 (17.2,18.8)	7.6 (3.9,14.5)	29.3 (21.6,38.5)	39.9 (31.2,49.2)	23.1 (16.0,32.3)	100
Education level[2]						
Less than primary	--	--	--	--	--	100
Primary	17.7 (16.4,19.0)	17.0 (8.0,32.4)	37.9 (23.5,54.9)	13.3 (6.1,26.4)	31.8 (18.3,49.3)	100
Secondary/high school	17.4 (16.1,18.7)	11.3 (4.9,23.8)	29.6 (21.5,39.2)	31.7 (23.4,41.3)	27.4 (18.7,38.2)	100
College or above	17.1 (16.3,17.8)	16.8 (7.0,35.3)	36.7 (20.6,56.4)	37.6 (19.3,60.3)	8.8 (2.8,24.7)	100
Race/ethnicity						
Malay	17.2 (16.8,17.6)	13.2 (8.3,20.3)	37.9 (29.7,46.8)	31.7 (24.0,40.5)	17.3 (11.7,24.7)	100
Chinese	18.3 (17.2,19.4)	7.0 (2.0,22.0)	23.2 (8.3,50.0)	40.0 (17.9,67.1)	29.9 (14.2,52.2)	100
Indian	--	--	--	--	--	100
Other	16.1 (14.2,18.0)	16.7 (6.5,36.4)	49.0 (35.4,62.8)	18.0 (10.7,28.5)	16.4 (9.1,27.6)	100
Religion						
Muslim	16.9 (16.2,17.5)	14.3 (9.2,21.7)	41.0 (33.6,48.8)	28.4 (22.1,35.8)	16.3 (11.5,22.6)	100
Non-Muslim	18.3 (17.4,19.2)	7.6 (3.8,14.6)	33.1 (21.2,47.7)	29.1 (17.0,45.1)	30.1 (18.6,45.0)	100

[1] Among adults aged 20-34 years who were ever daily smokers.

[2] Education level is reported only among persons aged ≥ 25 years.

-- Estimate suppressed because it was based on fewer than 25 unweighted cases

4.8 Prevalence of Former Daily Smoking and the Quit Ratio

Table 4.8 presents the prevalence of former daily smokers among all adults aged 15 years or above and the quit ratios[1], or the magnitude of success achieved by former daily smokers in quitting tobacco smoking, by selected demographic characteristics.

In Malaysia, 2.3% of adults formerly smoked tobacco daily but per the 2011 GATS had stopped smoking completely. Because the majority of the Malaysian population does not smoke, the quit ratio – the percentage of former daily smokers among ever daily smokers —is more relevant than the percentage of former daily smokers for understanding the extent of success achieved by daily smokers in quitting. Among Malaysian adults, the quit ratio was 9.5%, i.e., 1 in 10 / 11 ever daily smokers had completely stopped smoking.

Not surprisingly, the prevalence of former daily smokers increased by age groups, from 0.5% in the 15−24 age group to 7.4% in those aged ≥65 years. The youngest and oldest groups also had the lowest and highest quit rates: 3.4% and 34.0%, respectively.

By residence, the prevalence of former daily smokers was 2.7% in rural areas and 2.2% in urban areas and the quit ratio was 10.5% in rural areas and 9.0% in urban areas.

The prevalence of former daily smokers decreased as education level increased, from 4.4% in those with less than a primary education to 2.3% among those with a college education or more, a pattern that corresponded with that for the quit ratio through the secondary / high school level.

The prevalence of former daily smokers was 2.8% for Malays and 2.7% for Indians. The quit ratio was 13.6% for Indians.

The prevalence of former daily smokers was 2.6% for Muslims and 1.7% for non-Muslims. The quit ratio was 9.5% for Muslims and 9.2% for non-Muslims.

[1] Quit ratio is the percentage of ever daily tobacco smokers who currently do not smoke tobacco. The indicator indicates the success of efforts to encourage cessation among established tobacco smokers.

Table 4.8: Percentages of all adults aged ≥15 years and of ever daily smokers who were former daily smokers, by selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Former Daily Smokers[1] (Among All Adults)	Former Daily Smokers[1] (Among Ever Daily Smokers)[2]
	Percentage (95% CI)	
Overall	2.3 (1.8, 2.9)	9.5 (7.5, 11.9)
Gender		
Male	4.4 (3.5, 5.6)	9.4 (7.5, 11.9)
Female	0.1 (0.0, 0.3)	10.0 (4.2, 22.4)
Age (years)		
15-24	0.5 (0.2, 1.3)	3.4 (1.3, 8.3)
25-44	1.7 (1.1, 2.7)	5.7 (3.6, 9.1)
45-64	4.0 (2.7, 5.7)	15.1 (10.5, 21.1)
65+	7.4 (5.0, 10.8)	34.0 (23.5, 46.2)
Residence		
Urban	2.2 (1.6, 2.9)	9.0 (6.5, 12.3)
Rural	2.7 (2.0, 3.6)	10.5 (7.9, 13.9)
Education level[3]		
Less than primary	4.4 (2.9, 6.8)	18.6 (12.4, 27.2)
Primary	3.7 (2.4, 5.7)	11.5 (7.5, 17.4)
Secondary/high school	2.4 (1.6, 3.5)	8.3 (5.7, 12.0)
College or above	2.3 (1.0, 5.3)	11.3 (4.7, 24.6)
Race/ethnicity		
Malay	2.8 (2.2, 3.6)	10.5 (8.1, 13.5)
Chinese	1.8 (0.9, 3.4)	11.0 (5.7, 20.2)
Indian	2.7 (1.0, 6.7)	12.6 (4.7, 29.5)
Other	0.7 (0.3, 1.7)	2.5 (1.1, 5.8)
Religion		
Muslim	2.6 (2.0, 3.4)	9.5 (7.4, 12.2)
Non-Muslim	1.7 (1.0, 2.9)	9.2 (5.4, 15.4)

[1] Current non-smokers.

[2] Also known as the quit ratio for daily smoking.

[3] Education level is reported only for persons aged ≥ 25 years.

4.9 Time Since Quitting Smoking

One important dimension of the quitting phenomenon is how long smokers can refrain from smoking, as there is always a chance they will return to this practice after some period of time. **Table 4.9** presents the percentage distribution of former daily smokers (current non-smokers) by duration (in years) since quitting. Almost half (47.1%) of the former daily smokers had stopped smoking for 10 years or longer, just under one-fourth (23.5%) had quit for 1 to <5 years, 15.4% had stopped for less than 1 year, and 14.0% had stayed away from smoking for 5 to <10 years.

In both the 45-64 (60.1%) and ≥65 (78.4%) age groups, most former daily smokers (now non-smokers) had quit for at least 10 years, but not surprisingly, in the 25-44 age group only 15.2% had done so. The proportion of former daily smokers who had quit smoking for 10 years or longer was 55.7% among residents of rural areas and 42.8% among those living in urban areas. By education, the proportion of former daily smokers who had quit for 10 years or longer was 58.2% among those with less than a primary education.

Table 4.9: Percentage distribution of former daily smokers aged ≥15 years by time since quitting and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Time Since Quitting Smoking (Years)[1]				Total
	<1	1 to <5	5 to <10	≥10	
	Percentage (95% CI)				
Overall	15.4 (7.1, 30.1)	23.5 (15.8, 33.5)	14.0 (7.5, 24.7)	47.1 (36.2, 58.3)	100
Gender					
Male	15.7 (7.3, 30.7)	23.5 (15.6, 33.7)	13.5 (7.0, 24.6)	47.3 (36.1, 58.8)	100
Female	--	--	--	--	100
Age (years)					
15-24	--	--	--	--	100
25-44	30.9 (11.1, 61.4)	36.3 (18.0, 59.6)	17.6 (5.6, 43.7)	15.2 (6.0, 33.3)	100
45-64	8.9 (2.2, 30.0)	12.6 (6.1, 24.5)	18.4 (8.0, 36.9)	60.1 (43.5, 74.6)	100
65+	1.6 (0.2, 10.9)	14.4 (5.6, 32.2)	5.5 (1.9, 15.2)	78.4 (60.9, 89.4)	100
Residence					
Urban	22.3 (10.2, 42.1)	20.0 (10.9, 33.8)	14.8 (6.5, 30.5)	42.8 (28.7, 58.2)	100
Rural	1.4 (0.2, 9.4)	30.5 (19.2, 44.8)	12.4 (5.7, 25.1)	55.7 (42.1, 68.4)	100
Education level[2]					
Less than primary	9.7 (2.0, 36.7)	13.1 (5.1, 29.7)	19.0 (6.2, 45.4)	58.2 (36.1, 77.5)	100
Primary	19.2 (4.9, 52.2)	16.3 (7.7, 31.3)	9.8 (4.2, 21.5)	54.7 (34.6, 73.3)	100
Secondary/high school	6.7 (1.4, 27.0)	27.5 (14.1, 46.7)	17.6 (5.7, 43.2)	48.2 (29.3, 67.7)	100
College or above	--	--	--	--	100
Race/ethnicity					
Malay	6.1 (1.7, 19.4)	27.1 (18.1, 38.5)	18.7 (9.9, 32.6)	48.0 (36.5, 59.8)	100
Chinese	--	--	--	--	100
Indian	--	--	--	--	100
Other	--	--	--	--	100
Religion					
Muslim	11.1 (4.4, 25.4)	25.4 (16.9, 36.4)	17.6 (9.2, 30.9)	45.8 (34.5, 57.6)	100
Non-Muslim	28.1 (8.1, 63.3)	17.7 (6.8, 38.9)	3.4 (0.8, 13.9)	50.8 (25.9, 75.3)	100

[1] Among former daily smokers (currently nonsmokers).

[2] Education level is reported only among persons aged ≥ 25 years.

-- Estimate suppressed because it was based on fewer than 25 unweighted cases.

4.10 Prevalence of Current Tobacco Users by Type of Use

Table 4.10 presents the prevalence of current tobacco users aged 15 years or above both overall and in three categories of use by selected demographic characteristics. These categories were “smoked only,” “smokeless only” and “both smoked and smokeless.” The overall prevalence of current tobacco users (included daily and occasional tobacco smokers and all smokeless tobacco users) was 24.0%, of whom 96.8% used smoked tobacco; 1.4%, smokeless tobacco; and 1.8%, both smoked and smokeless. In all the demographic subclassifications examined except for female gender, over 90% of current tobacco users preferred smoked tobacco only (including cigarettes, curut, cigars or cigarillos, pipes, shisha/ hookah) and bidis over smokeless only or both smoked and smokeless.

By gender, the proportion of current tobacco users among men (44.9%) was 26 times that among women (1.7%). An almost negligible proportion of male tobacco users (0.2%) used smokeless tobacco only, but more than one-third (35.7%) of female tobacco users did.

In terms of age, the 25−44 (29.9%) and 45–64 (23.8%) age groups were more likely to use tobacco than those aged ≥65 years or 15–24 years. The prevalence of current tobacco users was slightly higher in rural (24.9%) than urban areas (23.6%). Starting at the primary level, the prevalence of current tobacco users decreased with greater education, dropping from 30.8% for those with a primary education to 18.6% among those with a college education or more.

By race / ethnicity, the prevalence of current tobacco users was highest in the “other” group (31.4%). The prevalences of tobacco use for the three main races/ethnicities were Malays 25.1%, Chinese 16.1%, and Indians 21.4%. Finally, Muslims had a significantly higher prevalence of current tobacco users (26.2%) than did non-Muslims (19.5%).

Table 4.10: Percentage distribution of current tobacco users aged ≥15 years by pattern of tobacco use and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Current Tobacco User[1]	Type of Current Tobacco Use			
		Smoke Only	Smokeless Only	Both Smoke and Use Smokeless	Total
		Percentage (95% CI)			
Overall	24.0 (22.0, 26.1)	96.8 (95.0, 98.0)	1.4 (0.8, 2.4)	1.8 (0.9, 3.6)	100
Gender					
Male	44.9 (41.5, 48.3)	98.0 (96.1, 98.9)	0.2 (0.0, 1.2)	1.9 (1.0, 3.7)	100
Female	1.7 (1.2, 2.3)	64.3 (46.4, 78.9)	35.7 (21.1, 53.6)	0.0 (-, -)	100
Age (years)					
15-24	17.2 (14.0, 21.0)	99.2 (96.9, 99.8)	0.3 (0.0, 2.2)	0.4 (0.1, 3.1)	100
25-44	29.9 (26.8, 33.1)	96.2 (93.0, 98.0)	1.2 (0.6, 2.5)	2.6 (1.1, 6.0)	100
45-64	23.8 (20.8, 27.0)	97.3 (94.2, 98.7)	1.6 (0.6, 4.1)	1.1 (0.3, 3.9)	100
65+	16.4 (12.4, 21.5)	91.0 (79.1, 96.4)	6.8 (2.2, 19.2)	2.2 (0.5, 9.4)	100
Residence					
Urban	23.6 (21.0, 26.4)	96.9 (94.3, 98.3)	1.3 (0.6, 2.7)	1.8 (0.7, 4.5)	100
Rural	24.9 (22.6, 27.4)	96.5 (94.3, 97.9)	1.7 (0.8, 3.4)	1.8 (0.9, 3.7)	100
Education level[2]					
Less than primary	21.6 (17.6, 26.4)	92.5 (84.5, 96.6)	7.5 (3.4, 15.5)	0.0 (-, -)	100
Primary	30.8 (26.8, 35.1)	96.1 (93.3, 97.8)	2.1 (0.9, 4.6)	1.8 (0.8, 3.9)	100
Secondary/high school	27.4 (24.2, 30.8)	97.7 (94.3, 99.1)	0.3 (0.1, 1.4)	1.9 (0.7, 5.6)	100
College or above	18.6 (13.9, 24.4)	92.5 (69.0, 98.6)	0.0 (-, -)	7.5 (1.4, 31.0)	100
Race/ethnicity					
Malay	25.1 (22.6, 27.9)	98.1 (95.6, 99.2)	0.1 (0.0, 0.5)	1.7 (0.7, 4.3)	100
Chinese	16.1 (12.5, 20.4)	96.1 (83.4, 99.2)	0.0 (-, -)	3.9 (0.8, 16.6)	100
Indian	21.4 (15.7, 28.4)	92.8 (83.0, 97.1)	6.8 (2.6, 16.7)	0.4 (0.1, 3.1)	100
Other	31.4 (26.6, 36.6)	94.6 (90.0, 97.1)	4.0 (1.9, 8.4)	1.4 (0.4, 4.8)	100
Religion					
Muslim	26.2 (23.8, 28.8)	97.9 (95.9, 99.0)	0.6 (0.2, 1.5)	1.5 (0.6, 3.6)	100
Non-Muslim	19.5 (16.5, 23.0)	93.7 (88.8, 96.5)	3.6 (1.9, 6.9)	2.7 (0.9, 7.7)	100

[1] Includes daily and occasional (less than daily) smokers or smokeless tobacco users.

[2] Education level is reported only among persons aged ≥ 25 years.

4.11 Time to First Smoke After Awakening

Because the nicotine contained in tobacco products is highly addictive, the use of tobacco within a short time after awakening is an indirect indicator of nicotine dependence. **Table 4.11** presents the distribution of daily tobacco users by the amount of time between waking up and having the first smoke of the day. Almost half (47.6%) of daily smokers aged ≥15 years smoked within 30 minutes after waking up (12.3% of daily smokers smoked in the first 5 minutes and 35.3% of daily smokers smoked 6–30 minutes after awakening). Just over one-fifth (21.6%) started to smoke 31 to 60 minutes after waking up, and 30.9% first smoked more than 1 hour after awakening.

The average time to the first smoke differed by gender, as almost half of male smokers started in 30 minutes or less but only 16.8% of female smokers did so. There was no consistent pattern for the first smoke by age group, but those in the youngest group (15–24) had the highest proportion of smoking within 5 minutes after waking up (20.5%), though not statistical significant.

There were no differences (statistically) when looking at residence, educational level, race/ethnicity, and religion. However, a noticeable finding was that 23.5% of Chinese daily smokers had their first smoke within 5 minutes after waking up.

Table 4.11: Percentage distribution of daily smokers aged ≥15 years by time to first smoke after awakening and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Time to First Smoke				Total
	≤5 Minutes	6-30 Minutes	31-60 Minutes	>60 Minutes	
	Percentage (95% CI)				
Overall	12.3 (9.2, 16.2)	35.3 (30.8, 40.0)	21.6 (18.1, 25.6)	30.9 (26.7, 35.3)	100
Gender					
Male	12.5 (9.4, 16.4)	35.6 (31.0, 40.4)	21.5 (18.0, 25.5)	30.4 (26.3, 34.9)	100
Female	0.0 (-, -)	16.8 (6.5, 36.7)	26.6 (10.2, 53.6)	56.6 (31.4, 78.8)	100
Age (years)					
15-24	20.5 (11.0, 35.2)	28.1 (19.0, 39.5)	19.3 (11.0, 31.8)	32.0 (22.1, 43.8)	100
25-44	10.4 (6.8, 15.6)	35.9 (30.2, 42.0)	22.3 (17.6, 27.8)	31.4 (25.9, 37.6)	100
45-64	11.3 (6.7, 18.3)	41.6 (33.9, 49.8)	18.0 (12.5, 25.3)	29.1 (22.5, 36.8)	100
65+	4.4 (1.3, 13.2)	22.9 (10.9, 41.9)	43.5 (26.0, 62.8)	29.3 (16.8, 46.0)	100
Residence					
Urban	13.5 (9.5, 18.9)	33.5 (27.8, 39.7)	23.1 (18.5, 28.4)	29.9 (24.5, 35.8)	100
Rural	9.4 (6.5, 13.3)	39.5 (33.7, 45.6)	17.9 (13.8, 23.0)	33.2 (27.9, 38.9)	100
Education level[1]					
Less than primary	4.8 (1.7, 12.4)	41.6 (29.3, 54.9)	28.5 (17.3, 43.3)	25.1 (16.6, 36.1)	100
Primary	11.3 (6.8, 18.0)	40.4 (32.4, 48.9)	16.4 (11.2, 23.3)	32.0 (24.4, 40.6)	100
Secondary/high school	10.7 (6.5, 17.1)	33.8 (27.3, 40.9)	24.4 (18.4, 31.7)	31.1 (25.0, 37.9)	100
College or above	12.1 (4.8, 27.3)	33.6 (20.5, 49.8)	26.7 (16.2, 40.6)	27.7 (15.9, 43.7)	100
Race/ethnicity					
Malay	10.5 (7.0, 15.3)	34.2 (28.8, 40.1)	23.2 (18.6, 28.5)	32.2 (27.2, 37.7)	100
Chinese	23.5 (11.6, 41.6)	33.2 (22.4, 46.3)	15.6 (8.0, 28.2)	27.7 (16.3, 43.1)	100
Indian	13.9 (6.0, 29.0)	31.1 (18.2, 47.8)	21.6 (9.6, 41.7)	33.4 (17.7, 53.9)	100
Other	9.9 (5.1, 18.3)	42.6 (32.9, 52.9)	20.2 (13.7, 28.9)	27.2 (18.3, 38.5)	100
Religion					
Muslim	10.1 (7.0, 14.3)	35.5 (30.3, 41.1)	22.7 (18.5, 27.5)	31.7 (26.9, 36.9)	100
Non-Muslim	18.8 (11.3, 29.6)	34.5 (26.6, 43.4)	18.3 (11.9, 27.0)	28.4 (20.3, 38.1)	100

[1] Education level is reported only among persons aged ≥25 years.

4.12 Shisha Smoking

Water pipe or shisha smoking, which uses flavored tobacco, is a traditional method of smoking tobacco in which family and friends interact socially within the shisha cafes located in some shopping malls. The word *water pipe* defines the feature in which smoke passes through water before the smoker inhales it. Different cultures and countries use different shapes of the pipe and variously define this practice of smoking as hookah, huqqa, arghile, narghile, hubble bubble, goza, and boori.

Water pipe or shisha smoking is very popular in the Middle East and is believed to be a part of the cultural identity of countries in that region. Elsewhere, this activity is fast gaining popularity in the United States of America, Canada, United Kingdom, Australia, and Malaysia, facilitated by the influx of Middle Eastern people into these countries. Regardless, shisha smoking is predominantly a social phenomenon that allows people to spend pleasurable time in the company of friends and family at homes or in cafes or bars.

Shisha come in different shapes, sizes, and colors. The apparatus consists of a bowl, windscreen (optional), hose, body and gaskets, a purge valve (optional), water jar, plate, and grommets. The sweetened and flavored tobacco, which is called moassel, is mixed with molasses and gives the aroma of burned sugar.

In Malaysia, the prevalence of shisha smoking among adults was only 0.6%.

4.13 Electronic Cigarettes

Electronic cigarettes (E-cigarettes) are essentially electronic systems designed to deliver nicotine. One end of a plastic or metal cylinder, resembling a cigarette or cigar, is placed in the user's mouth, and he/she inhales to draw a mixture of air and vapors from the device into the respiratory system.

The E-cigarette consists of an electronic vaporization system, a rechargeable battery and charger, electronic controls, and replaceable cartridges that may contain nicotine and other chemicals. E-cigarettes usually include various flavorants that deliver nicotine and other impurities in various proportions and quantities. Essentially, e-cigarettes are drug devices combined with tobacco products and should be classified as nicotine vaporizers that ought to meet the definition of both cigarette and smokeless tobacco products and adhere to strict regulations.

About 21% (20.9%, 95% CI: 19.1-22.9%) of adults in Malaysia had heard about E-cigarettes, and the prevalence of using these devices was just 0.8% (95% CI: 0.4-1.6%).

5

CESSATION

5. CESSATION

This chapter discusses three components of smoking cessation: attempts to quit smoking and the receipt of advice to quit from health care providers, cessation methods used by those who attempted to quit smoking, and the interest of smokers in quitting. The chapter also highlights the discrepancy between Malaysian smokers' desire to quit and the level of their awareness of or ability to access cessation services. Indirectly, the chapter reflects upon the smoking cessation services implemented to date in Malaysia. Findings from this study provide evidence to support and further advocate for specific policies on smoking cessation to help smokers quit using tobacco. In addition, it adds to the growing body of our knowledge regarding the components of a comprehensive tobacco control programme. Comprehensive programs are needed because a single intervention is unlikely to be suitable for every smoker in the population.

Key Findings

- *Nearly one-half of smokers aged 15 years or above had made an attempt to quit smoking in the past 12 months.*
- *Four out of five smokers who attempted to quit smoking in the past 12 months tried to quit without any assistance.*
- *Only half of current smokers who had visited a health care provider in the past 12 months received advice to quit smoking from the provider.*

5.1 Attempts to Quit Smoking and Receipt of Advice to Quit from Health Care Providers

Among current smokers plus former smokers who had abstained from smoking for less than 12 months, nearly half (48.6%) had made at least one attempt to quit smoking in the past 12 months (48.7% of men and 45.7% of women). The youngest group, those aged 15−24 years, had a high percentage (60.8%) of making at least one quit attempt in the past 12 months. The percentages for the other age groups were as follows: 46.6% of those aged 25-44 years, 46.0% of those aged 45-64 years, and 30.4% of those aged ≥65 years.

Almost one-third (32.4%) of the population of current smokers plus former smokers who had been abstinent for less than 12 months had visited a health care provider (HCP) in the previous 12 months. Of this group, 67.6% had been asked by their HCP if they smoked. Overall, slightly more than half (52.6%) had been advised to quit by their HCP.

The percentages of those who were asked about their smoking status by their HCP were 72.8% for rural residents and 65.5% for urban residents. The percentages of those who were advised to quit smoking by their HCP was 60.2% for rural residents and 49.6% for urban residents.

Just 37.2% of those below the primary level had tried to quit versus 47.4% of those at both the secondary/high school and college or above levels. The percentages of smokers who were asked by their HCP if they smoked were 71.3% with less than a primary education; 66.2% for those with a primary education and 68.0% for those with a secondary / high school education.

Malay adults were much more likely to have been asked about smoking (77.2%) and to have been advised to quit by their HCP (59.9%) than were their Chinese counterparts (43.4% asked, 33.1% advised). Interestingly, a high percentage of Indians made quit attempts (60.6%) and visited an HCP (44.7%). Muslims were significantly more likely to have been asked about their smoking (75.0%) and advised to quit (58.8%) by their HCP than were non-Muslims (44.7% asked, 33.4% advised). Detailed data are presented in **Table 5.1** below.

Table 5.1: Percentage of smokers aged ≥15 years who made a quit attempt and received advice to quit from a health care provider in the past 12 months, by selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Smoking Cessation and Health-Care–Seeking Behavior			
	Made Quit Attempt[1]	Visited an HCP[1,2]	Asked by HCP if a Smoker[2,3]	Advised to Quit by HCP[2,3]
	Percentage(95% CI)			
Overall	48.6 (44.1, 53.2)	32.4 (27.9, 37.3)	67.6 (60.0, 74.3)	52.6 (43.8, 61.2)
Gender				
Male	48.7 (44.0, 53.4)	32.2 (27.6, 37.3)	67.3 (59.6, 74.2)	52.2 (43.2, 61.0)
Female	45.7 (24.8, 68.3)	40.4 (20.9, 63.5)	--	--
Age (years)				
15-24	60.8 (50.1, 70.6)	26.0 (17.4, 37.0)	72.5 (47.7, 88.4)	54.0 (32.3, 74.3)
25-44	46.6 (39.9, 53.4)	31.1 (25.0, 37.9)	65.7 (53.8, 75.8)	47.8 (35.4, 60.5)
45-64	46.0 (37.2, 55.0)	38.9 (32.0, 46.1)	68.4 (53.7, 80.2)	59.3 (45.8, 71.6)
65+	30.4 (18.2, 46.1)	43.6 (28.9, 59.5)	65.5 (43.7, 82.3)	56.5 (34.6, 76.2)
Residence				
Urban	51.0 (45.0, 56.9)	32.9 (26.9, 39.5)	65.5 (55.7, 74.2)	49.6 (38.4, 61.0)
Rural	42.9 (37.5, 48.5)	31.2 (26.2, 36.7)	72.8 (64.7, 79.7)	60.2 (51.9, 68.1)
Education level[4]				
Less than primary	37.2 (26.6, 49.2)	27.2 (18.4, 38.3)	71.3 (52.4, 84.8)	66.5 (45.7, 82.5)
Primary	45.4 (37.6, 53.4)	37.4 (29.3, 46.4)	66.2 (50.6, 79.0)	48.7 (35.3, 62.2)
Secondary/high school	47.4 (40.7, 54.3)	33.2 (26.7, 40.4)	68.0 (55.4, 78.4)	56.4 (44.0, 68.1)
College or above	47.4 (33.4, 61.9)	30.3 (18.9, 44.9)	--	--
Race/ethnicity				
Malay	50.5 (45.0, 56.0)	34.3 (29.0, 40.1)	77.2 (70.4, 82.9)	59.9 (49.9, 69.1)
Chinese	38.6 (25.3, 53.9)	30.7 (19.3, 45.1)	43.4 (21.1, 68.7)	33.1 (15.2, 57.7)
Indian	60.6 (43.1, 75.7)	44.7 (29.3, 61.2)	--	--
Other	43.3 (34.7, 52.5)	20.2 (12.3, 31.3)	59.9 (33.6, 81.6)	52.1 (26.8, 76.4)
Religion				
Muslim	49.7 (44.6, 54.8)	33.1 (28.0, 38.6)	75.0 (68.5, 80.5)	58.8 (50.0, 67.1)
Non-Muslim	45.6 (36.0, 55.5)	30.5 (22.4, 40.1)	44.7 (28.7, 61.9)	33.4 (20.3, 49.6)

[1] Among current smokers and former smokers who had been abstinent for less than 12 months.
[2] HCP = health care provider.
[3] Among current smokers and former smokers who had been abstinent for less than 12 months and had visited a HCP during the past 12 months.
[4] Education level reported only among persons aged ≥ 25 years.
-- Estimate suppressed because based on fewer than 25 unweighted cases.

5.2 Cessation Methods Used by Those Who Attempted to Quit Smoking

Among all smokers who had made an attempt to quit smoking in the past 12 months, 9.0% used pharmacotherapy (nicotine replacement and/or medications), 4.4% used counseling and/or a quitline, and 80.3% attempted to quit without any assistance. Additionally, 7.6% used some other methods.

By age, the percentage of using pharmacotherapy among the youngest group (15-24) was 14.0%, with the percentages at 9.5% for those aged 25-44 and just 3.2% for those 45-64. Slightly more than one-third of those with a college education or higher (34.6%) used pharmacotherapy, while only 8.2% of those with a secondary/high school education did so. No one with just a primary school education used pharmacotherapy, and only 1.1% of those with less than a primary school education used this approach. The percentages of using pharmacotherapy werer 11.7% for Malays and 10.3% for Muslims. Details are presented in **Table 5.2**.

Table 5.2: Percentage of smokers aged ≥15 years who attempted to quit smoking in the past 12 months, by cessation method used and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Cessation Method[1]			
	Pharmacotherapy[2]	Counseling/Quitline[3]	Tried to Quit Without Assistance[4]	Other[5]
	Percentage(95% CI)			
Overall	9.0 (5.7, 13.8)	4.4 (2.8, 7.0)	80.3 (73.8, 85.5)	7.6 (4.8, 11.7)
Gender				
Male	9.2 (5.9, 14.1)	4.4 (2.7, 6.9)	80.6 (74.2, 85.7)	7.6 (4.8, 11.8)
Female	--	--	--	--
Age (years)				
15-24	14.0 (6.3, 28.4)	3.6 (1.2, 10.5)	83.5 (69.9, 91.7)	1.2 (0.3, 4.9)
25-44	9.5 (5.5, 15.9)	3.2 (1.5, 6.6)	77.2 (66.7, 85.2)	8.9 (4.9, 15.7)
45-64	3.2 (1.4, 7.5)	7.4 (3.5, 14.9)	83.0 (72.4, 90.1)	11.1 (5.4, 21.5)
65+	--	--	--	--
Residence				
Urban	9.3 (5.4, 15.8)	3.7 (1.9, 7.1)	78.7 (70.1, 85.3)	6.9 (3.8, 12.4)
Rural	8.0 (4.4, 14.1)	6.5 (3.8, 10.8)	85.2 (78.6, 90.0)	9.6 (5.6, 16.0)
Education level[6]				
Less than primary	1.1 (0.1, 7.3)	6.2 (2.0, 17.8)	78.9 (60.0, 90.4)	7.0 (2.1, 20.5)
Primary	0.0 (-, -)	2.8 (1.2, 6.6)	84.0 (70.1, 92.2)	10.1 (4.3, 22.0)
Secondary/High school	8.2 (4.6, 14.1)	6.0 (3.0, 11.5)	72.5 (60.6, 81.9)	7.2 (4.1, 12.4)
College or above	34.6 (15.8, 60.0)	4.0 (0.9, 15.8)	96.4 (77.9, 99.5)	24.2 (7.8, 54.5)
Race/ethnicity				
Malay	11.7 (7.1, 18.6)	5.0 (3.0, 8.3)	78.4 (70.2, 84.9)	5.9 (3.2, 10.9)
Chinese	0.9 (0.1, 6.5)	2.4 (0.7, 7.9)	96.1 (86.0, 99.0)	5.4 (1.0, 23.6)
Indian	4.7 (0.6, 27.7)	0.0 (-, -)	91.0 (59.7, 98.6)	17.2 (5.5, 42.3)
Other	5.4 (1.5, 18.2)	6.2 (2.1, 17.1)	71.0 (51.3, 85.1)	10.1 (4.7, 20.3)
Religion				
Muslim	10.3 (6.3, 16.4)	5.3 (3.3, 8.4)	78.1 (70.2, 84.4)	6.6 (3.9, 11.0)
Non-Muslim	4.8 (1.5, 14.6)	1.8 (0.7, 4.5)	87.4 (76.2, 93.8)	10.7 (4.6, 23.0)

[1] Among current smokers who made a quit attempt in the past 12 months and former smokers who had been abstinent for less than 12 months.

[2] Pharmacotherapy includes nicotine replacement therapy and prescription medications.

[3] Including counseling at a cessation clinic and a telephone quitline/helpline.

[4] Tried to stop smoking without aid.

[5] Other includes traditional medicines, switching to smokeless tobacco, and any other reported methods.

[6] Education level is reported only among persons aged ≥ 25 years.

-- Estimate suppressed because it was based on fewer than 25 unweighted cases.

5.3 Interest in Quitting Smoking

In GATS, interest in quitting smoking in GATS was defined as a response by current tobacco smokers that they were planning to quit or were thinking about quitting smoking within the next month, within 12 months, or someday. **Table 5.3** shows levels of interest in quitting among current smokers aged 15 years or older. Over half of current smokers (56.4%) planned to quit someday, but not in the next 12 months, while a smaller percentage were planning to quit within the next month (6.3%) or within the next 12 months (8.0%). These findings contrast with **Table 5.1**, which showed that nearly half of smokers made at least one attempt to quit in the past 12 months.

For the demographic characteristics, there were no significant differences seen in intention to quit by subgroup (**Table 5.3**).

Table 5.3: Percentage distribution of current smokers aged ≥15 years by interest in quitting smoking and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Interest in Quitting Smoking[1]					Total
	Planning to Quit Within Next Month	Thinking About Quitting Within Next 12 Months	Will Quit Someday, But Not in the Next 12 Months	Not Interested in Quitting	Don't Know	
	Percentage(95% CI)					
Overall	6.3 (4.4, 8.8)	8.0 (5.5, 11.6)	56.4 (51.6, 61.1)	17.5 (14.2, 21.4)	11.8 (8.7, 15.8)	100
Gender						
Male	6.1 (4.3, 8.7)	8.1 (5.5, 11.8)	56.2 (51.3, 60.9)	17.7 (14.4, 21.6)	11.8 (8.7, 15.9)	100
Female	12.9 (4.9, 30.1)	1.4 (0.2, 9.5)	68.5 (47.0, 84.3)	6.8 (1.7, 23.6)	10.4 (2.7, 33.0)	100
Age (years)						
15-24	8.1 (3.7, 16.7)	10.0 (5.0, 18.9)	55.3 (44.0, 66.0)	18.0 (10.4, 29.5)	8.6 (4.3, 16.5)	100
25-44	5.8 (3.7, 9.1)	8.1 (5.0, 12.9)	56.2 (49.9, 62.3)	18.3 (14.1, 23.6)	11.5 (7.9, 16.4)	100
45-64	6.3 (3.0, 12.6)	6.3 (3.8, 10.3)	57.6 (50.8, 64.2)	15.8 (11.0, 22.4)	13.9 (9.0, 20.9)	100
65+	3.6 (0.9, 13.5)	6.0 (1.3, 23.8)	58.1 (41.2, 73.3)	14.0 (5.3, 32.4)	18.3 (8.1, 36.0)	100
Residence						
Urban	6.8 (4.5, 10.3)	8.2 (5.0, 13.4)	54.9 (48.6, 61.1)	17.2 (13.0, 22.5)	12.8 (8.7, 18.3)	100
Rural	4.9 (2.8, 8.3)	7.4 (5.0, 10.8)	60.0 (54.2, 65.6)	18.2 (14.6, 22.5)	9.5 (6.9, 12.9)	100
Education level[2]						
Less than primary	5.9 (2.3, 14.3)	7.8 (3.2, 17.7)	52.7 (40.2, 64.8)	14.7 (8.8, 23.5)	18.9 (10.5, 31.7)	100
Primary	4.8 (2.2, 10.5)	6.7 (3.8, 11.4)	52.1 (43.5, 60.5)	24.6 (17.9, 32.7)	11.8 (6.8, 19.9)	100
Secondary/high school	6.4 (3.6, 10.9)	7.5 (4.1, 13.6)	60.7 (53.2, 67.7)	13.1 (9.0, 18.8)	12.3 (8.2, 18.0)	100
College or above	7.2 (2.8, 17.4)	10.7 (4.4, 23.6)	60.1 (43.3, 74.7)	14.9 (6.8, 29.5)	7.2 (2.4, 19.3)	100
Race/ethnicity						
Malay	5.6 (3.6, 8.7)	6.6 (4.5, 9.5)	61.4 (55.8, 66.8)	15.0 (11.1, 19.9)	11.3 (8.0, 15.8)	100
Chinese	5.6 (1.5, 18.9)	9.3 (3.5, 22.6)	47.2 (33.8, 61.1)	24.3 (14.5, 37.8)	13.6 (6.2, 27.2)	100
Indian	9.2 (2.4, 29.0)	8.8 (3.0, 23.5)	50.2 (34.1, 66.3)	14.0 (5.5, 31.1)	17.8 (7.2, 37.8)	100
Other	7.8 (4.1, 14.2)	11.9 (5.7, 23.3)	47.5 (37.8, 57.4)	23.4 (16.6, 32.1)	9.4 (5.4, 15.7)	100
Religion						
Muslim	5.8 (3.9, 8.4)	7.9 (5.4, 11.2)	59.0 (53.6, 64.2)	16.8 (13.1, 21.2)	10.6 (7.4, 14.9)	100
Non-Muslim	7.7 (3.7, 15.3)	8.4 (4.4, 15.4)	49.1 (40.5, 57.7)	19.6 (13.5, 27.6)	15.3 (9.5, 23.6)	100

[1] Among current daily or less than daily smokers.

[2] Education level is reported only among persons aged ≥25 years.

6

SECONDHAND SMOKE

6. SECONDHAND SMOKE

Secondhand smoke (SHS) is tobacco smoke that is inhaled involuntarily or passively by someone who is not smoking. It is generated from the sidestream (the smoke that is coming from the smoldering end) of a cigarette, pipe or cigar or from the exhaled mainstream (the smoke puffed out by smokers) of cigarettes, pipes and cigars. The U.S. government has long classified SHS as a known human carcinogen[27-30]. Non-smokers exposed to SHS have a 25%-30% higher risk of coronary heart disease than do non-smokers who are not exposed to SHS[31]. Exposure to SHS occurs mainly in workplaces, homes, public places and private cars.

Malaysia does not have comprehensive national legislation that protects all people from SHS, although subnational jurisdictions have the authority to implement laws that ban smoking in public places. This chapter measures exposure to SHS at home, at the workplace, and in various public places, including government buildings, health-care facilities, restaurants, bars / nightclubs, cafes / coffee shops / bistros, indoor shopping complexes, and public transportation, among adults aged 15 years or above.

Key Findings

- *Among those who worked indoors, 4 in 10 were exposed to SHS in the workplace.*
- *Almost 4 in 10 adults were exposed to tobacco smoke at home.*
- *More than 8 in 10 adults were exposed to SHS when visiting cafes/coffee shops/bistros, and almost 8 in 10 adults were exposed when visiting bars/nightclubs.*
- *7 in 10 adults were exposed to SHS when visiting restaurants, which equates to 42% of the entire adult population.*
- *20% of adults were exposed to SHS when visiting government buildings and 28% of adults were exposed to SHS when using public transportation.*
- *Almost 9% of adults were exposed to SHS when visiting health-care facilities.*

6.1 Exposure to Secondhand Smoke in the Workplace

The prevalence and estimated numbers of adults exposed to SHS at the workplace (among those working exclusively indoors or both indoors and outdoors) over the past 30 days by smoking status are shown in **Table 6.1**. Exposure to SHS in the workplace was measured only among adults who worked outside of their home. **Table 6.1** shows that in Malaysia, 39.8% of adults had been exposed to SHS in the workplace in the past 30 days; among non-smokers only, 33.9% had been exposed.

Men (46.2% overall, 39.1% of non-smokers) were more likely than women (30.1% overall, 29.8% of non-smokers) to be exposed to SHS in the workplace. The prevalence of SHS exposure in the workplace for residents of urban areas (41.6% overall, 35.6% of non-smokers) was higher than those residing in rural areas (33.1% overall, 27.4% of non-smokers). Chinese workers had the highest exposure at work among all the racial/ ethnic groups (44.7% overall, 41.2% among non-smokers), but neither finding was

significant. Among non-smokers, a higher proportion of non-Muslim (39.5%) workers were exposed to SHS at work than Muslim workers (30.9%).

Table 6.1: Percentage and number of adults aged ≥15 years who worked indoors and were exposed to tobacco smoke at work, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Exposed to Tobacco Smoke at Work[1]			
	Overall		Non-smokers	
	Percentage (95% CI)	*Number in thousands*	*Percentage (95% CI)*	*Number in thousands*
Overall	39.8 (35.9, 44.0)	2,298	33.9 (29.5, 38.6)	1,373
Gender				
Male	46.2 (41.1, 51.5)	1,612	39.1 (32.6, 46.0)	705
Female	30.1 (24.7, 36.1)	685	29.8 (24.4, 35.7)	668
Age (years)				
15-24	37.8 (28.8, 47.8)	505	30.6 (21.0, 42.3)	320
25-44	40.0 (35.0, 45.3)	1,313	34.5 (28.9, 40.5)	770
45-64	41.3 (33.8, 49.2)	455	35.6 (27.3, 44.8)	259
65+	--	--	--	--
Residence				
Urban	41.6 (36.9, 46.5)	1,901	35.6 (30.4, 41.3)	1,141
Rural	33.1 (27.2, 39.6)	397	27.4 (20.9, 35.0)	233
Education level[2]				
Less than primary	69.2 (45.4, 85.9)	66	--	--
Primary	48.0 (38.9, 57.2)	457	48.3 (37.7, 59.0)	250
Secondary/high school	36.1 (30.6, 42.0)	800	30.6 (24.5, 37.4)	466
College or above	40.8 (32.3, 49.8)	462	34.7 (26.2, 44.4)	312
Race/Ethnicity				
Malay	39.9 (34.7, 45.4)	1,445	30.7 (25.0, 37.0)	753
Chinese	44.7 (37.2, 52.5)	501	41.2 (32.8, 50.0)	367
Indian	32.7 (21.7, 45.9)	178	36.8 (24.8, 50.7)	163
Other	36.2 (26.1, 47.8)	173	34.7 (21.7, 50.3)	91
Religion				
Muslim	39.7 (34.7, 45.0)	1,561	30.9 (25.2, 37.1)	809
Non-Muslim	40.1 (34.0, 46.4)	736	39.5 (33.0, 46.4)	565

[1] In the past 30 days, among adults who worked outside of the home who usually worked indoors or both indoors and outdoors.
[2] Education level is reported only among persons aged ≥ 25 years.
-- Estimate suppressed because it was based on fewer than 25 unweighted cases.

6.2 Exposure to Secondhand Smoke at Home

The prevalence and estimated numbers of people exposed to SHS at home are shown in **Table 6.2** both overall and among non-smokers. Exposure to SHS at home was measured among adults who lived in a home in which smoking occurred daily, weekly, or monthly. **Table 6.2** shows that 38.4% of adults in Malaysia (7.6 million persons) were exposed to SHS at home.

Men (43.3%, 4.5 million) had a higher prevalence of exposure to SHS at home than women (33.3%, 3.2 million). Adults living in rural areas (45.4%, 2.5 million) were more likely to be exposed to SHS at home than those living in urban areas (35.7%, 5.1 million).

By educational attainment, adults with a college education or above had the lowest estimate of SHS exposure at home (24.8%, 0.4 million); the findings for other groups were 42.7%, 0.8 million for less than primary; 41.3%, 1.8 million for primary; and 38.4%, 2.4 million for secondary / high school.

Chinese (22.5%, 0.8 million) and Indians (23.1%, 0.4 million) were less likely to be exposed to SHS at home than were Malays (43.9%, 5.1 million) or the "other" group (47.8%, 1.3 million). The prevalence of SHS exposure at home for Muslims (45.5%, 6.0 million) was much higher than for non-Muslims (24.5%, 1.6 million).

Among current non-smokers, 27.9% (4.2 million persons) were exposed to SHS at home. The pattern of SHS exposure in non-smokers was similar to that among all adults across various demographic variables except for gender. Female non-smokers (32.8%, 3.1 million) were more likely to be exposed to SHS at home than were male non-smokers (19.5%, 1.1 million). Non-smokers living in rural areas (35.0%, 1.5 million) were more likely to be exposed to SHS at home than were non-smokers residing in urban areas (25.1%, 2.7 million). By education, (16.0%, 0.2 million) of non-smokers with a college education or more were exposed to SHS at home; other findings for non-smokers were 32.2%, 0.5 million for less than primary education; 29.0%, 0.9 million for primary; and 25.3%, 1.2 million for secondary / high school.

Non-smoking Chinese (14.5%, 0.5 million) and Indians (14.4%, 0.2 million) were less likely to be exposed to SHS at home than were non-smoking Malays (33.8%, 2.9 million) or the "other" group (33.5%, 0.6 million). Non-smoking Muslims (34.9%, 3.4 million) were more likely to be exposed than were non-smoking non-Muslims (15.2%, 0.8 million).

Table 6.2: Percentage and number of adults aged ≥15 years who were exposed to tobacco smoke at home, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Exposed to Tobacco Smoke at Home[1]			
	Overall		Non-smokers	
	Percentage (95% CI)	*Number in thousands*	*Percentage (95% CI)*	*Number in thousands*
Overall	38.4 (35.9, 41.1)	7,638	27.9 (25.5, 30.4)	4,217
Gender				
Male	43.3 (39.9, 46.8)	4,448	19.5 (16.2, 23.2)	1,101
Female	33.3 (30.2, 36.4)	3,190	32.8 (29.8, 36.0)	3,117
Age (years)				
15-24	39.3 (34.8, 44.0)	2,159	32.2 (27.5, 37.3)	1,466
25-44	41.1 (37.6, 44.7)	3,400	27.6 (24.2, 31.3)	1,601
45-64	35.2 (30.9, 39.7)	1,649	24.8 (21.0, 29.0)	892
65+	30.3 (24.0, 37.5)	430	21.6 (16.2, 28.2)	259
Residence				
Urban	35.7 (32.5, 39.1)	5,106	25.1 (22.1, 28.3)	2,745
Rural	45.4 (41.7, 49.1)	2,533	35.0 (31.5, 38.7)	1,472
Education level[2]				
Less than primary	42.7 (36.7, 48.9)	801	32.2 (26.4, 38.5)	482
Primary	41.3 (36.7, 45.9)	1,777	29.0 (25.0, 33.5)	873
Secondary/high school	38.4 (34.7, 42.2)	2,434	25.3 (21.7, 29.2)	1,162
College or above	24.8 (19.3, 31.3)	442	16.0 (11.0, 22.8)	232
Race/ethnicity				
Malay	43.9 (40.8, 46.9)	5,116	33.8 (30.7, 37.1)	2,943
Chinese	22.5 (17.8, 28.1)	838	14.5 (10.8, 19.2)	455
Indian	23.1 (16.3, 31.7)	434	14.4 (9.2, 21.8)	215
Other	47.8 (41.6, 54.2)	1,251	33.5 (27.7, 39.9)	604
Religion				
Muslim	45.5 (42.6, 48.4)	6,020	34.9 (31.9, 38.0)	3,401
Non-Muslim	24.5 (20.8, 28.7)	1,618	15.2 (12.4, 18.5)	816

[1] Adults reporting that smoking inside their home occurs daily, weekly, or monthly.
[2] Education level is reported only among persons aged ≥ 25 years.

6.3 Exposure to Secondhand Smoke in Public Places

Exposure to SHS was estimated for a variety of public places: government buildings, health-care facilities, restaurants, bars/nightclubs, cafes/coffee shops/bistros, indoor shopping complexes, and public transportation. **Table 6.3** describes the prevalence of exposure to SHS among those who had visited various public places in the past 30 days, while Table **6.4** presents the population level SHS exposure prevalence in these places.

6.3.1 Prevalence of SHS Exposure in Various Public Places

In this section, prevalence of SHS exposure is depicted for adults who had visited various public places during last 30 days, both overall and for non-smokers (**Table 6.3**). From highest to lowest, the prevalence of SHS exposure was 84.9% (84.1%, non-smokers) in cafes / coffee shops / bistros, 78.7% (70.3%, non-smokers) in bars/nightclubs, 71.0% (68.3%, non-smokers) in restaurants, 28.2% (27.9%, non-smokers) in public transportation, 20.0% (19.0%, non-smokers) in government buildings, 13.6% (14.6%, non-smokers) in indoor shopping complexes, and 8.7% (8.6%, non-smokers) in health-care facilities.

An examination of **Table 6.3** revealed very few significant differences by subgroup. Adults in urban areas (21.5% overall) who had visited government buildings had a higher prevalence of exposure to SHS than did rural adults (15.4% overall). Overall, Muslims (22.3%) had a greater prevalence of exposure in government buildings than did non-Muslims (14.4%). Of those who visited bars / nightclubs in the past 30 days, non-Muslims (86.9%) were, overall, exposed to SHS at a higher prevalence than were Muslims (61.7%).

Table 6.3: Percentage of adults aged ≥15 years who visited various public places in the past 30 days and were exposed to tobacco smoke there, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Exposed to Tobacco Smoke[1] in…						
	Government Buildings	Health-Care Facilities	Restaurants	Bars/Nightclubs	Cafes/Coffee Shops/Bistros	Indoor Shopping Complexes	Public Transportation
	Percentage (95% CI)						
Overall	20.0 (16.4, 24.2)	8.7 (6.9, 10.8)	71.0 (67.7, 74.0)	78.7 (64.2, 88.4)	84.9 (82.1, 87.3)	13.6 (11.7, 15.7)	28.2 (23.3, 33.5)
Gender							
Male	20.1 (16.0, 25.0)	7.8 (5.4, 11.2)	73.1 (69.2, 76.6)	81.4 (62.4, 92.0)	85.0 (81.7, 87.8)	11.7 (9.2, 14.9)	32.1 (24.7, 40.6)
Female	19.8 (14.7, 26.2)	9.4 (7.1, 12.4)	68.4 (63.8, 72.8)	70.2 (46.6, 86.4)	84.7 (80.8, 87.9)	15.4 (12.9, 18.3)	25.2 (19.5, 31.9)
Age (years)							
15-24	24.1 (16.2, 34.3)	12.3 (7.9, 18.7)	72.6 (66.7, 77.8)	81.2 (58.7, 92.9)	86.3 (81.1, 90.3)	17.8 (13.7, 22.6)	33.4 (25.5, 42.3)
25-44	20.9 (16.3, 26.4)	8.4 (5.9, 11.6)	72.6 (68.4, 76.3)	80.3 (61.5, 91.2)	83.9 (79.4, 87.5)	12.6 (10.3, 15.4)	28.2 (21.1, 36.5)
45-64	14.4 (9.6, 20.9)	6.3 (4.3, 9.1)	67.6 (61.9, 72.7)	--	86.9 (82.8, 90.1)	8.8 (6.5, 11.9)	15.9 (9.7, 25.0)
65+	23.7 (12.7, 39.7)	7.9 (3.6, 16.5)	55.4 (39.9, 70.0)	--	75.1 (63.5, 83.9)	19.0 (9.8, 33.5)	19.4 (8.5, 38.4)
Residence							
Urban	21.5 (17.0, 26.9)	9.2 (7.0, 12.1)	71.3 (67.4, 75.0)	80.8 (64.1, 90.8)	85.6 (82.0, 88.6)	14.3 (12.1, 16.9)	27.8 (21.9, 34.7)
Rural	15.4 (11.4, 20.6)	7.3 (5.3, 10.0)	69.6 (64.9, 74.0)	63.3 (36.9, 83.6)	82.5 (79.1, 85.4)	10.9 (8.4, 14.1)	29.0 (22.9, 36.0)
Education level[2]							
Less than primary	16.0 (7.7, 30.2)	5.6 (3.1, 10.1)	68.8 (55.3, 79.7)	--	82.4 (73.7, 88.6)	14.2 (8.4, 23.0)	17.4 (10.3, 27.8)
Primary	24.3 (16.6, 34.0)	7.4 (4.8, 11.3)	67.9 (61.6, 73.5)	--	84.3 (78.6, 88.8)	12.3 (9.1, 16.4)	26.1 (17.4, 37.0)
Secondary/high school	17.5 (13.1, 22.9)	8.0 (5.4, 11.8)	72.3 (67.5, 76.6)	88.5 (74.5, 95.3)	85.9 (82.1, 88.9)	10.0 (7.9, 12.6)	26.1 (18.2, 35.8)
College or above	18.4 (11.4, 28.3)	8.9 (4.9, 15.7)	68.4 (60.4, 75.5)	--	80.4 (71.1, 87.3)	15.2 (10.4, 21.7)	17.4 (6.2, 40.1)
Race/ethnicity							
Malay	22.6 (18.2, 27.6)	8.8 (6.8, 11.4)	75.1 (71.2, 78.6)	64.1 (40.6, 82.3)	84.0 (80.5, 87.0)	12.7 (10.4, 15.4)	27.9 (21.3, 35.6)
Chinese	12.8 (6.8, 22.8)	7.7 (4.5, 12.7)	58.0 (51.3, 64.5)	86.8 (61.1, 96.5)	88.6 (82.8, 92.6)	14.7 (11.0, 19.4)	21.8 (11.1, 38.4)
Indian	18.3 (9.5, 32.1)	14.9 (7.3, 28.1)	74.8 (65.0, 82.7)	--	79.4 (68.8, 87.1)	17.9 (11.0, 27.6)	35.1 (22.6, 50.1)
Other	16.4 (8.9, 28.2)	3.8 (1.7, 8.6)	69.8 (61.8, 76.7)	65.5 (30.8, 89.0)	87.1 (80.2, 91.9)	12.9 (8.6, 18.8)	28.0 (20.3, 37.4)
Religion							
Muslim	22.3 (18.1, 27.1)	8.5 (6.7, 10.8)	74.3 (70.6, 77.7)	61.7 (38.6, 80.4)	84.0 (80.7, 86.9)	12.4 (10.3, 14.9)	27.8 (22.0, 34.4)
Non-Muslim	14.4 (9.4, 21.5)	9.0 (5.8, 13.7)	64.4 (58.8, 69.7)	86.9 (66.6, 95.7)	86.5 (81.9, 90.1)	16.0 (12.6, 20.0)	28.9 (21.1, 38.2)

[1] Among those who visited the place in the past 30 days.
[2] Education level is reported only for persons aged ≥ 25 years.
-- Estimate suppressed because it was based on fewer than 25 unweighted cases.

Table 6.3 (cont.): Percentage of adults aged ≥15 years who visited various public places in the past 30 days and were exposed to tobacco smoke there, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Exposed to Tobacco Smoke[1] in…						
	Government Buildings	Health-Care Facilities	Restaurants	Bars/Nightclubs	Cafes/Coffee Shops/Bistros	Indoor Shopping Complexes	Public Transportation
	Percentage (95% CI)						
Non-smokers	19.0 (15.2, 23.6)	8.6 (6.8, 10.8)	68.3 (64.6, 71.7)	70.3 (51.2, 84.3)	84.1 (80.9, 86.9)	14.6 (12.6, 17.0)	27.9 (22.5, 34.0)
Gender							
Male	18.2 (13.8, 23.8)	6.9 (4.4, 10.7)	68.0 (63.2, 72.5)	--	83.3 (78.9, 87.0)	13.4 (9.9, 17.8)	33.5 (23.4, 45.4)
Female	19.8 (14.7, 26.2)	9.5 (7.2, 12.5)	68.4 (63.8, 72.8)	--	84.8 (80.9, 88.0)	15.3 (12.8, 18.3)	25.4 (19.6, 32.2)
Age (years)							
15-24	19.7 (12.4, 29.9)	10.4 (6.2, 17.1)	72.1 (65.8, 77.7)	--	86.4 (80.9, 90.5)	17.6 (13.3, 23.1)	31.8 (23.2, 41.7)
25-44	20.0 (14.6, 26.8)	8.7 (5.9, 12.6)	69.5 (64.4, 74.1)	--	83.5 (78.4, 87.6)	14.2 (11.6, 17.3)	30.1 (22.1, 39.6)
45-64	15.5 (9.7, 23.7)	6.6 (4.3, 10.0)	61.6 (55.0, 67.9)	--	84.3 (78.9, 88.6)	10.3 (7.4, 14.3)	14.7 (9.0, 23.2)
65+	25.8 (13.4, 43.9)	9.1 (4.1, 18.9)	55.6 (38.5, 71.4)	--	73.2 (59.4, 83.6)	17.5 (8.3, 33.4)	20.2 (8.8, 39.9)
Residence							
Urban	20.5 (15.6, 26.5)	9.5 (7.2, 12.5)	68.4 (63.9, 72.5)	73.5 (52.3, 87.6)	85.0 (80.9, 88.3)	15.4 (12.9, 18.2)	27.5 (20.8, 35.4)
Rural	14.9 (10.3, 21.0)	6.4 (4.5, 8.9)	68.0 (62.7, 72.8)	--	81.1 (77.3, 84.3)	12.0 (9.0, 15.9)	29.1 (22.4, 36.9)
Education level[2]							
Less than primary	21.3 (9.9, 39.9)	5.5 (2.8, 10.6)	64.0 (48.4, 77.1)	--	81.4 (70.7, 88.8)	14.6 (8.4, 24.4)	17.2 (9.6, 28.8)
Primary	23.8 (15.5, 34.6)	8.9 (5.6, 13.9)	64.4 (56.6, 71.4)	--	84.6 (78.1, 89.4)	13.5 (9.6, 18.8)	22.9 (14.8, 33.6)
Secondary/high school	16.8 (11.8, 23.3)	7.6 (4.7, 12.1)	68.2 (62.7, 73.3)	--	84.3 (79.5, 88.1)	11.1 (8.7, 14.1)	29.3 (20.0, 40.6)
College or above	19.3 (11.5, 30.5)	10.3 (5.7, 17.8)	64.9 (56.3, 72.6)	--	78.1 (68.0, 85.7)	17.5 (11.8, 25.2)	20.7 (7.4, 45.8)
Race/ethnicity							
Malay	21.7 (16.6, 27.8)	8.2 (6.2, 10.8)	71.9 (67.3, 76.1)	--	81.9 (77.4, 85.7)	13.8 (11.2, 17.0)	29.3 (21.6, 38.3)
Chinese	15.3 (8.1, 26.8)	8.1 (4.8, 13.6)	57.5 (50.3, 64.5)	--	89.8 (84.6, 93.4)	15.2 (11.2, 20.2)	22.7 (11.6, 39.6)
Indian	19.3 (9.5, 35.3)	16.7 (7.8, 32.3)	75.8 (64.3, 84.4)	--	79.2 (67.1, 87.6)	18.7 (11.1, 29.7)	30.7 (18.7, 46.0)
Other	8.5 (3.9, 17.6)	4.4 (1.9, 9.9)	64.7 (55.6, 72.8)	--	86.4 (78.0, 92.0)	14.4 (9.5, 21.2)	25.5 (18.0, 34.7)
Religion							
Muslim	20.8 (16.1, 26.4)	8.1 (6.2, 10.5)	70.9 (66.5, 74.9)	--	82.0 (77.7, 85.6)	13.6 (11.1, 16.5)	28.6 (21.7, 36.5)
Non-Muslim	14.9 (9.3, 23.2)	9.7 (6.1, 15.0)	63.7 (57.5, 69.4)	79.4 (54.1, 92.6)	87.3 (82.6, 90.8)	16.7 (13.1, 21.0)	26.7 (19.0, 36.0)

[1] Among those who visited the place in the past 30 days.
[2] Education level is reported only among persons aged ≥ 25 years.
--Estimate suppressed because it was based on fewer than 25 unweighted cases.

6.3.2 Population Exposure to SHS in Various Public Places

Table 6.4 provides the prevalence of SHS exposure for the various public places described in **Table 6.3**, but at the population level rather than for those persons who had visited these places.

From highest to lowest, the prevalence of population SHS exposure was 42.9% (38.1% for non-smokers) in cafes / coffee shops / bistros, 42.1% (39.8%, non-smokers) in restaurants, 8.8% (9.7%, non-smokers) in indoor shopping complexes, 5.6% (5.9%, non-smokers) in public transportation, 4.9% (4.3%, non-smokers) in government buildings, 3.4% (3.5%, non-smokers) in health-care facilities, and 2.4% (1.3%, non-smokers) in bars/nightclubs. The population exposure rates are much lower than the rates shown in **Table 6.3** because many people did not visit the specific places of interest. For example, the prevalence of SHS exposure for people visiting bars/nightclubs was very high, but because many adults did not go to bars / nightclubs the prevalence of population SHS exposure was very low. Regardless, the noticeable finding is that over 40% of the entire adult population was exposed to SHS in restaurants and cafes / coffee shops / bistros.

An examination by subgroups within the demographic characteristics revealed a few differences, but they can probably be explained by differences in the frequencies with which the different subgroups visited various places. Appreciable differences were seen overall between men and women in the prevalence of population exposure to SHS for each of the public places studied except for public transportation (5.8% for men, 5.9% for women). Overall, urban adults had higher a population prevalence of exposure than rural adults in restaurants (46.5% vs. 30.6%), bars / nightclubs (3.0% vs. 0.8%), cafes/coffee shops/bistros (45.6% vs. 35.8%), and indoor shopping complexes (10.1% vs. 5.6%) - all places that are typically more common in urban areas. An examination of exposure in restaurants by education levels found a positive relationship with that variable overall (less than primary, 16.3%; primary, 33.0%; secondary / high school, 45.7%; college or above, 60.2%). Those with higher educational attainment may be more likely to go to restaurants.

Table 6.4: Percentage of adults aged ≥15 years who were exposed to tobacco smoke in various public places in the past 30 days, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Exposed to Tobacco Smoke[1] in…						
	Government Buildings	Health-Care Facilities	Restaurants	Bars/Nightclubs	Cafes/Coffee Shops/Bistros	Indoor Shopping Complexes	Public Transportation
	Percentage (95% CI)						
Overall	4.9 (3.9, 6.1)	3.4 (2.7, 4.3)	42.1 (39.3, 44.9)	2.4 (1.8, 3.3)	42.9 (39.9, 46.0)	8.8 (7.6, 10.2)	5.6 (4.5, 7.0)
Gender							
Male	6.1 (4.7, 7.9)	2.7 (1.9, 4.0)	46.1 (42.6, 49.7)	3.7 (2.6, 5.2)	52.1 (48.2, 55.8)	7.4 (5.8, 9.5)	5.3 (3.9, 7.3)
Female	3.5 (2.6, 4.9)	4.1 (3.0, 5.4)	37.8 (34.6, 41.1)	1.1 (0.5, 2.0)	33.3 (29.8, 36.9)	10.3 (8.6, 12.4)	5.9 (4.5, 7.8)
Age (years)							
15-24	4.9 (3.2, 7.4)	3.8 (2.4, 6.0)	48.5 (43.5, 53.5)	3.3 (1.8, 5.7)	45.1 (40.1, 50.3)	12.9 (9.8, 16.6)	11.4 (8.4, 15.1)
25-44	5.7 (4.4, 7.5)	3.4 (2.4, 4.8)	46.7 (43.3, 50.1)	3.0 (2.1, 4.4)	44.2 (40.2, 48.3)	8.8 (7.2, 10.8)	4.2 (3.0, 5.8)
45-64	3.9 (2.6, 5.8)	2.6 (1.8, 3.8)	34.4 (30.5, 38.5)	0.8 (0.4, 1.6)	43.8 (39.7, 48.0)	5.2 (3.8, 7.1)	2.3 (1.4, 3.7)
65+	2.7 (1.4, 5.3)	4.1 (1.9, 8.7)	15.7 (10.1, 23.7)	0.6 (0.1, 4.2)	23.9 (18.6, 30.1)	5.2 (2.5, 10.3)	2.6 (1.2, 5.7)
Residence							
Urban	5.5 (4.2, 7.1)	3.5 (2.6, 4.7)	46.5 (43.0, 50.1)	3.0 (2.1, 4.2)	45.6 (41.7, 49.7)	10.1 (8.5, 11.9)	5.7 (4.3, 7.5)
Rural	3.3 (2.4, 4.5)	3.0 (2.1, 4.1)	30.6 (27.4, 34.0)	0.8 (0.5, 1.5)	35.8 (32.5, 39.3)	5.6 (4.3, 7.4)	5.3 (4.1, 7.0)
Education level[2]							
Less than primary	1.9 (0.9, 4.0)	2.5 (1.3, 4.5)	16.3 (12.3, 21.3)	0.0 (-, -)	24.4 (20.0, 29.4)	4.1 (2.3, 7.1)	2.7 (1.6, 4.6)
Primary	4.0 (2.7, 5.8)	3.0 (1.9, 4.7)	33.0 (28.9, 37.4)	1.4 (0.6, 3.0)	41.2 (36.4, 46.2)	6.7 (4.9, 9.1)	4.2 (2.7, 6.4)
Secondary/high school	5.3 (3.9, 7.2)	3.2 (2.1, 4.7)	45.7 (41.6, 49.9)	3.3 (2.2, 4.8)	45.8 (41.5, 50.2)	7.1 (5.6, 9.0)	3.2 (2.1, 4.7)
College or above	8.7 (5.4, 13.9)	4.7 (2.6, 8.5)	60.2 (52.7, 67.3)	1.8 (0.7, 4.4)	50.2 (42.4, 58.0)	13.3 (9.0, 19.2)	3.3 (1.2, 8.7)
Race/ethnicity							
Malay	6.0 (4.7, 7.6)	3.6 (2.8, 4.7)	44.5 (41.0, 48.0)	0.8 (0.4, 1.5)	43.0 (39.5, 46.5)	8.4 (6.9, 10.3)	5.1 (3.7, 6.9)
Chinese	2.6 (1.4, 4.7)	2.7 (1.6, 4.5)	38.7 (33.2, 44.5)	5.9 (3.7, 9.2)	54.5 (47.8, 61.0)	10.6 (8.0, 14.0)	3.0 (1.5, 5.7)
Indian	4.6 (2.4, 8.6)	6.1 (2.9, 12.3)	47.5 (38.9, 56.3)	4.7 (2.2, 9.6)	39.4 (30.4, 49.2)	10.8 (6.6, 17.3)	10.4 (6.6, 16.0)
Other	3.1 (1.6, 5.8)	1.3 (0.5, 2.9)	32.4 (27.2, 38.1)	2.7 (1.4, 4.9)	28.5 (23.5, 34.1)	6.6 (4.4, 9.8)	8.2 (5.6, 11.7)
Religion							
Muslim	5.8 (4.6, 7.3)	3.5 (2.7, 4.5)	43.3 (40.1, 46.7)	0.9 (0.5, 1.6)	41.5 (38.3, 44.8)	8.1 (6.7, 9.8)	5.7 (4.3, 7.4)
Non-Muslim	3.0 (2.0, 4.7)	3.2 (2.0, 5.0)	39.4 (35.0, 44.0)	5.2 (3.7, 7.4)	45.9 (40.7, 51.2)	10.3 (8.1, 12.9)	5.5 (4.0, 7.6)

[1] Among all adults in the past 30 days.
[2] Education level is reported only for persons aged ≥ 25 years.

Table 6.4 (cont.): Percentage of adults aged ≥15 years who were exposed to tobacco smoke in various public places in the past 30 days, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Exposed to Tobacco Smoke[1] in…						
	Government Buildings	Health-Care Facilities	Restaurants	Bars/Nightclubs	Cafes/Coffee Shops/Bistros	Indoor Shopping Complexes	Public Transportation
	Percentage (95% CI)						
Non-smokers	4.3 (3.4, 5.5)	3.5 (2.8, 4.5)	39.8 (37.0, 42.7)	1.3 (0.8, 2.1)	38.1 (34.9, 41.3)	9.7 (8.3, 11.3)	5.9 (4.6, 7.4)
Gender							
Male	5.5 (4.1, 7.5)	2.6 (1.6, 4.2)	42.9 (38.8, 47.2)	1.9 (1.1, 3.2)	45.8 (41.2, 50.6)	8.6 (6.4, 11.6)	5.8 (3.8, 8.8)
Female	3.6 (2.6, 4.9)	4.1 (3.1, 5.4)	38.0 (34.8, 41.3)	1.0 (0.5, 2.0)	33.4 (29.9, 37.0)	10.3 (8.6, 12.4)	5.9 (4.5, 7.8)
Age (years)							
15-24	3.8 (2.3, 6.1)	3.4 (2.0, 5.7)	47.7 (42.4, 53.0)	2.1 (1.1, 4.1)	41.7 (36.3, 47.3)	13.0 (9.7, 17.3)	11.3 (8.1, 15.7)
25-44	5.4 (3.8, 7.5)	3.9 (2.6, 5.7)	44.9 (41.0, 48.8)	1.6 (0.9, 2.9)	39.6 (35.3, 44.0)	10.2 (8.3, 12.5)	4.5 (3.2, 6.4)
45-64	3.7 (2.3, 5.9)	2.8 (1.8, 4.3)	29.7 (25.7, 33.9)	0.1 (0.0, 0.8)	36.6 (32.1, 41.2)	6.2 (4.4, 8.6)	2.1 (1.3, 3.5)
65+	3.1 (1.6, 6.0)	4.7 (2.1, 10.2)	16.1 (9.8, 25.2)	0.7 (0.1, 4.8)	21.0 (15.5, 27.7)	5.1 (2.3, 10.9)	3.0 (1.3, 6.6)
Residence							
Urban	4.7 (3.5, 6.3)	3.8 (2.9, 5.1)	43.7 (40.0, 47.4)	1.7 (1.1, 2.7)	40.9 (36.8, 45.2)	10.9 (9.2, 13.0)	5.9 (4.3, 8.0)
Rural	3.2 (2.2, 4.8)	2.8 (2.0, 3.9)	29.7 (26.3, 33.3)	0.3 (0.1, 0.9)	30.4 (26.9, 34.1)	6.4 (4.7, 8.6)	5.8 (4.3, 7.8)
Education level[2]							
Less than primary	2.0 (0.9, 4.5)	2.6 (1.3, 5.1)	15.2 (10.7, 21.0)	0.0 (-, -)	18.7 (14.2, 24.3)	4.4 (2.5, 7.9)	2.9 (1.6, 5.0)
Primary	3.4 (2.2, 5.3)	3.9 (2.4, 6.2)	30.1 (25.4, 35.4)	0.3 (0.1, 1.0)	37.0 (31.8, 42.4)	7.5 (5.2, 10.6)	3.6 (2.3, 5.5)
Secondary/high school	4.7 (3.3, 6.6)	3.1 (1.9, 5.1)	41.6 (37.3, 46.0)	1.7 (0.9, 3.3)	39.0 (34.4, 43.8)	8.0 (6.2, 10.2)	3.7 (2.4, 5.6)
College or above	9.3 (5.5, 15.3)	5.8 (3.1, 10.3)	57.0 (49.1, 64.6)	1.2 (0.3, 4.9)	47.2 (39.2, 55.3)	15.4 (10.3, 22.3)	4.0 (1.4, 10.6)
Race/ethnicity							
Malay	5.4 (4.0, 7.1)	3.5 (2.6, 4.7)	41.1 (37.6, 44.7)	0.2 (0.0, 0.7)	36.0 (32.4, 39.8)	9.3 (7.5, 11.6)	5.8 (4.1, 8.1)
Chinese	2.9 (1.5, 5.4)	3.0 (1.8, 5.1)	38.0 (32.3, 44.2)	4.1 (2.4, 7.1)	53.1 (46.2, 59.8)	11.2 (8.3, 15.0)	3.5 (1.8, 6.7)
Indian	4.2 (2.1, 8.4)	6.9 (3.2, 14.5)	47.9 (38.5, 57.5)	1.9 (0.7, 5.3)	36.6 (27.3, 47.1)	11.4 (6.7, 18.8)	9.9 (6.0, 15.9)
Other	1.7 (0.7, 3.7)	1.7 (0.7, 3.9)	30.4 (24.6, 36.8)	1.3 (0.5, 3.0)	23.3 (18.0, 29.6)	7.6 (5.0, 11.3)	7.0 (4.7, 10.1)
Religion							
Muslim	5.1 (3.8, 6.7)	3.5 (2.6, 4.6)	40.2 (36.8, 43.5)	0.3 (0.1, 0.9)	34.6 (31.2, 38.1)	9.0 (7.3, 11.0)	6.1 (4.4, 8.3)
Non-Muslim	2.9 (1.8, 4.7)	3.6 (2.3, 5.8)	39.1 (34.3, 44.2)	3.2 (2.0, 5.1)	44.5 (39.0, 50.2)	11.1 (8.7, 14.0)	5.6 (3.9, 7.9)

[1] Among all adults in the past 30 days.
[2] Education level is reported only for persons aged ≥ 25 years.

7

ECONOMICS

7. ECONOMICS

Malaysia is considered one of the more mature cigarette markets in South East Asia, with sales of approximately 20 billion sticks per annum. Even though there has been a global economic slowdown, the Ministry of Finance reports that revenue from excise duties on imported and locally manufactured goods, the largest component of indirect taxes, increased from 2009 to 2011 by 17.6%, from RM10.1 billion to 11.8 billion, mainly because there continues to be a strong demand for goods such as cigarettes and liquor[32]. To a large extent, the consumption of tobacco and the prevalence of its use in the population are associated with the cost of tobacco products available in the country, and the price of cigarettes is influenced by the level of taxation on tobacco products. In Malaysia, a study[33,34] has shown that the price elasticity of demand for cigarettes in this country is -0.38, which means the demand for cigarettes declines by 3.8% with a 10% increase in prices. However, the same study estimated that the income elasticity of demand for cigarettes in Malaysia is +1.0, which means that a 10% increase in income in Malaysia will lead to a 10% increase in demand for cigarettes. Thus, it can be expected that the tobacco epidemic in Malaysia will spread with the income growth in the country if no stringent tobacco control measures are taken.

This chapter focuses on the economic aspects of tobacco use by current smokers of manufactured cigarettes (not including kreteks). It consists of analysis of last purchase of manufactured cigarettes; including the cigarette brand purchased, source of purchase, and expenditure on cigarettes.

Key Findings

- *The average amount spent on a pack of 20 manufactured cigarettes was RM 10.10 (RM =Malaysian Ringgits, the currency for Malaysia.) (In 2012, one US dollar = RM 3.20.)*
- *On average, a current cigarette smoker spent RM 178.80 per month on manufactured cigarettes.*
- *Almost 7% of current smokers of manufactured cigarettes spent enough money on cigarettes so as not to have enough money for food sometime in the last 6 months.*

7.1 Brand of Manufactured Cigarettes at Last Purchase

In GATS Malaysia, current smokers of manufactured cigarettes were asked to report the brand name of the last cigarettes they had purchased (not including kreteks). Overall, the five most purchased brands **(Table 7.1)** were Dunhill (42.7%), Winston (11.2%), Marlboro (5.0%), Mild Seven (3.8%), and Salem (2.8%).

Because most of the current smokers of manufactured cigarette smokers were men, the percentages for men were almost exactly the same as for the overall adult population. There were some slight (but not significant) differences by age group, as the 25-44 age group had a higher percentage of purchasing Dunhill (47.1%) than did the other age groups, and the youngest age group (15-24) had a higher percentage of purchasing Winston (16.2%) than the other age groups.

The patterns of purchasing brands were different between urban and rural residents, as rural cigarette smokers bought various other brands. A higher percentage of those with a higher level of education generally bought Dunhill, Winston, and Marlboro than did those with lower levels of education, although the differences were not statistically significant.

7.2 Source of Last Purchase of Cigarettes

The most common source of the last purchase of manufactured cigarettes (not including kreteks) **(Table 7.2)** was grocery stores (79.6%), followed by convenience stores/kiosks (6.5%), petrol stations (5.9%), and roadside shops (3.5%). Within demographic subgroups, the only noticeable difference was by residence, as rural residents (88.7%) were more likely to buy manufactured cigarettes from grocery stores than were urban residents (76.3%), while the percent of urban residents buying from convenience stores/kiosks was higher than for rural residents (7.9% vs. 2.7%).

Table 7.1: Percentage of current smokers of manufactured cigarettes aged ≥15 years by last brand purchased and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Last Cigarette Brand Purchased				
	Dunhill	Winston	Marlboro	Mild Seven	Salem
	Percentage(95% CI)				
Overall	42.7 (38.0, 47.4)	11.2 (8.3, 14.8)	5.0 (3.4, 7.2)	3.8 (1.9, 7.3)	2.8 (1.4, 5.4)
Gender					
Male	43.0 (38.3, 47.8)	11.3 (8.4, 15.0)	5.1 (3.5, 7.3)	3.8 (1.9, 7.4)	2.7 (1.3, 5.4)
Female	--	--	--	--	--
Age (years)					
15-24	38.0 (26.9, 50.6)	16.2 (8.9, 27.8)	2.5 (1.1, 5.8)	4.3 (1.0, 16.5)	0.2 (0.0, 1.4)
25-44	47.1 (40.9, 53.5)	11.5 (7.9, 16.6)	6.3 (4.1, 9.7)	4.2 (1.8, 9.4)	1.7 (0.7, 4.1)
45-64	36.9 (28.6, 46.0)	5.7 (3.0, 10.8)	4.7 (2.1, 10.0)	2.7 (0.8, 8.5)	8.4 (3.3, 19.7)
65+	34.1 (16.9, 56.9)	6.9 (1.5, 26.2)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)
Residence					
Urban	44.5 (38.5, 50.7)	12.4 (8.7, 17.4)	5.9 (3.9, 8.8)	5.2 (2.6, 9.9)	3.4 (1.6, 7.0)
Rural	37.6 (31.9, 43.7)	7.8 (5.0, 11.8)	2.7 (1.3, 5.4)	0.0 (-, -)	1.1 (0.4, 2.9)
Education level[1]					
Less than primary	27.3 (15.7, 43.1)	7.8 (2.7, 20.5)	4.7 (1.1, 18.4)	0.0 (-, -)	0.0 (-, -)
Primary	34.9 (26.8, 43.9)	7.9 (3.8, 15.8)	5.6 (2.6, 11.5)	5.4 (1.8, 15.2)	4.6 (1.7, 11.8)
Secondary/high school	50.7 (43.5, 57.9)	11.0 (7.1, 16.7)	4.5 (2.7, 7.5)	3.7 (1.5, 9.1)	2.3 (0.5, 9.6)
College or above	56.6 (41.8, 70.2)	9.4 (3.5, 22.9)	12.5 (6.0, 24.1)	0.0 (-, -)	8.3 (2.5, 24.4)
Race/ethnicity					
Malay	46.8 (41.0, 52.8)	13.5 (9.5, 18.9)	3.8 (2.2, 6.3)	1.5 (0.6, 4.0)	2.9 (1.2, 6.5)
Chinese	45.0 (30.2, 60.7)	5.5 (1.7, 15.8)	7.2 (3.4, 14.5)	17.7 (7.8, 35.2)	3.8 (0.9, 14.4)
Indian	59.7 (40.4, 76.4)	9.4 (3.6, 22.3)	0.0 (-, -)	5.3 (0.7, 29.5)	5.9 (0.8, 32.0)
Other	16.3 (9.8, 25.9)	7.8 (3.4, 16.9)	10.2 (5.1, 19.4)	0.0 (-, -)	0.0 (-, -)
Religion					
Muslim	42.4 (37.1, 47.9)	12.3 (8.7, 17.0)	5.6 (3.7, 8.4)	1.3 (0.5, 3.4)	2.4 (1.1, 5.6)
Non-Muslim	43.3 (33.4, 53.8)	8.2 (4.5, 14.5)	3.3 (1.4, 7.4)	10.4 (4.8, 21.0)	3.7 (1.1, 11.5)

Note: Current manufactured cigarette smokers include daily and occasional users. The top five brands last purchased among all smokers of manufactured cigarettes are shown here.

[1] Education level is reported only among persons aged ≥ 25 years.

-- Estimate suppressed because it was based on fewer than 25 unweighted cases.

Table 7.2: Percentage distribution of manufactured cigarette smokers aged ≥15 years by the source of last purchase of cigarettes and selected demographic characteristics – GATS Malaysia, 2011.

		Gender		Age (years)		Residence	
Source	**Overall**	**Male**	**Female**	**15-24**	**≥ 25**	**Urban**	**Rural**
				Percentage (95% CI)			
Grocery store	79.6 (75.4, 83.3)	79.5 (75.2, 83.2)	--	76.8 (65.9, 85.0)	80.4 (75.7, 84.4)	76.3 (70.7, 81.1)	88.7 (83.6, 92.3)
Convenience store or kiosk	6.5 (4.4, 9.3)	6.4 (4.4, 9.3)	--	8.8 (3.9, 18.8)	5.8 (3.8, 8.8)	7.9 (5.2, 11.8)	2.7 (1.4, 5.2)
Petrol station	5.9 (3.8, 8.9)	5.9 (3.8, 9.0)	--	4.5 (1.3, 14.7)	6.2 (4.0, 9.6)	6.7 (4.1, 10.9)	3.5 (1.8, 6.6)
News stand	0.9 (0.3, 2.5)	0.9 (0.3, 2.5)	--	0.7 (0.1, 5.0)	0.9 (0.3, 3.0)	1.1 (0.4, 3.4)	0.1 (0.0, 0.6)
Supermarket	1.0 (0.4, 2.5)	1.0 (0.4, 2.5)	--	1.1 (0.1, 7.2)	1.0 (0.3, 2.8)	1.4 (0.5, 3.4)	0.0 (-, -)
Roadside shop	3.5 (2.1, 5.8)	3.5 (2.1, 5.9)	--	4.4 (1.9, 9.9)	3.2 (1.8, 5.6)	3.3 (1.7, 6.2)	4.1 (1.7, 9.4)
Other	2.7 (1.6, 4.5)	2.8 (1.6, 4.6)	--	3.7 (1.4, 9.8)	2.4 (1.3, 4.5)	3.4 (1.9, 5.8)	1.0 (0.3, 2.7)
Total	100	100	100	100	100	100	100

-- Estimate suppressed because it was based on fewer than 25 unweighted cases.

7.3 Expenditures on Cigarettes

Information was collected from current smokers of manufactured cigarettes on the amount of money they had spent on their last purchase of manufactured cigarettes (not including kreteks). Two indicators were calculated from this information: 1) average cost (amount spent) of 20 manufactured cigarettes (one pack), and 2) average expenditure for manufactured cigarettes per month. Average expenditure was calculated using both cost and consumption data (i.e., cigarettes smoked per day) previously presented. In addition, current smokers of manufactured cigarettes were asked whether there was any time during the last 6 months where spending money on cigarettes resulted in their not having enough money to buy food. **Table 7.3** presents the results for these three indicators.

Overall, the mean amount spent per pack of 20 manufactured cigarettes was RM 10.10. The findings were not statistically different by age, residence, education, race/ethnicity, or religion.

Another economic indicator (not provided in the tables) that was calculated for Malaysia was the cost of 100 packs of manufactured cigarettes as a percentage of per capita Gross Domestic Product (GDP) in 2011. This indicator provides a relative sense of how affordable cigarettes are in the country. Calculating the average cost of 100 packs of manufactured cigarettes and factoring in the per capita GDP as of September 2011 (RM 28,866)[32] suggests that 3.5% of the GDP was spent on the purchase of manufactured cigarettes in 2011.

On average, a current smoker of manufactured cigarettes spent RM 178.80 per month on manufactured cigarettes. The average amounts spent per month by age groups are as follows: 15−24 (RM130.50), 25-44 (RM 192.50), 45-64 (RM 202.30), and ≥65 (RM 100.30). Those in urban areas (RM 202.00) spent more than those in rural areas (RM 116.10).

Finally, the results showed that for 6.8% of current smokers of manufactured cigarettes, spending money on cigarettes resulted in their not having enough money for food sometime in the last 6 months. The highest percentages of not having enough money for food sometime in the last 6 months because of spending money to purchase manufactured cigarettes were found among the 15-24 age group (13.1%), urban residents (6.8%), those with less than primary education (7.6%), Malays (7.8%), and Muslims (7.6%), though these findings were not statistically significant in each of the demographic characteristics.

Table 7.3: Average cost of and monthly expenditure for manufactured cigarettes, and percentage who did not have enough money for food because of purchasing cigarettes, among smokers of manufactured cigarettes aged ≥15 years by selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Amount Spent on 20 Manufactured Cigarettes[1] (Malaysian Ringgit)	Expenditure on Manufactured Cigarettes Per Month[1] (Malaysian Ringgit)	Not Enough Money for Food Because of Purchasing Cigarettes[1,2]
	Average (95% CI)		*Percentage (95% CI)*
Overall	10.1 (8.0, 12.2)	178.8 (140.4, 217.1)	6.8 (4.6, 10.0)
Gender			
Male	10.1 (8.0, 12.2)	180.6 (141.6, 219.6)	6.9 (4.7, 10.1)
Female	--	--	--
Age (years)			
15-24	9.4 (5.8, 13.1)	130.5 (76.7, 184.3)	13.1 (6.3, 25.4)
25-44	10.7 (7.1, 14.2)	192.5 (129.0, 256.0)	6.0 (3.5, 10.0)
45-64	9.6 (7.7, 11.6)	202.3 (151.9, 252.6)	3.7 (1.4, 9.3)
65+	6.2 (3.8, 8.6)	100.3 (51.1, 149.5)	1.1 (0.1, 7.7)
Residence			
Urban	11.0 (8.2, 13.8)	202.0 (149.7, 254.2)	6.8 (4.1, 11.2)
Rural	7.2 (6.1, 8.3)	116.1 (95.9, 136.4)	6.7 (4.3, 10.4)
Education level[3]			
Less than primary	9.6 (6.0, 13.2)	209.2 (105.6, 312.8)	7.6 (3.0, 18.1)
Primary	7.3 (6.3, 8.3)	134.9 (110.8, 159.0)	6.7 (3.3, 13.1)
Secondary/high school	12.7 (7.6, 17.8)	230.9 (139.4, 322.5)	4.6 (2.3, 8.9)
College or above	9.4 (7.9, 11.0)	187.5 (131.5, 243.6)	1.2 (0.2, 8.4)
Race/ethnicity			
Malay	11.3 (8.0, 14.7)	192.2 (134.2, 250.3)	7.8 (4.8, 12.4)
Chinese	9.4 (7.4, 11.4)	208.0 (156.7, 259.3)	5.7 (1.9, 16.4)
Indian	8.5 (7.6, 9.4)	142.9 (108.5, 177.4)	2.1 (0.4, 10.5)
Other	6.9 (3.3, 10.5)	122.5 (56.7, 188.3)	6.6 (2.5, 16.2)
Religion			
Muslim	10.7 (7.7, 13.6)	184.0 (132.4, 235.5)	7.6 (4.8, 11.7)
Non-Muslim	8.7 (7.5, 9.8)	164.8 (134.1, 195.4)	4.8 (2.1, 10.4)

[1] Among smokers of manufactured cigarettes, not including hand-rolled or kretek cigarettes.
[2] Happened at least one time in the last 6 months.
[3] Education level is reported only among persons aged ≥ 25 years.
-- Estimate suppressed because it was based on fewer than 25 unweighted cases.

8

MEDIA

8. MEDIA

The mass media play an extremely important role in the advertising, sponsorship, and promotion of tobacco products. Correspondingly, mass media campaigns are an effective means of disseminating information on the ill effects of tobacco and discouraging the use of tobacco products. The Malaysia Control of Tobacco Product Regulations (CTPR) 2004 provides for a ban on direct and indirect advertising (with the exception of at point-of-sale) of tobacco products and the mandatory display of 'pictorial health warnings' on all tobacco products that covers 40% and 60% of the principal display area of the front and back panels, respectively of each package of tobacco products.[5] The mass media campaign carried out under Malaysia's National Tobacco Control Programme focuses on the dissemination of information regarding the ill effects of tobacco use (smoking) as well as of exposure to secondhand smoke[35].

This chapter, which presents information on the exposure of adults in Malaysia to anti-cigarette information, is organized into six sections: The first section deals with the levels of adults who noticed anti-cigarette information disseminated through various mass media channels, while the second section concerns awareness of the **"TAK NAK"** anti-smoking campaign. The third section deals with the extent of awareness of health warnings on cigarette packages and of considering quitting because of the warning labels, while the fourth section concerns levels of thinking about the health risks of smoking from seeing the health warnings. The fifth section concerns the effect of health warnings on preventing smoking, and the sixth and final section deals with noticing cigarette marketing.

Key Findings

- *94.0% of adults (93.6% current smokers) noticed anti-cigarette information in the last 30 days.*
- *45.8% of current smokers thought about quitting because they noticed a warning label on a cigarette package.*
- *25.3% of current smokers did not think at all about the health risks of smoking after seeing health warnings.*
- *35.6% of adults (33.8% of non-smokers) noticed cigarette advertisements or promotions in the last 30 days.*

8.1 Noticing Anti-cigarette Information

In GATS Malaysia, all respondents were asked whether they had noticed any anti-cigarette smoking information in various places during the last 30 days before the survey in various places. The question was asked separately for each form of media, such as newspapers or in magazines, television or radio, on billboards, posters, at cinemas, on windows or inside shops/stalls where cigarettes were bought, on the Internet, somewhere else, and at any other location. This section presents exposure to anti-cigarette information in different forms of mass media among men and women in urban and rural residences in Malaysia. In interpreting these tables it is important to consider that exposure to anti-cigarette information or messages depends upon two factors: the exposure of individuals to different mass media as well as the extent of display of anti-tobacco or anti-cigarette information or messages in each of the mass media.

As **Table 8.1** indicates, well over 90% (94.0%) of Malaysian adults had noticed anti-cigarette information at any location in the last 30 days prior to the survey. The proportion of adults who noticed such information was essentially the same (94.1%) among non-smokers (includes former and never smokers) and current smokers (93.6%) (includes daily and occasional [less than daily] smokers).

The proportion of adults who noticed anti-cigarette information differed very little overall between urban (93.7%) and rural (94.8%) residents. In addition, there was little difference by residence between current smokers (92.8% of urban, 95.5% of rural) and non-smokers (93.9% of urban, 94.6% of rural) in noticing this information.

Just under half (47.8%) of adults noticed anti-cigarette information on the radio, but 85.2% noticed it on television. Men (47.2%, 84.0%) and women (48.5%, 86.5%) were quite similar in the percentages who noticed anti-cigarette information on the radio and television, respectively.

The highest proportion of adults noticing anti-cigarette information was found for television or the radio (87.1%), followed by billboards (72.0%), posters (70.4%), on windows or inside shops/stalls where cigarettes are bought (53.3%), at cinemas (20.3%), and on the Internet (17.7%).

Men (93.5%) and women (94.5%) were similar in noticing anti-cigarette information, while younger people (15−24) had a slightly higher prevalence than those 25+ (96.2% vs. 93.1%). Among current smokers, the prevalence was slightly higher for men than women (93.7% vs. 90.2%), but among non-smokers there was no difference (94.5% women vs. 93.3% men). The percent of both current smokers and non-smokers noticing anti-cigarette information was above 90.0% overall for both genders, both age groups, and both residential categories.

Table 8.1: Percentage of adults aged ≥15 years who noticed anti-cigarette information during the last 30 days in various places, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Place	Overall	Gender		Age (Years)		Residence	
		Male	Female	15-24	≥ 25	Urban	Rural
	Percentage (95% CI)						
Overall							
In newspapers or in magazines	68.9 (66.5, 71.2)	69.6 (66.3, 72.8)	68.1 (65.0, 71.1)	70.6 (65.7, 75.1)	68.2 (65.7, 70.7)	70.1 (67.0, 73.1)	65.7 (62.4, 68.7)
On television or the radio	87.1 (85.2, 88.7)	86.0 (83.2, 88.3)	88.3 (86.1, 90.2)	87.0 (82.9, 90.3)	87.1 (85.1, 88.8)	86.0 (83.5, 88.2)	89.8 (87.9, 91.5)
On television	85.2 (83.2, 87.0)	84.0 (81.1, 86.4)	86.5 (84.1, 88.7)	85.4 (81.0, 88.9)	85.1 (83.0, 87.0)	84.0 (81.3, 86.3)	88.4 (86.3, 90.2)
On the radio	47.8 (45.3, 50.3)	47.2 (43.6, 50.8)	48.5 (45.4, 51.5)	49.5 (44.4, 54.6)	47.2 (44.5, 49.8)	47.6 (44.4, 50.9)	48.3 (45.2, 51.5)
On billboards	72.0 (69.8, 74.1)	73.1 (70.1, 75.8)	70.8 (67.8, 73.7)	75.5 (71.1, 79.4)	70.7 (68.2, 73.0)	73.3 (70.5, 76.0)	68.5 (65.2, 71.7)
On posters	70.4 (68.0, 72.8)	70.9 (67.7, 73.9)	69.9 (66.6, 73.0)	73.4 (68.6, 77.8)	69.3 (66.7, 71.7)	70.7 (67.6, 73.7)	69.7 (66.3, 72.8)
At cinemas	20.3 (18.4, 22.5)	20.0 (17.4, 22.9)	20.7 (18.1, 23.6)	28.3 (23.9, 33.2)	17.3 (15.4, 19.3)	23.4 (20.8, 26.3)	12.4 (10.5, 14.7)
On windows or inside shops/ stalls where cigs are bought	53.3 (50.4, 56.2)	55.6 (51.9, 59.3)	50.8 (47.4, 54.3)	59.8 (55.0, 64.5)	50.8 (47.7, 53.9)	53.8 (50.0, 57.5)	52.0 (48.1, 55.9)
On Internet	17.7 (15.8, 19.7)	17.2 (14.7, 19.9)	18.2 (15.7, 20.9)	27.2 (22.7, 32.3)	14.0 (12.4, 15.7)	19.4 (17.0, 22.0)	13.2 (10.8, 16.0)
Somewhere else	5.8 (4.7, 7.0)	5.4 (4.1, 7.0)	6.1 (4.7, 8.1)	8.1 (5.7, 11.3)	4.9 (3.9, 6.1)	6.1 (4.8, 7.5)	4.9 (3.3, 7.3)
Any location	94.0 (92.7, 95.1)	93.5 (91.5, 95.1)	94.5 (92.9, 95.8)	96.2 (93.8, 97.7)	93.1 (91.6, 94.4)	93.7 (91.9, 95.1)	94.8 (93.3, 95.9)

Table 8.1 (cont.): Percentage of adults aged ≥15 years who noticed anti-cigarette information during the last 30 days in various places, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Place	Overall	Gender		Age(Years)		Residence	
		Male	Female	15-24	≥ 25	Urban	Rural
				Percentage (95% CI)			
Current smokers[1]							
In newspapers or in magazines	73.9 (69.4, 78.0)	74.3 (69.6, 78.4)	58.4 (36.1, 77.8)	74.5 (62.8, 83.6)	73.8 (68.8, 78.2)	75.4 (69.2, 80.7)	70.5 (64.9, 75.5)
On television or the radio	87.7 (84.0, 90.6)	87.8 (84.0, 90.8)	83.9 (66.6, 93.1)	83.3 (71.0, 91.0)	88.8 (85.1, 91.6)	87.7 (82.5, 91.5)	87.6 (83.6, 90.7)
On television	86.6 (82.9, 89.7)	86.7 (82.9, 89.8)	81.8 (64.6, 91.7)	82.4 (70.3, 90.2)	87.7 (83.9, 90.7)	87.1 (81.9, 91.0)	85.5 (81.2, 88.9)
On the radio	47.0 (42.0, 52.0)	46.8 (41.8, 51.9)	53.7 (32.3, 73.7)	50.8 (39.4, 62.1)	46.0 (40.6, 51.5)	45.6 (39.1, 52.3)	50.2 (44.3, 56.0)
On billboards	73.7 (69.7, 77.3)	74.0 (69.9, 77.6)	60.4 (39.3, 78.2)	73.3 (61.4, 82.6)	73.7 (69.4, 77.6)	76.1 (70.8, 80.7)	67.8 (62.5, 72.7)
On posters	71.7 (67.4, 75.6)	72.3 (67.8, 76.3)	46.6 (26.4, 68.0)	77.5 (66.2, 85.9)	70.2 (65.5, 74.6)	72.2 (66.4, 77.3)	70.5 (65.2, 75.2)
At cinemas	18.4 (15.0, 22.4)	18.2 (14.8, 22.3)	25.7 (10.4, 50.6)	23.9 (15.3, 35.2)	17.0 (13.3, 21.5)	21.7 (17.0, 27.1)	10.6 (7.4, 15.0)
On windows or inside shops/ stalls where cigs are bought	58.9 (53.8, 63.8)	59.1 (54.0, 64.1)	47.9 (27.2, 69.4)	73.4 (63.5, 81.4)	55.3 (49.6, 60.8)	60.5 (53.6, 66.9)	55.0 (49.4, 60.5)
On Internet	14.1 (10.8, 18.1)	14.0 (10.7, 18.1)	15.7 (5.6, 37.0)	26.7 (17.3, 38.7)	10.9 (8.0, 14.7)	16.7 (12.3, 22.2)	7.8 (5.2, 11.6)
Somewhere else	5.8 (4.1, 8.1)	5.8 (4.1, 8.2)	4.6 (1.4, 14.2)	6.1 (2.9, 12.4)	5.7 (3.9, 8.4)	6.2 (4.1, 9.4)	4.7 (2.6, 8.4)
Any Location	93.6 (90.5, 95.8)	93.7 (90.5, 95.9)	90.2 (73.2, 96.8)	93.2 (82.3, 97.6)	93.7 (90.4, 95.9)	92.8 (88.4, 95.7)	95.5 (93.0, 97.2)
Non-smokers[2]							
In newspapers or in magazines	67.4 (64.7, 69.9)	66.0 (61.6, 70.1)	68.2 (65.1, 71.2)	69.8 (64.5, 74.7)	66.3 (63.5, 69.1)	68.6 (65.2, 71.8)	64.1 (60.7, 67.4)
On television or the radio	86.9 (84.9, 88.7)	84.5 (80.7, 87.7)	88.3 (86.1, 90.2)	87.8 (83.5, 91.1)	86.5 (84.2, 88.5)	85.5 (82.9, 87.8)	90.6 (88.4, 92.3)
On television	84.8 (82.6, 86.7)	81.8 (77.8, 85.2)	86.6 (84.1, 88.7)	86.0 (81.3, 89.7)	84.2 (81.7, 86.5)	83.1 (80.2, 85.6)	89.3 (87.1, 91.2)
On the radio	48.1 (45.5, 50.7)	47.5 (43.0, 52.1)	48.4 (45.3, 51.5)	49.2 (43.7, 54.8)	47.6 (44.8, 50.3)	48.2 (44.9, 51.5)	47.7 (44.2, 51.3)
On billboards	71.5 (69.0, 73.8)	72.4 (68.5, 76.0)	71.0 (67.9, 73.9)	75.9 (71.2, 80.0)	69.6 (66.8, 72.2)	72.5 (69.4, 75.4)	68.7 (65.0, 72.2)
On posters	70.0 (67.3, 72.6)	69.9 (65.8, 73.7)	70.1 (66.9, 73.2)	72.6 (67.3, 77.4)	68.9 (66.0, 71.7)	70.3 (66.8, 73.6)	69.4 (65.7, 72.9)
At cinemas	20.9 (18.8, 23.3)	21.4 (18.1, 25.1)	20.7 (18.0, 23.6)	29.2 (24.3, 34.6)	17.4 (15.3, 19.7)	23.9 (21.1, 27.0)	13.0 (10.7, 15.7)
On windows or inside shops/ stalls where cigs are bought	51.6 (48.4, 54.8)	52.9 (48.1, 57.6)	50.9 (47.3, 54.4)	57.1 (51.6, 62.5)	49.3 (44.9, 52.6)	51.8 (47.8, 55.9)	51.0 (46.6, 55.4)
On Internet	18.7 (16.7, 20.9)	19.6 (16.5, 23.2)	18.2 (15.7, 21.0)	27.4 (22.6, 32.7)	15.0 (13.2, 17.1)	20.2 (17.7, 23.0)	14.9 (12.0, 18.3)
Somewhere else	5.8 (4.6, 7.3)	5.1 (3.4, 7.6)	6.2 (4.7, 8.1)	8.5 (5.8, 12.2)	4.6 (3.5, 6.0)	6.1 (4.6, 7.9)	5.0 (3.2, 7.8)
Any location	94.1 (92.7, 95.2)	93.3 (90.7, 95.2)	94.5 (92.9, 95.8)	96.8 (94.4, 98.1)	92.9 (91.2, 94.3)	93.9 (92.1, 95.3)	94.6 (92.9, 95.9)

[1] Includes daily and occasional (less than daily) smokers.

[2] Includes former and never smokers.

8.2 Awareness of the "Tak Nak" Anti-smoking Campaign

This section discusses awareness among Malaysian adults of the country's "Tak-Nak" anti-smoking campaign. The WHO Framework Convention On Tobacco Control, Article12: Education, Communication, Training and Public Awareness recommends using media to shape tobacco-related knowledge, opinions, attitudes, and behaviors, and these media can be extremely powerful in influencing both individuals and policy makers regarding tobacco use and tobacco control issues.[1] Anti-smoking campaigns discourage tobacco users from consumption of tobacco and motivate them to quit.[36] Global evidence supports the fact that strong and effective anti-smoking campaigns comprise an essential component of any anti-tobacco strategy and have ultimately motivated tobacco users in many countries to quit.

Table 8.2 shows that 85.2% of Malaysian adults (85.9% of current smokers and 85.0% of non-smokers) had seen or heard about the "Tak Nak" anti-smoking campaign in the last 12 months. A similar proportion of men (88.2%) than women (87.3%) had seen or heard about the campaign. The estimate for young persons (15−24, 89.1%) was well above the estimate for the ≥65 age group (70.3%), but similar to the estimates of 86.9% for the 25−44 age group and 82.2% for the 45−64 age group. Rural residents (86.4%) had a similar percentage than urban residents (84.8%) on this question.

Among current smokers, 98.5% of those with a college education or above had seen or heard about the "Tak Nak" campaign, versus rates of 88.1% to 72.8% for persons with less education.

Table 8.2: Percentage of adults aged ≥15 years who had seen or heard about the "Tak Nak" anti-smoking campaign in the last 12 months, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Who Had Seen or Heard about the "Tak Nak" Antismoking Campaign in the Last 12 Months		
	Overall	Current Smokers[1]	Non-smokers[2]
	Percentage(95% CI)		
Overall	85.2 (83.4, 86.9)	85.9 (81.9, 89.1)	85.0 (83.1, 86.8)
Gender			
Male	85.9 (83.4, 88.0)	86.1 (82.0, 89.4)	85.7 (82.8, 88.2)
Female	84.6 (82.1, 86.7)	78.4 (60.4, 89.6)	84.6 (82.2, 86.8)
Age (years)			
15-24	89.1 (86.0, 91.6)	85.0 (74.6, 91.7)	89.9 (86.7, 92.4)
25-44	86.9 (84.3, 89.1)	87.3 (81.9, 91.3)	86.7 (84.0, 89.0)
45-64	82.2 (78.7, 85.3)	84.0 (75.6, 89.9)	81.7 (78.0, 84.9)
65+	70.3 (63.4, 76.3)	83.7 (69.9, 91.9)	67.9 (60.2, 74.8)
Residence			
Urban	84.8 (82.4, 86.9)	85.3 (79.7, 89.5)	84.6 (82.2, 86.8)
Rural	86.4 (83.9, 88.6)	87.5 (83.6, 90.6)	86.1 (83.3, 88.5)
Education level[3]			
Less than primary	69.7 (64.0, 74.8)	72.8 (59.2, 83.2)	68.9 (62.5, 74.6)
Primary	81.7 (77.9, 84.9)	84.0 (76.1, 89.7)	80.7 (76.4, 84.4)
Secondary/high school	88.2 (85.3, 90.5)	88.1 (82.3, 92.2)	88.2 (84.9, 90.8)
College or above	87.8 (81.5, 92.1)	98.5 (89.7, 99.8)	85.4 (77.9, 90.6)
Race/ethnicity			
Malay	90.7 (88.9, 92.2)	90.5 (86.6, 93.4)	90.7 (88.8, 92.3)
Chinese	73.1 (67.7, 77.9)	77.9 (61.6, 88.6)	72.3 (66.8, 77.1)
Indian	79.7 (72.5, 85.4)	76.2 (55.5, 89.2)	80.5 (72.7, 86.5)
Other	81.9 (76.5, 86.3)	79.3 (69.5, 86.6)	83.0 (76.5, 88.0)
Religion			
Muslim	89.5 (87.8, 91.0)	89.2 (85.5, 92.1)	89.6 (87.8, 91.2)
Non-Muslim	76.7 (72.9, 80.1)	76.6 (67.3, 83.9)	76.7 (72.8, 80.2)

[1] Includes daily and occasional (less than daily) smokers

[2] Includes former and never smokers.

[3] Education level is reported only for persons aged ≥ 25 years.

8.3 Health Warnings on Cigarette Packages and Thinking About Quitting

This section deals with awareness of health warnings on cigarette packages and their effectiveness in prompting smokers to think about quitting. The WHO MPOWER policy package recommends the display of warnings on packages of tobacco products to discourage tobacco users from consuming tobacco and to motivate them to quit.[1] The global evidence supports the fact that strong and effective pictorial health warnings are an essential component of any anti-tobacco strategy and have resulted in motivating tobacco users to quit in many countries.

Table 8.3 presents the percentage of current smokers aged ≥15 years who during the last 30 days had noticed health warnings on cigarette packages and considered quitting because of these labels, by selected demographic characteristics. In all, 92.8% of current smokers had noticed the health warnings on the cigarette packages, but less than half (45.8%) of current smokers had thought about quitting because of the labels. More men (93.2%) than women (74.7**%**) noticed the warnings.

Among all current smokers, the proportion who noticed the warnings was 91.6% for the 15−24 age group but only 78.7% for those aged ≥65. Most of current smokers with a primary education or above noticed health warnings (93.2% primary, 96.0% secondary / high school, 100% college or above), but only 73.3% of those with less than a primary education had noticed them.

Overall, 45.8% of current smokers thought about quitting because of the warning labels (51.7% of women and 45.7% of men). The proportion of current smokers from urban areas who thought about quitting was 47.4%, compared to 42.1% from rural areas. Age and education seemed to have little relation to thinking about quitting.

Table 8.3: Percentage of current smokers aged ≥15 years who noticed health warnings on cigarette packages and considered quitting because of the warning labels during the last 30 days, by selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Current Smokers[1] Who…	
	Noticed Health Warnings on Cigarette Package[2]	Thought About Quitting Because of Warning Label[2]
	Percentage(95% CI)	
Overall	92.8 (90.1, 94.8)	45.8 (41.3, 50.4)
Gender		
Male	93.2 (90.4, 95.2)	45.7 (41.2, 50.2)
Female	74.7 (54.3, 88.0)	51.7 (30.7, 72.1)
Age (years)		
15-24	91.6 (82.5, 96.2)	47.6 (36.6, 58.8)
25-44	94.0 (90.4, 96.3)	45.7 (39.9, 51.6)
45-64	93.9 (89.8, 96.5)	44.0 (36.2, 52.2)
65+	78.7 (65.5, 87.8)	47.4 (31.4, 63.9)
Residence		
Urban	94.4 (90.6, 96.7)	47.4 (41.4, 53.5)
Rural	88.9 (85.1, 91.8)	42.1 (37.1, 47.2)
Education level[3]		
Less than primary	73.3 (61.3, 82.7)	36.8 (25.2, 50.1)
Primary	93.2 (88.5, 96.1)	47.6 (39.8, 55.5)
Secondary/high school	96.0 (90.5, 98.4)	46.5 (39.8, 53.5)
College or above	100.0 (-, -)	41.1 (26.3, 57.7)
Race/ethnicity		
Malay	95.1 (92.1, 97.0)	50.4 (45.0, 55.8)
Chinese	95.0 (83.4, 98.6)	33.3 (22.2, 46.6)
Indian	97.9 (90.5, 99.6)	49.3 (32.8, 65.9)
Other	80.6 (70.7, 87.7)	36.2 (27.5, 46.1)
Religion		
Muslim	93.5 (90.5, 95.7)	49.1 (44.3, 53.9)
Non-Muslim	90.7 (84.7, 94.5)	36.6 (28.4, 45.7)

[1] Includes daily and occasional (less than daily) smokers.
[2] During the last 30 days.
[3] Education level is reported only among persons aged ≥ 25 years.

8.4 Thinking About the Health Risks of Smoking from Seeing Health Warnings

This section deals with the effectiveness of health warnings on cigarette packages as measured by levels among current smokers of thinking about health risks from seeing health warnings in the last 30 days on packages of cigarettes.

Table 8.4 shows that 25.3% of current smokers had thought not at all about health risks from seeing the warnings; 43.9% had thought a little; 17.4% had thought "somewhat"; and 13.3% had thought a lot about the risks.

There were very few differences between the age groups and when comparing urban vs. rural residents. About half (50.3%) of current smokers with less than a primary education thought a little about the risks, versus just 31.0% of those with a college education or more.

Table 8.4: Percentage distribution of current smokers aged ≥15 years by level of thinking about the health risks of smoking from seeing health warnings and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Level of Thinking About Health Risks of Smoking From Seeing Health Warnings[1]				Total
	Not at All	A Little	Somewhat	A Lot	
	Percentage (95% CI)				
Overall	25.3 (20.6, 30.6)	43.9 (38.9, 49.1)	17.4 (14.2, 21.2)	13.3 (10.1, 17.4)	100
Gender					
Male	25.2 (20.5, 30.7)	43.9 (38.8, 49.1)	17.5 (14.2, 21.3)	13.4 (10.1, 17.5)	100
Female	--	--	--	--	100
Age (years)					
15-24	29.2 (18.8, 42.4)	40.2 (28.8, 52.8)	23.0 (14.6, 34.3)	7.6 (3.3, 16.5)	100
25-44	23.4 (18.0, 30.0)	46.1 (39.2, 53.1)	17.2 (13.2, 22.2)	13.3 (9.3, 18.5)	100
45-64	25.8 (17.7, 35.9)	42.3 (33.8, 51.3)	14.0 (9.2, 20.8)	17.9 (12.0, 25.9)	100
65+	27.0 (12.3, 49.3)	43.7 (25.7, 63.5)	12.2 (4.9, 27.2)	17.1 (6.7, 37.3)	100
Residence					
Urban	25.9 (19.6, 33.3)	43.2 (36.6, 50.2)	17.0 (12.9, 22.0)	13.9 (9.8, 19.5)	100
Rural	23.8 (19.7, 28.5)	45.7 (39.9, 51.5)	18.6 (14.5, 23.5)	11.9 (8.6, 16.3)	100
Education level[2]					
Less than primary	27.2 (14.5, 45.1)	50.3 (35.5, 65.1)	7.9 (3.0, 18.9)	14.6 (6.6, 29.0)	100
Primary	19.7 (13.6, 27.5)	48.9 (39.3, 58.5)	14.7 (9.8, 21.5)	16.8 (9.9, 27.0)	100
Secondary/High school	23.3 (17.4, 30.4)	44.4 (37.4, 51.6)	18.5 (14.0, 24.1)	13.8 (9.6, 19.4)	100
College or above	39.5 (22.5, 59.6)	31.0 (18.1, 47.7)	16.0 (8.2, 28.8)	13.5 (5.5, 29.6)	100
Race/ethnicity					
Malay	22.1 (16.8, 28.5)	43.6 (37.4, 50.0)	20.6 (16.2, 25.7)	13.7 (10.3, 18.0)	100
Chinese	47.7 (32.6, 63.1)	37.1 (23.8, 52.6)	7.9 (3.4, 17.1)	7.4 (2.4, 20.7)	100
Indian	15.4 (6.1, 33.7)	45.7 (28.4, 64.1)	15.7 (6.7, 32.6)	23.2 (11.3, 41.6)	100
Other	25.5 (18.1, 34.8)	50.1 (38.9, 61.4)	12.7 (8.1, 19.4)	11.6 (5.3, 23.6)	100
Religion					
Muslim	22.9 (18.2, 28.5)	45.0 (39.2, 50.8)	19.4 (15.5, 24.0)	12.7 (9.7, 16.5)	100
Non-Muslim	32.2 (22.9, 43.2)	40.8 (30.7, 51.8)	11.6 (7.2, 18.3)	15.3 (8.5, 26.0)	100

[1] Among current smokers who noticed health warning labels on cigarette packages in the last 30 days.
[2] Education level is reported only among persons aged ≥ 25 years.
-- Indicates estimate suppressed because it was based on fewer than 25 unweighted cases.

8.5 Effect of Health Warnings on the Prevention of Smoking

This section deals with the effectiveness of health warnings on cigarette packages as measured by the number of times these warnings prevented current smokers from smoking cigarettes.

Table 8.5 shows that in 59.9% of cases these warnings did not prevent current smokers from smoking cigarettes even once ("never") in the past 30 days when they felt like smoking one. Other estimates were 11.7% for once, 25.5% for a few times, and 2.9% for a lot of times.

The proportion of current smokers for whom health warnings had never prevented them from smoking cigarettes in the last 30 days when they felt like smoking was 58.6% and 58.1%, respectively, in the two lowest age groups, and 62.5% for the 45−64 age group and 73.5% for the ≥65 age group.

There was almost no difference by residence in the estimates that the health warnings never prevented smoking: 59.5% for urban and 60.7% for rural.

By race/ethnicity and religion, Chinese and non-Muslims respectively had the highest proportions of current smokers for whom health warnings had never prevented them from smoking cigarettes when they felt like smoking one, but the differences between the subgroups were not significant.

Table 8.5: Percentage distribution of current smokers aged ≥15 years by how often health warnings prevented them from smoking in the last 30 days according to selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Number of Times Health Warnings Prevented Smoking in the Last 30 Days[1,2]				Total
	Never	Once	A few times	A lot of times	
	Percentage (95% CI)				
Overall	59.9 (54.6, 64.9)	11.7 (9.2, 14.9)	25.5 (21.3, 30.2)	2.9 (1.7, 4.9)	100
Gender					
Male	60.2 (55.0, 65.3)	12.0 (9.3, 15.3)	24.9 (20.6, 29.7)	2.9 (1.7, 5.0)	100
Female	--	--	--	--	100
Age (years)					
15-24	58.6 (46.1, 70.1)	18.0 (11.1, 27.9)	19.8 (11.8, 31.4)	3.5 (0.8, 14.9)	100
25-44	58.1 (51.3, 64.5)	11.1 (8.1, 14.9)	28.6 (22.8, 35.3)	2.2 (1.1, 4.4)	100
45-64	62.5 (53.4, 70.9)	9.2 (5.3, 15.4)	24.6 (18.0, 32.6)	3.7 (1.6, 8.2)	100
65+	73.5 (54.0, 86.8)	4.4 (1.0, 17.0)	18.3 (7.4, 38.4)	3.8 (0.8, 16.3)	100
Residence					
Urban	59.5 (52.5, 66.2)	10.5 (7.4, 14.6)	27.8 (22.3, 34.2)	2.2 (0.9, 5.1)	100
Rural	60.7 (54.6, 66.5)	14.8 (10.8, 19.8)	19.9 (15.5, 25.3)	4.6 (2.5, 8.4)	100
Education level[3]					
Less than primary	62.1 (44.7, 76.8)	11.6 (5.1, 24.5)	23.7 (13.6, 38.1)	2.6 (0.5, 11.5)	100
Primary	60.9 (52.1, 69.0)	9.6 (5.9, 15.3)	28.0 (20.7, 36.7)	1.5 (0.6, 3.9)	100
Secondary/high school	57.8 (50.4, 64.8)	11.8 (8.4, 16.3)	26.9 (20.3, 34.7)	3.5 (1.8, 6.8)	100
College or above	66.8 (50.3, 79.9)	3.1 (0.7, 12.2)	26.4 (15.1, 41.9)	3.7 (0.9, 14.0)	100
Race/ethnicity					
Malay	58.2 (51.9, 64.3)	11.8 (8.7, 15.8)	26.0 (21.0, 31.9)	3.9 (2.1, 7.0)	100
Chinese	71.0 (56.8, 82.0)	11.9 (6.1, 22.1)	17.1 (8.9, 30.3)	0.0 (-, -)	100
Indian	69.6 (49.6, 84.2)	9.4 (3.7, 21.7)	20.1 (7.9, 42.6)	0.9 (0.1, 6.5)	100
Other	53.2 (42.6, 63.6)	12.4 (7.3, 20.0)	32.5 (22.9, 43.7)	1.9 (0.6, 6.5)	100
Religion					
Muslim	56.9 (51.0, 62.6)	12.0 (9.2, 15.6)	27.4 (22.5, 32.8)	3.7 (2.2, 6.4)	100
Non-Muslim	69.3 (59.8, 77.4)	10.8 (6.6, 17.3)	19.6 (13.0, 28.5)	0.3 (0.0, 2.0)	100

[1] Among current smokers who noticed health warning labels on cigarette packages in the last 30 days.

[2] Times that current smokers did not smoke when they felt like smoking.

[3] Education level is reported only among persons aged ≥ 25 years.

-- Estimate suppressed because it was based on fewer than 25 unweighted cases.

8.6 Adults Who Noticed Cigarette Marketing

This section discusses how often adults aged ≥15 years had noticed advertisements or promotions about cigarettes in different places and in different media in the last 30 days.

Table 8.6 indicates that 35.6% of Malaysian adults (39.0% of men and 32.0% of women) had noticed at least one advertisement or promotion of cigarettes in the last 30 days. The estimate for urban residents (38.1%) was significantly higher than the estimate for rural (29.2%) residents.

In order, estimates for the places where advertisements were noticed were 18.9% for stores; 15.5%, posters; 14.5%, television; 14.4%, billboards; 13.4%, newspapers or magazines; 9.6%, on public walls; 8.1%, on public transportation; 7.6%, on the radio; 4.4%, on the Internet; and 3.6% in cinemas.

The most common places for noticing advertisements for cigarettes were, for men, stores (21.0%), posters (17.3%), and billboards (15.1%), but women had a somewhat different order for the top three: stores (16.6%), television (15.3%), and billboards (13.6%). For both rural and urban residents overall, stores ranked first.

For every selected demographic characteristic, clothing / item with brand name or logo and one-to-one sales promotion ranked first and second respectively among the cigarette promotions noticed.

Table 8.6: Percentage of adults aged ≥15 years who noticed cigarette marketing during the last 30 days in various places, by selected demographic characteristics – GATS Malaysia, 2011.

Place	Overall	Gender		Age (Years)		Residence	
		Male	Female	15-24	≥ 25	Urban	Rural
				Percentage (95% CI)			
Noticed advertisements							
In stores	18.9 (16.7, 21.2)	21.0 (18.1, 24.3)	16.6 (14.1, 19.4)	20.2 (16.5, 24.6)	18.3 (16.1, 20.7)	20.5 (17.7, 23.5)	14.7 (12.4, 17.3)
On television	14.5 (12.5, 16.7)	13.7 (11.2, 16.5)	15.3 (13.0, 18.0)	17.6 (13.9, 21.9)	13.3 (11.4, 15.4)	15.1 (12.6, 18.0)	12.8 (10.5, 15.6)
On the radio	7.6 (6.2, 9.2)	7.2 (5.3, 9.5)	8.0 (6.4, 10.0)	9.3 (6.7, 12.9)	6.9 (5.6, 8.5)	8.4 (6.6, 10.5)	5.6 (4.3, 7.2)
On billboards	14.4 (12.4, 16.5)	15.1 (12.5, 18.2)	13.6 (11.3, 16.2)	16.3 (12.8, 20.5)	13.6 (11.7, 15.8)	16.2 (13.7, 19.2)	9.5 (7.7, 11.6)
On posters	15.5 (13.5, 17.7)	17.3 (14.5, 20.5)	13.5 (11.5, 15.9)	18.3 (14.7, 22.6)	14.4 (12.4, 16.6)	17.5 (14.9, 20.4)	10.2 (8.3, 12.6)
In newspapers or magazines	13.4 (11.6, 15.5)	14.3 (11.8, 17.2)	12.5 (10.4, 14.8)	14.7 (11.4, 18.7)	12.9 (11.1, 15.0)	14.8 (12.5, 17.5)	9.7 (7.7, 12.3)
In cinemas	3.6 (2.6, 5.0)	4.2 (2.7, 6.7)	2.9 (1.9, 4.2)	5.5 (3.3, 9.2)	2.8 (2.0, 4.0)	4.5 (3.1, 6.4)	1.2 (0.7, 2.0)
On the Internet	4.4 (3.3, 5.8)	4.9 (3.3, 7.2)	3.8 (2.7, 5.3)	6.6 (4.3, 10.1)	3.5 (2.5, 4.9)	5.4 (4.0, 7.3)	1.6 (1.0, 2.8)
On public transportation	8.1 (6.6, 9.8)	8.1 (6.1, 10.7)	8.0 (6.3, 10.2)	10.3 (7.3, 14.1)	7.2 (5.9, 8.8)	9.7 (7.8, 12.1)	3.8 (2.7, 5.3)
On public walls	9.6 (8.0, 11.4)	9.4 (7.3, 12.0)	9.7 (7.9, 11.9)	11.2 (8.3, 15.0)	9.0 (7.5, 10.7)	10.5 (8.5, 13.0)	7.1 (5.5, 9.1)
Somewhere else	0.8 (0.5, 1.2)	1.0 (0.6, 1.6)	0.7 (0.3, 1.3)	0.6 (0.2, 1.8)	0.9 (0.6, 1.4)	0.8 (0.5, 1.4)	0.7 (0.3, 1.7)
Noticed cigarette promotions							
Free samples	2.7 (2.0, 3.8)	4.4 (3.2, 6.2)	0.9 (0.5, 1.7)	3.3 (1.8, 5.9)	2.6 (1.9, 3.5)	3.3 (2.3, 4.7)	1.4 (0.9, 2.2)
Sale prices	3.2 (2.5, 4.1)	5.0 (3.8, 6.7)	1.2 (0.8, 1.9)	4.5 (2.9, 7.1)	2.7 (2.0, 3.5)	3.5 (2.5, 4.7)	2.4 (1.6, 3.7)
Coupons	0.4 (0.2, 0.8)	0.8 (0.4, 1.5)	0.1 (0.0, 0.3)	0.5 (0.2, 1.6)	0.4 (0.2, 0.8)	0.4 (0.2, 1.0)	0.4 (0.2, 0.9)
Free gifts/discounts on other products	4.0 (2.9, 5.5)	5.4 (3.9, 7.5)	2.6 (1.6, 4.0)	4.9 (3.0, 7.8)	3.7 (2.6, 5.3)	4.9 (3.4, 7.0)	1.7 (1.1, 2.8)
Clothing/item with brand name or logo	7.8 (6.3, 9.7)	10.5 (8.4, 13.2)	4.9 (3.7, 6.5)	9.0 (6.5, 12.2)	7.3 (5.6, 9.5)	9.1 (7.0, 11.6)	4.6 (3.4, 6.0)
Mail promoting cigarettes	0.0 (0.0, 0.1)	0.0 (-, -)	0.1 (0.0, 0.2)	0.0 (-, -)	0.1 (0.0, 0.1)	0.0 (-, -)	0.1 (0.0, 0.4)
One-to-one sales promotion	5.3 (4.1, 6.8)	7.4 (5.7, 9.7)	3.0 (2.0, 4.3)	5.1 (3.3, 7.6)	5.3 (4.0, 7.0)	6.3 (4.7, 8.3)	2.6 (1.7, 4.0)
Noticed any advertisement or promotion	35.6 (32.9, 38.5)	39.0 (35.4, 42.7)	32.0 (28.7, 35.5)	40.9 (36.3, 45.7)	33.6 (30.7, 36.6)	38.1 (34.5, 41.8)	29.2 (25.9, 32.7)

8.6.1 Current Adult Smokers Who Noticed Cigarette Marketing

As shown in **Table 8.7**, 41.6% (41.7% of men, 39.6% of women) of current smokers aged ≥15 years had noticed any advertisement or promotion of cigarettes in the last 30 days. The estimate was lower (39.1%) for current smokers aged ≥25 years than it was for the 15−24 group (51.7%), and this pattern held true for all specific locations. A higher proportion of urban (45.3%) than rural (32.7%) current smokers had noticed some advertisement or promotion of cigarettes in the last 30 days.

The three most common places overall for the noticing by current smokers of advertisements were the same as for male smokers: stores (22.4%), posters (17.7%), and billboards (15.5%). For women, however, the top three were posters (16.2%), billboards (13.4%), and public transportation (10.0%). Overall, stores ranked first for both rural and urban current smokers.

As was the case for the overall population (**Table 8.6**), the two most commonly noticed sources of cigarette promotion for current smokers (**Table 8.7**) overall were clothing/item with brand name or logo (10.9%) and one-to-one sales promotion (10.8%). For male smokers the order was the same, but for female smokers the top two were reversed. For younger adults (15-24), the top two were clothing/item with brand name or logo and sale prices, while for those 25+ and for urban residents the order was one-to-one sales promotion and then clothing/item with brand name or logo. For rural residents the order was clothing / item with brand name or logo followed by sale prices.

8.6.2 Non-smokers Who Noticed Cigarette Marketing

As shown in **Table 8.8,** 33.8% of current non-smokers had noticed any advertisement or promotion of cigarettes during the last 30 days. Patterns of noticing any advertisement or promotion for age groups and residence were similar to those observed for the overall population and current smokers.

The two sources of cigarette promotion seen most commonly were clothing/item with brand name or logo and one-to-one sales promotion, the same order as for the overall population and for smokers.

Table 8.7: Percentage of current smokers aged ≥15 years who noticed cigarette marketing during the last 30 days in various places, by selected demographic characteristics – GATS Malaysia, 2011.

Place	Overall	Gender		Age (Years)		Residence	
		Male	Female	15-24	≥ 25	Urban	Rural
				Percentage (95% CI)			
Noticed advertisements							
In stores	22.4 (18.3, 27.2)	22.7 (18.5, 27.6)	6.6 (1.7, 22.1)	27.1 (18.0, 38.6)	21.3 (17.0, 26.3)	24.6 (19.2, 31.0)	17.0 (12.7, 22.5)
On television	12.1 (9.3, 15.7)	12.2 (9.3, 15.9)	9.3 (3.3, 23.8)	18.1 (10.6, 29.2)	10.7 (7.8, 14.5)	12.1 (8.5, 17.0)	12.2 (8.8, 16.7)
On the radio	6.8 (4.4, 10.4)	6.9 (4.4, 10.5)	4.0 (1.0, 14.4)	9.3 (4.1, 19.9)	6.2 (3.7, 10.1)	7.8 (4.6, 12.9)	4.4 (2.7, 7.0)
On billboards	15.5 (11.9, 19.9)	15.5 (11.9, 20.1)	13.4 (4.6, 33.2)	23.3 (14.7, 34.7)	13.6 (10.2, 17.9)	18.3 (13.5, 24.4)	8.7 (5.9, 12.5)
On posters	17.7 (14.0, 22.1)	17.7 (13.9, 22.3)	16.2 (5.9, 37.1)	26.7 (17.7, 38.2)	15.4 (11.8, 19.9)	20.7 (15.8, 26.8)	10.3 (7.1, 14.6)
In newspapers or magazines	13.9 (10.6, 18.0)	14.1 (10.7, 18.2)	7.2 (1.2, 32.1)	18.2 (10.4, 29.7)	12.8 (9.6, 17.0)	15.6 (11.3, 21.2)	9.7 (6.6, 14.1)
In cinemas	3.9 (2.1, 7.2)	4.0 (2.2, 7.3)	0.0 (-, -)	5.7 (1.9, 16.2)	3.5 (1.7, 6.9)	5.1 (2.7, 9.6)	1.0 (0.3, 3.3)
On the Internet	4.5 (2.6, 7.8)	4.6 (2.7, 8.0)	0.0 (-, -)	8.3 (3.3, 19.3)	3.6 (1.8, 6.9)	5.6 (3.0, 10.3)	2.0 (0.9, 4.2)
On public transportation	8.7 (6.0, 12.5)	8.7 (5.9, 12.5)	10.0 (2.5, 32.4)	17.4 (9.9, 28.7)	6.5 (4.1, 10.2)	10.4 (6.8, 15.6)	4.6 (2.5, 8.2)
On public walls	9.7 (6.8, 13.6)	9.9 (6.9, 13.8)	3.2 (0.6, 14.6)	14.8 (7.9, 26.2)	8.4 (5.7, 12.2)	11.2 (7.4, 16.5)	6.2 (3.8, 9.9)
Somewhere else	1.4 (0.7, 2.7)	1.5 (0.8, 2.8)	0.0 (-, -)	0.6 (0.1, 4.5)	1.6 (0.8, 3.2)	1.6 (0.7, 3.4)	1.0 (0.3, 2.9)
Noticed cigarette promotions							
Free samples	6.9 (4.6, 10.2)	7.0 (4.7, 10.4)	1.8 (0.2, 11.9)	11.3 (5.2, 22.7)	5.8 (3.9, 8.6)	8.7 (5.6, 13.3)	2.5 (1.3, 4.8)
Sale prices	6.8 (4.8, 9.7)	7.0 (4.9, 9.8)	1.8 (0.2, 11.9)	13.3 (7.1, 23.4)	5.3 (3.7, 7.5)	7.5 (4.9, 11.4)	5.2 (3.1, 8.7)
Coupons	1.0 (0.5, 2.0)	0.9 (0.4, 2.0)	1.8 (0.2, 11.9)	0.0 (-, -)	1.2 (0.6, 2.5)	1.2 (0.6, 2.8)	0.3 (0.1, 0.8)
Free gifts/discounts on other products	7.2 (4.8, 10.7)	7.4 (4.9, 10.9)	1.8 (0.2, 11.9)	10.2 (5.4, 18.5)	6.5 (4.2, 9.8)	8.2 (5.0, 13.1)	5.0 (2.9, 8.5)
Clothing/item with brand name or logo	10.9 (8.0, 14.7)	11.1 (8.1, 15.0)	2.6 (0.6, 11.1)	19.0 (11.2, 30.5)	8.9 (6.3, 12.4)	12.6 (8.7, 17.9)	6.9 (4.5, 10.3)
Mail promoting cigarettes	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)	0.0 (-, -)
One-to-one sales promotion	10.8 (7.8, 14.7)	10.7 (7.7, 14.7)	14.3 (2.7, 50.3)	12.2 (6.2, 22.8)	10.4 (7.4, 14.4)	13.3 (9.2, 18.7)	4.7 (2.7, 8.2)
Noticed any advertisement or promotion	41.6 (36.4, 47.0)	41.7 (36.4, 47.1)	39.6 (20.0, 63.2)	51.7 (40.3, 62.9)	39.1 (33.8, 44.7)	45.3 (38.4, 52.4)	32.7 (27.3, 38.6)

Note: Current smokers include daily and occasional (less than daily) smokers.

Table 8.8: Percentage of current non-smokers aged ≥15 years who noticed cigarette marketing during the last 30 days in various places, by selected demographic characteristics – GATS Malaysia, 2011.

Place	Overall	Gender		Age(Years)		Residence	
		Male	Female	15-24	≥ 25	Urban	Rural
				Percentage (95% CI)			
Noticed advertisements							
In stores	17.8 (15.5, 20.3)	19.7 (16.2, 23.7)	16.7 (14.2, 19.5)	18.9 (14.9, 23.6)	17.3 (15.0, 19.9)	19.2 (16.3, 22.5)	13.9 (11.4, 16.9)
On television	15.2 (13.0, 17.6)	14.8 (11.6, 18.7)	15.4 (13.0, 18.1)	17.5 (13.7, 21.9)	14.2 (12.0, 16.6)	16.0 (13.3, 19.1)	13.0 (10.4, 16.1)
On the radio	7.8 (6.4, 9.5)	7.4 (5.2, 10.4)	8.1 (6.4, 10.1)	9.3 (6.5, 13.2)	7.2 (5.7, 8.9)	8.5 (6.7, 10.8)	5.9 (4.4, 7.9)
On billboards	14.0 (12.0, 16.3)	14.7 (11.6, 18.6)	13.6 (11.3, 16.3)	14.9 (11.4, 19.3)	13.7 (11.6, 16.1)	15.6 (13.1, 18.6)	9.7 (7.8, 12.1)
On posters	14.8 (12.8, 17.1)	17.0 (13.4, 21.2)	13.5 (11.4, 15.9)	16.7 (12.9, 21.2)	14.0 (11.9, 16.4)	16.5 (13.9, 19.5)	10.2 (8.1, 12.8)
In newspapers or magazines	13.3 (11.4, 15.4)	14.5 (11.4, 18.4)	12.5 (10.5, 14.9)	14.0 (10.6, 18.3)	13.0 (11.0, 15.3)	14.6 (12.2, 17.4)	9.7 (7.7, 12.3)
In cinemas	3.5 (2.4, 4.9)	4.4 (2.5, 7.5)	2.9 (2.0, 4.3)	5.5 (3.1, 9.5)	2.6 (1.7, 3.8)	4.3 (2.9, 6.2)	1.2 (0.7, 2.2)
On the Internet	4.3 (3.2, 5.8)	5.1 (3.2, 8.0)	3.9 (2.8, 5.4)	6.3 (3.9, 10.0)	3.5 (2.4, 5.0)	5.4 (3.9, 7.3)	1.5 (0.8, 3.1)
On public transportation	7.9 (6.4, 9.6)	7.6 (5.3, 10.8)	8.0 (6.3, 10.2)	8.8 (6.0, 12.8)	7.4 (6.0, 9.2)	9.5 (7.6, 11.8)	3.5 (2.5, 5.0)
On public walls	9.5 (7.9, 11.4)	9.1 (6.7, 12.3)	9.8 (8.0, 12.0)	10.5 (7.5, 14.5)	9.1 (7.5, 11.1)	10.4 (8.3, 12.9)	7.3 (5.6, 9.6)
Somewhere else	0.6 (0.4, 1.1)	0.6 (0.3, 1.2)	0.7 (0.3, 1.3)	0.5 (0.1, 2.0)	0.7 (0.4, 1.1)	0.6 (0.3, 1.2)	0.7 (0.3, 1.6)
Noticed cigarette promotions							
Free samples	1.5 (1.0, 2.3)	2.4 (1.5, 4.1)	0.9 (0.5, 1.7)	1.7 (0.8, 3.4)	1.4 (0.9, 2.2)	1.7 (1.0, 2.7)	1.1 (0.6, 1.9)
Sale prices	2.1 (1.5, 2.9)	3.5 (2.3, 5.4)	1.2 (0.8, 1.9)	2.8 (1.6, 4.9)	1.8 (1.2, 2.6)	2.3 (1.5, 3.4)	1.5 (0.8, 2.8)
Coupons	0.3 (0.1, 0.6)	0.6 (0.2, 1.6)	0.1 (0.0, 0.3)	0.6 (0.2, 1.9)	0.1 (0.0, 0.4)	0.2 (0.1, 0.7)	0.5 (0.2, 1.2)
Free gifts/discounts on other products	3.1 (2.1, 4.5)	3.9 (2.3, 6.4)	2.6 (1.6, 4.0)	3.8 (2.0, 7.1)	2.7 (1.7, 4.3)	4.0 (2.6, 5.9)	0.7 (0.3, 1.4)
Clothing/item with brand name or logo	6.9 (5.3, 8.8)	10.1 (7.4, 13.6)	4.9 (3.7, 6.5)	7.0 (4.7, 10.2)	6.8 (5.0, 9.3)	8.0 (6.0, 10.7)	3.8 (2.8, 5.3)
Mail promoting cigarettes	0.0 (0.0, 0.1)	0.0 (-, -)	0.1 (0.0, 0.2)	0.0 (-, -)	0.1 (0.0, 0.2)	0.0 (-, -)	0.2 (0.1, 0.5)
One-to-one sales promotion	3.6 (2.6, 5.0)	4.9 (3.3, 7.2)	2.8 (1.9, 4.1)	3.6 (2.2, 5.9)	3.6 (2.5, 5.2)	4.3 (2.9, 6.2)	2.0 (1.2, 3.3)
Noticed any advertisement or promotion	33.8 (30.9, 36.9)	36.9 (32.5, 41.5)	31.9 (28.6, 35.4)	38.8 (33.8, 44.0)	31.7 (28.5, 35.0)	36.0 (32.2, 40.0)	28.0 (24.5, 31.9)

Note: Current non-smokers include former and never smokers.

9

KNOWLEDGE, ATTITUDES & PERCEPTIONS

9. KNOWLEDGE, ATTITUDES, AND PERCEPTIONS

This chapter presents GATS results on knowledge, attitudes, and perceptions about tobacco among Malaysians aged 15 years or older, including their beliefs about illnesses caused from tobacco use (both smoked and smokeless), exposure to secondhand smoke (SHS), and public opinion regarding the prohibition of indoor smoking in various places and other potential tobacco control laws. The GATS has revealed a high level of awareness about the dangers of exposure to SHS, including serious illness, as well as strong evidence of public support for tobacco control laws.

Key Findings

- *92.2% of adults in Malaysia (93.5% of non-smokers), believed that smoking causes serious illness.*
- *85.8% of adults in Malaysia (87.7% of non-smokers) believed that breathing other people's smoke causes serious illness and disease in non-smokers.*
- *90.4% of adults in Malaysia (92.4% of non-smokers) believed that indoor smoking should be prohibited in workplaces.*
- *70.6% of adults in Malaysia (82.0% of non-smokers) favored increasing taxes on tobacco products.*

9.1 Belief That Smoking Causes Serious Illness and Various Specific Diseases

Overall, 92.2% of adults aged 15 years or older (93.5% of non-smokers and 88.1% of current smokers) believed that smoking causes serious illness. Most adults also believed that smoking causes stroke (80.7%), heart attack (88.8%), lung cancer (93.7%), oral cancer (86.0%), premature birth (79.4%), throat cancer (82.9%), miscarriage (71.9%) and gangrene (66.0%). Overall, only about half of Malaysian adults believed that smoking causes bladder cancer (51.7%), stomach cancer (53.2%), or bone loss / osteoporosis (47.2%). In most cases, the ≥65 age group had lower levels of belief. For example, only 85.0% of this group, believed that smoking causes serious illness. In all, 81.0% of this group believed that smoking causes heart attack and 84.0% thought it causes lung cancer, while 70.8% believed that smoking causes stroke; 73.0% oral cancer; and 62.3% premature birth. Details for these and other findings are shown in **Table 9.1** and **9.1a**.

Table 9.1: Percentage of adults aged ≥15 years who believed that smoking causes serious illness and various specific diseases, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults who believe that smoking causes…					
	Serious Illness	Stroke	Heart Attack	Lung Cancer	Oral Cancer	Premature birth
	Percentage(95% CI)					
Overall	92.2 (90.9, 93.4)	80.7 (78.5, 82.7)	88.8 (87.1, 90.2)	93.7 (92.6, 94.6)	86.0 (84.3, 87.6)	79.4 (77.6, 81.2)
Gender						
Male	90.7 (88.5, 92.4)	79.2 (76.3, 81.7)	86.9 (84.4, 89.0)	92.7 (91.0, 94.1)	84.2 (81.8, 86.3)	77.3 (74.9, 79.6)
Female	93.9 (92.5, 95.1)	82.3 (79.8, 84.6)	90.8 (88.9, 92.3)	94.8 (93.4, 95.9)	88.0 (85.9, 89.8)	81.7 (79.3, 83.8)
Age (years)						
15-24	93.6 (90.9, 95.6)	84.1 (80.3, 87.2)	89.8 (86.7, 92.2)	96.2 (93.9, 97.6)	90.0 (86.8, 92.5)	85.1 (81.4, 88.1)
25-44	93.7 (91.8, 95.1)	81.1 (78.0, 83.8)	89.7 (87.3, 91.7)	95.1 (93.5, 96.3)	88.6 (86.4, 90.4)	81.5 (78.8, 83.9)
45-64	90.3 (87.9, 92.3)	79.0 (75.4, 82.2)	88.2 (85.6, 90.4)	91.3 (88.9, 93.1)	80.8 (77.6, 83.8)	74.3 (70.5, 77.8)
65+	85.0 (79.7, 89.1)	70.8 (64.4, 76.4)	81.0 (75.0, 85.8)	84.0 (77.5, 88.9)	73.0 (66.4, 78.7)	62.3 (55.1, 69.0)
Residence						
Urban	92.8 (91.1, 94.2)	81.7 (78.9, 84.2)	89.3 (87.1, 91.2)	94.0 (92.5, 95.1)	87.2 (85.0, 89.1)	81.6 (79.2, 83.7)
Rural	90.8 (88.8, 92.5)	78.1 (75.2, 80.8)	87.3 (84.9, 89.4)	93.0 (91.4, 94.3)	83.1 (80.7, 85.2)	73.9 (71.0, 76.6)
Education level[1]						
Less than primary	80.1 (74.5, 84.8)	68.2 (62.8, 73.1)	77.7 (72.5, 82.2)	81.0 (75.9, 85.2)	67.1 (61.2, 72.6)	54.4 (48.4, 60.3)
Primary	90.1 (87.2, 92.4)	78.4 (74.4, 81.9)	87.1 (83.7, 89.9)	91.9 (89.1, 94.0)	83.0 (79.6, 86.0)	72.6 (68.5, 76.4)
Secondary/high school	95.6 (94.0, 96.8)	83.7 (80.7, 86.4)	92.7 (90.4, 94.4)	96.6 (95.2, 97.6)	89.5 (87.1, 91.5)	85.2 (82.5, 87.6)
College or above	94.2 (88.1, 97.3)	78.2 (71.2, 83.9)	87.8 (80.9, 92.4)	94.4 (89.6, 97.0)	89.0 (83.2, 93.0)	85.2 (79.0, 89.8)
Race/ethnicity						
Malay	93.5 (91.9, 94.8)	84.2 (81.9, 86.3)	91.7 (90.0, 93.1)	95.3 (94.1, 96.3)	88.7 (86.9, 90.3)	84.3 (82.3, 86.0)
Chinese	89.6 (85.9, 92.4)	75.0 (69.4, 79.9)	83.8 (79.5, 87.4)	92.0 (88.9, 94.3)	80.4 (75.9, 84.2)	71.0 (65.5, 75.9)
Indian	92.3 (87.0, 95.6)	81.0 (74.4, 86.2)	85.1 (78.8, 89.8)	90.0 (84.0, 93.9)	83.1 (76.6, 88.1)	77.6 (69.9, 83.8)
Other	90.2 (86.4, 93.0)	72.9 (67.3, 77.8)	85.2 (80.5, 88.9)	91.4 (88.1, 93.8)	84.0 (80.2, 87.2)	71.1 (66.3, 75.5)
Religion						
Muslim	93.2 (91.8, 94.4)	83.7 (81.6, 85.7)	91.5 (89.9, 92.8)	95.1 (94.0, 96.1)	88.5 (86.8, 89.9)	82.7 (80.7, 84.5)
Non-Muslim	90.4 (87.7, 92.5)	74.9 (70.7, 78.8)	83.4 (80.0, 86.3)	90.9 (88.5, 92.8)	81.2 (77.5, 84.3)	72.9 (68.8, 76.6)

[1] Education level is reported only among persons aged ≥25 years.

Table 9.1 (cont.): Percentage of adults aged ≥15 years who believed that smoking causes serious illness and various specific diseases, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Who Believed That Smoking Causes…					
	Serious Illness	Stroke	Heart Attack	Lung Cancer	Oral Cancer	Premature birth
	Percentage(95% CI)					
Current Smokers[1]	88.1 (84.7, 90.9)	74.6 (70.2, 78.6)	84.6 (80.7, 87.8)	90.0 (86.8, 92.4)	79.0 (75.2, 82.4)	72.0 (67.9, 75.7)
Gender						
Male	88.1 (84.6, 90.8)	74.5 (70.0, 78.6)	84.4 (80.5, 87.7)	90.0 (86.8, 92.5)	79.1 (75.1, 82.5)	72.0 (67.9, 75.8)
Female	91.8 (74.8, 97.7)	76.7 (58.6, 88.4)	89.5 (73.9, 96.2)	88.8 (73.2, 95.9)	78.3 (59.5, 89.8)	72.3 (52.6, 86.0)
Age (years)						
15-24	86.9 (75.9, 93.3)	76.2 (65.6, 84.3)	84.2 (74.4, 90.7)	87.7 (77.1, 93.8)	84.1 (73.9, 90.8)	80.1 (69.4, 87.7)
25-44	90.0 (85.3, 93.4)	77.0 (71.2, 81.9)	86.5 (80.7, 90.8)	93.1 (89.0, 95.7)	81.7 (76.3, 86.1)	73.1 (67.4, 78.2)
45-64	88.6 (83.2, 92.4)	71.5 (62.7, 79.0)	82.5 (75.9, 87.6)	87.8 (82.1, 91.8)	73.1 (65.6, 79.4)	68.2 (60.9, 74.6)
65+	70.1 (51.6, 83.8)	56.1 (39.3, 71.5)	74.1 (54.5, 87.2)	75.5 (55.4, 88.4)	56.9 (40.1, 72.3)	43.6 (28.6, 59.9)
Residence						
Urban	88.8 (84.1, 92.2)	77.5 (71.4, 82.6)	85.7 (80.3, 89.8)	90.2 (85.9, 93.3)	80.7 (75.4, 85.0)	73.4 (68.1, 78.2)
Rural	86.6 (82.6, 89.9)	67.5 (62.3, 72.4)	81.8 (76.9, 85.9)	89.4 (85.4, 92.4)	75.1 (70.5, 79.2)	68.6 (63.2, 73.5)
Education level[2]						
Less than primary	81.0 (67.6, 89.7)	67.0 (54.1, 77.7)	74.2 (60.5, 84.3)	76.9 (64.4, 85.9)	59.1 (45.4, 71.5)	43.7 (32.1, 56.0)
Primary	84.7 (77.0, 90.1)	70.2 (61.8, 77.4)	80.8 (72.3, 87.2)	90.3 (82.8, 94.8)	78.3 (70.3, 84.6)	65.3 (56.9, 72.8)
Secondary/high school	93.5 (89.3, 96.2)	79.1 (72.6, 84.4)	90.5 (85.0, 94.1)	93.7 (89.4, 96.3)	82.0 (76.3, 86.7)	78.9 (72.7, 84.0)
College or above	84.6 (71.1, 92.5)	70.8 (56.9, 81.6)	80.4 (67.3, 89.1)	90.4 (77.6, 96.3)	73.8 (60.7, 83.7)	72.1 (58.5, 82.6)
Race/ethnicity						
Malay	89.2 (85.1, 92.2)	76.9 (72.0, 81.2)	87.6 (83.5, 90.8)	91.2 (87.4, 93.9)	81.0 (76.7, 84.6)	77.1 (72.4, 81.2)
Chinese	87.2 (72.0, 94.7)	67.9 (51.0, 81.1)	82.7 (67.0, 91.8)	89.0 (73.3, 95.9)	71.6 (56.3, 83.2)	59.0 (43.7, 72.7)
Indian	90.6 (76.9, 96.5)	72.2 (55.5, 84.4)	73.6 (54.7, 86.5)	87.1 (72.6, 94.5)	77.8 (60.0, 89.1)	66.7 (49.2, 80.6)
Other	83.8 (73.2, 90.7)	72.0 (63.2, 79.3)	79.7 (70.0, 86.9)	87.4 (78.6, 92.9)	77.9 (69.2, 84.6)	65.4 (56.8, 73.1)
Religion						
Muslim	88.6 (84.7, 91.6)	77.0 (72.6, 80.9)	86.8 (82.9, 90.0)	91.1 (87.6, 93.6)	81.0 (77.1, 84.4)	75.4 (71.0, 79.3)
Non-Muslim	86.9 (78.9, 92.1)	67.7 (58.1, 76.1)	78.1 (68.3, 85.5)	86.8 (79.0, 91.9)	73.5 (63.8, 81.3)	62.4 (52.9, 71.1)

[1] Includes daily and occasional (less than daily) smokers.

[2] Education level is reported only among adults aged ≥25 years.

Table 9.1 (cont.): Percentage of adults aged ≥15 years who believed that smoking causes serious illness and various specific diseases, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults who believe that smoking causes…					
	Serious Illness	Stroke	Heart Attack	Lung Cancer	Oral Cancer	Premature birth
	Percentage(95% CI)					
Non-smokers[1]	93.5 (92.1, 94.6)	82.5 (80.2, 84.6)	90.0 (88.2, 91.6)	94.8 (93.7, 95.7)	88.1 (86.3, 89.7)	81.7 (79.6, 83.6)
Gender						
Male	92.7 (89.8, 94.7)	82.8 (79.2, 85.9)	88.8 (85.6, 91.3)	94.8 (92.8, 96.2)	88.2 (85.2, 90.7)	81.5 (78.3, 84.3)
Female	93.9 (92.5, 95.1)	82.4 (79.8, 84.7)	90.8 (88.9, 92.3)	94.8 (93.5, 95.9)	88.1 (86.0, 89.9)	81.8 (79.4, 83.9)
Age (years)						
15-24	95.0 (92.3, 96.8)	85.7 (81.6, 88.9)	90.9 (87.5, 93.5)	97.8 (96.2, 98.8)	91.2 (87.7, 93.7)	86.1 (82.4, 89.1)
25-44	95.1 (93.2, 96.5)	82.8 (79.2, 85.8)	91.0 (88.5, 93.0)	95.9 (94.1, 97.1)	91.4 (89.3, 93.1)	84.9 (82.1, 87.4)
45-64	90.8 (87.9, 93.0)	81.2 (77.3, 84.5)	89.9 (87.0, 92.3)	92.3 (89.5, 94.4)	83.1 (79.6, 86.2)	76.1 (72.1, 79.8)
65+	87.6 (82.2, 91.5)	73.4 (66.3, 79.5)	82.2 (75.7, 87.3)	85.5 (78.6, 90.5)	75.8 (68.6, 81.8)	65.6 (57.6, 72.8)
Residence						
Urban	94.0 (92.2, 95.4)	82.9 (79.9, 85.6)	90.4 (88.0, 92.3)	95.1 (93.6, 96.2)	89.1 (86.7, 91.0)	83.9 (81.3, 86.3)
Rural	92.1 (90.0, 93.9)	81.5 (78.3, 84.4)	89.1 (86.7, 91.1)	94.1 (92.6, 95.3)	85.6 (83.1, 87.8)	75.6 (72.4, 78.6)
Education level[2]						
Less than primary	79.9 (73.9, 84.8)	68.5 (62.6, 73.8)	78.6 (73.1, 83.2)	82.0 (76.6, 86.3)	69.1 (63.0, 74.6)	57.1 (50.5, 63.4)
Primary	92.3 (89.6, 94.3)	81.8 (77.4, 85.5)	89.7 (86.6, 92.2)	92.6 (89.5, 94.8)	85.0 (81.5, 88.0)	75.6 (71.2, 79.6)
Secondary/high school	96.4 (94.5, 97.6)	85.4 (82.1, 88.2)	93.5 (90.9, 95.3)	97.7 (96.4, 98.5)	92.2 (89.8, 94.1)	87.5 (84.5, 90.0)
College or above	96.3 (89.9, 98.7)	79.9 (72.0, 86.0)	89.5 (82.6, 93.8)	95.3 (89.2, 98.0)	92.5 (86.1, 96.1)	87.9 (80.3, 92.9)
Race/ethnicity						
Malay	94.9 (93.4, 96.1)	86.6 (84.1, 88.7)	93.0 (91.4, 94.4)	96.6 (95.6, 97.5)	91.3 (89.4, 92.8)	86.6 (84.5, 88.4)
Chinese	90.0 (86.3, 92.8)	76.3 (70.7, 81.1)	84.0 (79.6, 87.6)	92.6 (89.7, 94.8)	82.0 (77.2, 85.9)	73.2 (67.2, 78.5)
Indian	92.7 (86.4, 96.2)	83.1 (75.3, 88.9)	87.9 (80.8, 92.7)	90.7 (83.5, 94.9)	84.4 (77.5, 89.5)	80.2 (71.9, 86.5)
Other	92.9 (89.7, 95.1)	73.3 (66.2, 79.4)	87.5 (82.2, 91.3)	93.1 (89.9, 95.3)	86.6 (82.6, 89.8)	73.5 (67.9, 78.5)
Religion						
Muslim	94.8 (93.4, 95.9)	86.0 (83.8, 88.0)	93.0 (91.5, 94.3)	96.5 (95.5, 97.3)	91.0 (89.3, 92.5)	85.2 (83.1, 87.0)
Non-Muslim	91.2 (88.3, 93.3)	76.6 (71.8, 80.7)	84.6 (80.9, 87.7)	91.8 (89.3, 93.8)	82.9 (79.2, 86.1)	75.2 (70.7, 79.3)

[1] Includes former and never smokers.

[2] Education level is reported only among adults aged ≥25 years.

Table 9.1a: Percentage of adults aged ≥15 years who believed that smoking causes various specific diseases, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults who believe that smoking causes…					
	Throat Cancer	Miscarriage	Gangrene	Bladder Cancer	Stomach Cancer	Bone Loss / Osteoporosis
	Percentage(95% CI)					
Overall	82.9 (81.1, 84.6)	71.9 (69.5, 74.2)	66.0 (63.5, 68.4)	51.7 (48.9, 54.4)	53.2 (50.7, 55.8)	47.2 (44.4, 49.9)
Gender						
Male	82.7 (80.2, 84.9)	68.9 (65.7, 71.9)	65.5 (62.2, 68.6)	50.7 (47.3, 54.1)	51.7 (48.6, 54.9)	44.5 (41.1, 48.0)
Female	83.2 (80.9, 85.2)	75.1 (72.2, 77.7)	66.5 (63.4, 69.5)	52.8 (49.4, 56.1)	54.8 (51.7, 57.8)	49.9 (46.6, 53.2)
Age (years)						
15-24	86.5 (83.0, 89.3)	76.9 (72.7, 80.6)	70.5 (66.0, 74.6)	52.9 (48.0, 57.8)	50.1 (45.4, 54.9)	47.3 (42.1, 52.6)
25-44	84.0 (81.3, 86.4)	74.6 (71.5, 77.5)	68.6 (65.5, 71.6)	53.6 (50.2, 57.0)	55.8 (52.6, 58.8)	47.4 (44.0, 50.8)
45-64	81.3 (78.1, 84.2)	67.5 (63.4, 71.3)	60.5 (56.0, 64.8)	47.8 (43.4, 52.2)	53.5 (49.3, 57.7)	47.4 (43.0, 51.7)
65+	67.7 (60.8, 74.0)	51.0 (43.4, 58.5)	51.3 (44.4, 58.1)	48.7 (41.3, 56.1)	49.4 (41.8, 57.0)	44.4 (37.0, 52.0)
Residence						
Urban	84.1 (81.7, 86.2)	74.3 (71.2, 77.1)	68.0 (64.7, 71.1)	54.2 (50.7, 57.8)	55.8 (52.5, 59.0)	48.9 (45.3, 52.5)
Rural	79.9 (77.3, 82.3)	65.7 (62.3, 68.9)	60.8 (57.6, 63.9)	45.1 (41.5, 48.7)	46.5 (43.1, 50.0)	42.7 (39.1, 46.4)
Education level[1]						
Less than primary	60.3 (54.6, 65.8)	45.6 (39.8, 51.5)	42.0 (36.5, 47.7)	36.9 (31.5, 42.7)	38.1 (32.5, 44.0)	33.8 (28.5, 39.5)
Primary	79.6 (76.0, 82.8)	67.5 (63.2, 71.6)	60.7 (56.2, 65.0)	51.1 (46.5, 55.7)	56.4 (51.9, 60.8)	50.2 (45.5, 54.8)
Secondary/high school	87.5 (84.6, 89.9)	77.3 (74.2, 80.1)	71.5 (68.3, 74.6)	54.8 (51.1, 58.6)	56.7 (53.1, 60.3)	50.1 (46.4, 53.9)
College or above	88.1 (82.6, 92.0)	76.0 (69.3, 81.6)	70.6 (62.9, 77.2)	53.5 (46.7, 60.2)	57.9 (51.5, 64.1)	42.3 (35.0, 49.9)
Race/ethnicity						
Malay	86.6 (84.5, 88.5)	76.6 (73.8, 79.1)	70.2 (67.2, 73.0)	54.4 (51.1, 57.6)	55.9 (52.8, 59.0)	49.4 (46.1, 52.8)
Chinese	81.1 (77.2, 84.5)	64.1 (58.0, 69.8)	55.7 (49.5, 61.7)	45.5 (39.3, 51.9)	47.0 (41.3, 52.7)	44.0 (37.9, 50.3)
Indian	80.0 (73.9, 84.9)	73.0 (65.0, 79.7)	70.2 (62.3, 77.0)	64.1 (55.3, 72.1)	68.9 (61.2, 75.7)	56.8 (48.5, 64.7)
Other	71.0 (65.6, 75.8)	61.2 (55.3, 66.7)	58.9 (54.0, 63.7)	39.6 (34.7, 44.7)	38.8 (33.7, 44.2)	34.6 (29.6, 39.9)
Religion						
Muslim	84.9 (82.8, 86.8)	75.1 (72.4, 77.5)	68.9 (66.1, 71.6)	52.6 (49.5, 55.7)	54.1 (51.2, 57.0)	47.8 (44.7, 51.0)
Non-Muslim	79.3 (76.1, 82.1)	65.5 (60.9, 69.8)	60.0 (55.5, 64.4)	49.7 (44.9, 54.6)	51.3 (46.6, 56.0)	45.7 (41.1, 50.3)

[1] Education level is reported only among adults aged ≥25 years.

Table 9.1a (cont.): Percentage of adults aged ≥15 years who believed that smoking causes various specific diseases, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults who believe that smoking causes…					
	Throat Cancer	Miscarriage	Gangrene	Bladder Cancer	Stomach Cancer	Bone Loss / Osteoporosis
	Percentage(95% CI)					
Current Smokers[1]	78.9 (74.8, 82.5)	63.1 (58.2, 67.8)	59.8 (55.1, 64.3)	42.5 (37.9, 47.2)	45.3 (40.9, 49.8)	37.3 (32.7, 42.2)
Gender						
Male	79.0 (74.8, 82.6)	63.1 (58.0, 67.9)	59.5 (54.8, 64.1)	42.7 (38.0, 47.5)	45.2 (40.8, 49.6)	37.3 (32.6, 42.3)
Female	73.2 (54.0, 86.3)	64.1 (43.0, 80.9)	70.7 (51.2, 84.8)	34.5 (17.0, 57.5)	49.8 (28.6, 71.0)	36.4 (18.4, 59.2)
Age (years)						
15-24	80.5 (69.9, 88.0)	74.3 (63.7, 82.6)	63.7 (52.0, 73.9)	46.3 (35.0, 57.9)	42.6 (32.1, 53.8)	37.5 (27.1, 49.1)
25-44	82.2 (76.7, 86.7)	64.0 (57.6, 70.0)	63.1 (57.2, 68.6)	43.1 (37.0, 49.4)	47.4 (41.8, 53.0)	36.7 (31.1, 42.7)
45-64	76.7 (70.4, 82.0)	58.1 (49.5, 66.3)	53.8 (45.0, 62.4)	39.4 (31.7, 47.6)	45.3 (37.6, 53.3)	38.7 (30.8, 47.2)
65+	45.0 (30.3, 60.5)	29.9 (17.8, 45.6)	34.9 (21.8, 50.8)	35.4 (21.7, 52.1)	33.4 (20.2, 49.8)	36.9 (23.0, 53.4)
Residence						
Urban	80.6 (75.0, 85.2)	65.5 (58.7, 71.6)	61.2 (54.9, 67.1)	44.5 (38.5, 50.7)	48.6 (42.8, 54.5)	39.8 (33.7, 46.3)
Rural	74.7 (69.7, 79.0)	57.5 (52.4, 62.4)	56.4 (51.3, 61.3)	37.6 (32.3, 43.2)	37.2 (32.2, 42.6)	31.3 (26.1, 37.0)
Education level[2]						
Less than primary	60.3 (47.9, 71.5)	34.5 (24.0, 46.9)	35.6 (25.1, 47.6)	28.4 (18.5, 40.8)	23.9 (15.0, 36.0)	30.5 (19.4, 44.5)
Primary	72.6 (64.0, 79.7)	58.0 (49.8, 65.8)	56.5 (48.4, 64.2)	44.6 (36.5, 53.0)	50.2 (42.3, 58.2)	39.6 (31.8, 48.0)
Secondary/high school	87.1 (82.2, 90.8)	68.6 (61.6, 74.9)	65.6 (58.8, 71.8)	41.7 (34.6, 49.2)	46.9 (40.4, 53.6)	38.6 (32.2, 45.3)
College or above	76.8 (63.8, 86.1)	55.5 (37.3, 72.4)	58.5 (44.1, 71.6)	43.9 (29.8, 58.9)	47.7 (33.6, 62.3)	28.8 (17.1, 44.3)
Race/ethnicity						
Malay	82.9 (77.9, 87.0)	66.8 (60.8, 72.3)	62.2 (56.5, 67.5)	44.7 (39.2, 50.3)	47.9 (42.2, 53.6)	37.4 (31.6, 43.5)
Chinese	79.0 (64.8, 88.5)	51.0 (36.8, 65.0)	48.8 (36.0, 61.7)	43.1 (30.3, 56.8)	44.1 (31.4, 57.7)	42.9 (30.1, 56.8)
Indian	68.1 (50.5, 81.6)	63.2 (46.4, 77.3)	59.6 (41.0, 75.7)	45.6 (29.2, 63.1)	58.9 (43.5, 72.8)	46.2 (32.6, 60.4)
Other	69.1 (58.9, 77.7)	58.4 (49.4, 66.9)	58.9 (49.2, 67.9)	32.6 (24.5, 41.8)	30.3 (22.0, 40.2)	28.8 (20.7, 38.5)
Religion						
Muslim	80.4 (75.6, 84.5)	66.2 (60.8, 71.2)	61.6 (56.5, 66.4)	42.7 (37.5, 48.1)	44.9 (39.5, 50.5)	36.2 (30.9, 41.9)
Non-Muslim	74.5 (65.5, 81.8)	54.4 (45.4, 63.1)	54.6 (45.2, 63.8)	42.0 (33.5, 51.0)	46.3 (38.0, 54.7)	40.5 (32.3, 49.2)

[1] Includes daily and occasional (less than daily) smokers.

[2] Education level is reported only among adults aged ≥25 years.

Table 9.1a (cont.): Percentage of adults aged ≥15 years who believed that smoking causes various specific diseases, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Who Believed That Smoking Causes…					
	Throat Cancer	Miscarriage	Gangrene	Bladder Cancer	Stomach Cancer	Bone Loss / Osteoporosis
	Percentage(95% CI)					
Non-smokers[1]	84.1 (82.2, 85.9)	74.5 (71.9, 77.0)	67.8 (65.2, 70.4)	54.5 (51.3, 57.5)	55.6 (52.7, 58.5)	50.1 (47.2, 53.0)
Gender						
Male	85.5 (82.3, 88.3)	73.5 (69.5, 77.1)	70.2 (66.0, 74.0)	56.9 (52.5, 61.3)	56.9 (52.7, 60.9)	50.2 (46.0, 54.4)
Female	83.3 (81.0, 85.3)	75.2 (72.3, 77.9)	66.5 (63.3, 69.5)	53.0 (49.6, 56.3)	54.8 (51.7, 57.9)	50.1 (46.8, 53.4)
Age (years)						
15-24	87.7 (84.1, 90.5)	77.4 (72.8, 81.5)	71.8 (67.1, 76.2)	54.3 (48.8, 59.6)	51.6 (46.4, 56.8)	49.3 (43.6, 55.0)
25-44	84.8 (81.8, 87.3)	79.0 (75.7, 81.9)	70.9 (67.5, 74.0)	57.9 (54.0, 61.7)	59.2 (55.6, 62.7)	51.8 (47.9, 55.7)
45-64	82.7 (79.1, 85.8)	70.2 (65.7, 74.4)	62.4 (57.7, 67.0)	50.3 (45.5, 55.0)	55.9 (51.0, 60.7)	49.9 (45.1, 54.7)
65+	71.8 (64.5, 78.0)	54.7 (46.4, 62.7)	54.1 (46.5, 61.6)	51.0 (42.9, 59.2)	52.2 (43.8, 60.5)	45.7 (37.5, 54.2)
Residence						
Urban	85.1 (82.6, 87.2)	76.9 (73.5, 80.0)	70.0 (66.5, 73.2)	57.1 (53.1, 61.0)	57.9 (54.2, 61.6)	51.5 (47.8, 55.3)
Rural	81.6 (78.8, 84.1)	68.3 (64.6, 71.8)	62.2 (58.6, 65.7)	47.5 (43.6, 51.3)	49.5 (45.8, 53.1)	46.4 (42.5, 50.2)
Education level[2]						
Less than primary	60.4 (54.1, 66.3)	48.3 (42.0, 54.6)	43.6 (37.5, 49.8)	39.0 (33.1, 45.3)	41.5 (35.3, 48.1)	34.6 (29.1, 40.6)
Primary	82.6 (78.9, 85.7)	71.5 (66.8, 75.8)	62.4 (57.6, 67.0)	53.8 (48.9, 58.7)	59.0 (54.1, 63.8)	54.5 (49.3, 59.6)
Secondary/high school	87.6 (84.4, 90.2)	80.5 (77.0, 83.5)	73.7 (70.2, 76.9)	59.6 (55.3, 63.7)	60.3 (56.1, 64.4)	54.3 (50.2, 58.5)
College or above	90.7 (84.1, 94.7)	80.6 (73.3, 86.3)	73.3 (65.1, 80.3)	55.7 (48.2, 62.9)	60.2 (52.8, 67.2)	45.4 (38.0, 53.0)
Race/ethnicity						
Malay	87.8 (85.6, 89.7)	79.8 (76.8, 82.4)	72.7 (69.5, 75.7)	57.5 (53.9, 61.0)	58.6 (55.1, 62.0)	53.4 (49.9, 56.8)
Chinese	81.5 (77.6, 84.9)	66.5 (59.9, 72.6)	56.9 (50.5, 63.1)	46.0 (39.6, 52.6)	47.5 (41.4, 53.6)	44.2 (37.7, 50.9)
Indian	82.9 (75.5, 88.4)	75.4 (66.6, 82.4)	72.7 (63.3, 80.5)	68.6 (58.2, 77.4)	71.3 (62.1, 79.0)	59.4 (50.3, 68.0)
Other	71.8 (65.4, 77.4)	62.3 (55.7, 68.5)	59.0 (53.2, 64.5)	42.6 (36.7, 48.7)	42.4 (36.5, 48.6)	37.0 (31.1, 43.3)
Religion						
Muslim	86.4 (84.4, 88.2)	78.1 (75.3, 80.7)	71.4 (68.4, 74.3)	56.0 (52.7, 59.3)	57.3 (54.1, 60.5)	51.8 (48.6, 55.0)
Non-Muslim	80.3 (76.8, 83.5)	68.0 (62.9, 72.6)	61.2 (56.3, 65.8)	51.5 (46.1, 56.8)	52.4 (47.2, 57.6)	46.8 (41.8, 51.9)

[1] Includes former and never smokers.

[2] Education level is reported only among persons aged ≥25 years.

9.2 Levels of Belief That Breathing Other People's Smoke Causes Serious Illness in Non-Smokers

Non-smokers were significantly more likely than smokers to believe that breathing other people's smoke causes serious illness (**Table 9.2**, 87.7% vs. 79.8%). There were also significant differences between the two groups in believing that breathing other people's smoke causes lung illnesses in children (87.5% of non-smokers, 79.7% of smokers) and lung cancer in adults (87.6% vs. 81.4%). For believing that smoking causes serious heart disease in adults the estimates were 81.2% and 76.2% for non-smokers and smokers, respectively, but here the difference was not significant. Among Malaysians aged 65 or over, only 73.3% believed that breathing other people's smoke causes serious illness, just 68.7% believed it causes heart disease in adults, 69.5% believed it causes lung illnesses in children, and 71.7% believed it causes lung cancer in adults.

9.3 Support for Prohibiting Indoor Smoking in Various Places

Overall, among adults aged ≥15 years the percentages in favour of prohibiting indoor smoking (**Table 9.3**) at various places were 90.4% for workplaces; 83.5% restaurants; 78.7% hotels; 85.2% public transportation terminals; and 94.4% shopping centers. There was generally little difference overall in the levels of these beliefs across demographic characteristics, but a significant difference by smoking status was seen for banning smoking in restaurants: 72.7% of smokers vs. 86.7% of non-smokers. There were also significant differences between current smokers and non-smokers relative to banning smoking in bars (34.1% of smokers vs. 46.9% of non-smokers), casinos (29.1% vs. 43.2%), discos (26.7% vs. 41.2%), and karaoke centers (38.0% vs. 54.2%).

9.4 Support for Tobacco Control Laws

Overall, 70.6% of Malaysian adults aged ≥15 years were in favor of increasing taxes on tobacco products, and 75.6% were in favor of prohibiting the display of tobacco products at points-of-sale (**Table 9.4**). However, just 32.0% of current smokers favoured the tax increase, versus 82.0% of non-smokers. There was also a schism between the two groups for prohibiting the display of tobacco products at points-of-sale, which was favoured by 83.8% of non-smokers but only 47.9% of current smokers.

Table 9.2: Percentage of adults aged ≥ 15 years who believed that breathing other people's smoke causes serious illness and various specific diseases in non-smokers, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristics	Belief That Breathing Other People's Smoke Causes…			
	Serious illness	Heart Disease in Adults	Lung Illnesses in Children	Lung Cancer in Adults
	Percentage(95% CI)			
Overall	85.8 (84.3, 87.3)	80.0 (78.0, 81.9)	85.7 (84.0, 87.2)	86.2 (84.5, 87.7)
Gender				
Male	84.1 (81.7, 86.2)	79.8 (77.0, 82.3)	83.8 (81.3, 86.1)	86.0 (83.7, 88.0)
Female	87.7 (85.8, 89.5)	80.3 (77.9, 82.6)	87.7 (85.6, 89.5)	86.4 (84.3, 88.3)
Age (years)				
15-24	87.4 (84.0, 90.1)	82.0 (78.3, 85.3)	86.3 (82.8, 89.1)	86.9 (83.7, 89.6)
25-44	86.7 (84.2, 88.8)	80.5 (77.5, 83.2)	87.6 (85.1, 89.8)	88.2 (86.0, 90.1)
45-64	86.3 (83.6, 88.6)	80.3 (77.1, 83.2)	86.5 (83.8, 88.8)	86.1 (83.1, 88.7)
65+	73.3 (66.0, 79.5)	68.7 (61.6, 75.0)	69.5 (62.0, 76.0)	71.7 (64.3, 78.0)
Residence				
Urban	86.6 (84.6, 88.3)	81.0 (78.4, 83.4)	85.9 (83.7, 87.8)	86.7 (84.6, 88.6)
Rural	84.0 (81.4, 86.3)	77.5 (74.7, 80.0)	85.2 (82.9, 87.3)	84.8 (82.3, 86.9)
Education level[1]				
Less than primary	70.6 (65.3, 75.3)	69.6 (64.2, 74.5)	71.0 (66.1, 75.5)	72.2 (67.2, 76.8)
Primary	82.9 (79.4, 86.0)	76.2 (72.2, 79.9)	82.8 (79.3, 85.8)	83.0 (79.3, 86.1)
Secondary/high school	89.2 (86.7, 91.3)	84.9 (82.1, 87.3)	90.5 (88.3, 92.3)	91.0 (88.8, 92.7)
College or above	92.4 (88.1, 95.2)	76.9 (68.3, 83.8)	89.8 (83.1, 94.1)	90.2 (82.9, 94.6)
Race/ethnicity				
Malay	87.8 (85.7, 89.6)	84.1 (82.0, 86.1)	88.9 (87.0, 90.5)	89.5 (87.8, 91.0)
Chinese	82.9 (79.1, 86.1)	71.6 (66.1, 76.5)	81.3 (77.1, 84.9)	81.6 (77.1, 85.4)
Indian	86.7 (81.3, 90.8)	76.9 (68.9, 83.3)	81.8 (73.9, 87.7)	80.0 (72.5, 85.9)
Other	80.8 (76.3, 84.6)	75.9 (71.5, 79.8)	80.6 (76.3, 84.2)	82.2 (78.2, 85.6)
Religion				
Muslim	87.1 (85.1, 88.8)	83.4 (81.4, 85.2)	87.9 (86.2, 89.5)	88.6 (87.0, 90.1)
Non-Muslim	83.5 (80.7, 85.9)	73.3 (69.4, 76.8)	81.2 (77.9, 84.1)	81.3 (78.1, 84.2)

[1] Education level is reported only among persons aged ≥25 years.

Table 9.2 (cont.): Percentage of adults aged ≥ 15 years who believed that breathing other people's smoke causes serious illness and various specific diseases in non-smokers, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristics	Belief That Breathing Other People's Smoke Causes…			
	Serious Illness	Heart Disease in Adults	Lung Illnesses in Children	Lung Cancer in Adults
	Percentage(95% CI)			
Current Smokers[1]	79.8 (75.8, 83.2)	76.2 (71.8, 80.1)	79.7 (75.7, 83.2)	81.4 (77.6, 84.6)
Gender				
Male	79.7 (75.7, 83.2)	76.1 (71.6, 80.1)	79.5 (75.4, 83.1)	81.2 (77.4, 84.5)
Female	82.6 (65.1, 92.3)	81.9 (63.1, 92.3)	86.9 (69.9, 95.0)	86.9 (69.9, 95.0)
Age (years)				
15-24	85.1 (76.0, 91.1)	76.7 (65.0, 85.4)	78.4 (67.0, 86.7)	79.8 (68.6, 87.7)
25-44	79.4 (73.1, 84.4)	78.0 (71.7, 83.3)	80.5 (73.8, 85.7)	83.3 (77.8, 87.7)
45-64	80.1 (73.7, 85.2)	73.3 (66.1, 79.6)	83.3 (77.0, 88.1)	82.2 (76.0, 87.1)
65+	59.8 (42.3, 75.0)	67.7 (51.0, 80.8)	58.0 (40.9, 73.4)	61.2 (44.0, 76.0)
Residence				
Urban	81.1 (75.6, 85.5)	77.4 (71.5, 82.4)	79.5 (74.1, 84.0)	82.4 (77.3, 86.5)
Rural	76.7 (71.8, 80.9)	73.2 (67.9, 78.0)	80.1 (75.1, 84.2)	78.9 (74.0, 83.1)
Education level[2]				
Less than primary	62.1 (50.2, 72.8)	66.7 (54.7, 76.8)	67.4 (55.3, 77.5)	67.0 (55.0, 77.1)
Primary	73.9 (65.3, 81.0)	72.5 (63.8, 79.7)	76.9 (68.6, 83.6)	77.8 (69.0, 84.6)
Secondary/high school	83.9 (77.3, 88.9)	82.3 (77.1, 86.6)	85.8 (80.6, 89.8)	86.6 (81.6, 90.4)
College or above	85.1 (71.7, 92.8)	67.2 (47.2, 82.4)	75.2 (56.5, 87.7)	88.5 (76.5, 94.8)
Race/ethnicity				
Malay	84.2 (79.7, 87.8)	81.1 (76.3, 85.1)	82.9 (78.3, 86.7)	85.3 (81.0, 88.8)
Chinese	71.1 (56.3, 82.4)	57.9 (43.6, 71.0)	69.6 (54.6, 81.3)	67.8 (52.1, 80.3)
Indian	74.5 (58.2, 86.0)	71.9 (55.0, 84.2)	82.5 (67.5, 91.5)	80.0 (63.3, 90.3)
Other	72.2 (61.7, 80.7)	73.6 (64.9, 80.7)	74.0 (65.4, 81.1)	77.1 (68.7, 83.8)
Religion				
Muslim	82.3 (77.9, 86.0)	80.6 (76.3, 84.3)	82.1 (78.0, 85.5)	84.0 (80.2, 87.2)
Non-Muslim	72.7 (63.1, 80.5)	63.8 (53.8, 72.8)	72.9 (63.7, 80.5)	73.8 (63.8, 81.8)

[1] Includes daily and occasional (less than daily) smokers

[2] Education level is reported only among persons aged ≥25 years.

Table 9.2 (cont.): Percentage of adults aged ≥ 15 years who believed that breathing other people's smoke causes serious illness and various specific diseases in non-smokers, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristics	Belief That Breathing Other People's Smoke Causes…			
	Serious Illness	Heart Disease in Adults	Lung Illnesses in Children	Lung Cancer in Adults
	Percentage(95% CI)			
Non-smokers[1]	87.7 (86.0, 89.2)	81.2 (79.2, 83.1)	87.5 (85.8, 89.0)	87.6 (86.0, 89.2)
Gender				
Male	87.4 (84.6, 89.8)	82.6 (79.5, 85.3)	87.2 (84.3, 89.6)	89.7 (87.1, 91.8)
Female	87.8 (85.8, 89.5)	80.3 (77.9, 82.6)	87.7 (85.6, 89.5)	86.4 (84.3, 88.3)
Age (years)				
15-24	87.9 (84.1, 90.8)	83.1 (79.3, 86.3)	87.8 (84.3, 90.6)	88.4 (85.1, 91.0)
25-44	89.7 (87.3, 91.7)	81.5 (78.4, 84.3)	90.6 (88.2, 92.5)	90.2 (87.8, 92.1)
45-64	88.1 (85.3, 90.5)	82.3 (78.9, 85.3)	87.4 (84.3, 90.0)	87.3 (83.9, 90.0)
65+	75.7 (68.6, 81.6)	68.9 (61.1, 75.7)	71.5 (63.9, 78.0)	73.5 (66.1, 79.8)
Residence				
Urban	88.2 (86.1, 90.0)	82.1 (79.5, 84.4)	87.7 (85.5, 89.7)	88.0 (85.8, 89.9)
Rural	86.3 (83.5, 88.7)	78.8 (75.9, 81.5)	86.9 (84.5, 88.9)	86.7 (84.1, 88.8)
Education level[2]				
Less than primary	72.6 (66.8, 77.7)	70.3 (64.4, 75.5)	71.9 (66.2, 77.0)	73.5 (67.7, 78.6)
Primary	86.7 (83.0, 89.6)	77.8 (73.3, 81.7)	85.2 (81.6, 88.2)	85.1 (81.3, 88.3)
Secondary/high school	91.1 (88.8, 93.1)	85.8 (82.5, 88.6)	92.2 (89.8, 94.1)	92.6 (90.2, 94.4)
College or above	94.0 (89.0, 96.8)	79.1 (71.2, 85.4)	93.2 (85.4, 96.9)	90.6 (83.2, 95.0)
Race/ethnicity				
Malay	88.9 (86.6, 90.9)	85.1 (82.9, 87.1)	90.8 (88.8, 92.5)	90.9 (89.2, 92.3)
Chinese	85.0 (81.4, 88.0)	74.1 (68.6, 78.9)	83.4 (79.3, 86.8)	84.1 (79.3, 87.9)
Indian	89.7 (83.6, 93.6)	78.1 (69.1, 85.0)	81.6 (72.9, 88.0)	80.0 (71.4, 86.5)
Other	84.4 (79.6, 88.2)	76.9 (71.8, 81.3)	83.4 (79.0, 87.0)	84.4 (80.4, 87.7)
Religion				
Muslim	88.7 (86.5, 90.6)	84.4 (82.3, 86.3)	89.9 (88.1, 91.5)	90.2 (88.6, 91.6)
Non-Muslim	85.9 (83.0, 88.3)	75.4 (71.4, 79.0)	83.1 (79.6, 86.0)	83.0 (79.4, 86.1)

[1] Includes former and never smokers.

[2] Education level is reported only among persons aged ≥25 years.

Table 9.3: Percentage of adults aged ≥15 years who thought that indoor smoking should be prohibited in various places, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Who Believed That Smoking Should Be Prohibited Indoors at…								
	Workplaces	Restaurants	Bars	Hotels	Casinos	Discos	Karaoke Centers	Public Transportation Terminals	Shopping Centers
	Percentage(95% CI)								
Overall	90.4 (89.0, 91.6)	83.5 (81.4, 85.4)	43.9 (41.4, 46.5)	78.7 (76.7, 80.5)	40.0 (37.4, 42.6)	37.8 (35.3, 40.4)	50.5 (48.0, 53.0)	85.2 (83.3, 86.9)	94.4 (93.2, 95.3)
Gender									
Male	88.6 (86.4, 90.4)	79.1 (76.1, 81.9)	41.7 (38.4, 45.0)	76.7 (73.8, 79.4)	39.4 (36.2, 42.6)	36.3 (33.1, 39.5)	48.0 (44.9, 51.2)	84.2 (81.7, 86.5)	94.8 (93.2, 96.0)
Female	92.4 (90.7, 93.8)	88.1 (85.9, 89.9)	46.3 (43.2, 49.5)	80.7 (78.4, 82.9)	40.6 (37.4, 43.9)	39.5 (36.3, 42.7)	53.1 (49.7, 56.4)	86.2 (83.7, 88.3)	93.9 (92.2, 95.2)
Age (years)									
15-24	89.4 (86.0, 92.0)	82.7 (78.3, 86.4)	44.6 (39.6, 49.8)	82.0 (78.1, 85.3)	39.6 (34.8, 44.6)	38.2 (33.6, 43.0)	53.2 (48.8, 57.6)	85.4 (81.8, 88.4)	95.3 (93.0, 96.9)
25-44	91.0 (89.0, 92.6)	82.7 (79.9, 85.1)	41.8 (38.6, 45.2)	77.6 (74.9, 80.2)	39.6 (36.5, 42.8)	36.5 (33.4, 39.7)	50.3 (47.1, 53.5)	84.1 (81.4, 86.5)	94.7 (93.0, 96.0)
45-64	91.7 (89.6, 93.4)	86.5 (83.5, 89.0)	46.1 (42.3, 49.9)	80.1 (76.9, 83.0)	41.5 (37.8, 45.4)	40.0 (36.1, 44.1)	50.3 (46.5, 54.2)	87.6 (84.8, 89.9)	95.4 (93.6, 96.7)
65+	86.7 (81.4, 90.6)	81.0 (74.5, 86.2)	46.3 (39.5, 53.3)	67.3 (60.5, 73.4)	38.4 (31.9, 45.3)	36.9 (30.1, 44.2)	41.5 (34.5, 48.8)	82.5 (76.1, 87.5)	85.5 (79.4, 90.0)
Residence									
Urban	91.1 (89.4, 92.6)	83.3 (80.5, 85.7)	45.6 (42.4, 48.8)	79.7 (77.2, 81.9)	41.3 (38.0, 44.6)	39.5 (36.3, 42.9)	51.9 (48.7, 55.1)	85.3 (82.9, 87.4)	94.8 (93.3, 96.0)
Rural	88.6 (86.2, 90.6)	84.0 (81.4, 86.3)	39.6 (36.1, 43.1)	76.1 (73.2, 78.8)	36.7 (33.4, 40.1)	33.5 (30.4, 36.7)	46.8 (43.3, 50.4)	84.9 (82.1, 87.3)	93.1 (91.1, 94.6)
Education level[1]									
Less than primary	80.8 (76.1, 84.8)	77.1 (72.0, 81.6)	40.4 (34.7, 46.4)	63.7 (58.3, 68.7)	33.4 (28.2, 38.9)	30.6 (25.6, 36.0)	35.8 (30.8, 41.3)	77.1 (71.0, 82.2)	81.6 (76.3, 86.0)
Primary	90.2 (87.6, 92.3)	84.5 (81.2, 87.4)	44.9 (40.9, 48.9)	77.7 (73.9, 81.0)	42.4 (38.3, 46.6)	39.2 (35.0, 43.5)	49.0 (44.7, 53.3)	84.3 (80.4, 87.6)	93.9 (91.3, 95.8)
Secondary/high school	93.7 (91.6, 95.2)	84.8 (81.8, 87.3)	43.4 (39.7, 47.1)	79.8 (76.6, 82.6)	39.6 (36.0, 43.3)	38.2 (34.6, 41.9)	52.2 (48.4, 56.0)	87.1 (84.5, 89.3)	97.3 (96.2, 98.1)
College or above	93.6 (89.7, 96.0)	86.0 (79.8, 90.6)	44.7 (37.5, 52.2)	83.8 (77.6, 88.6)	43.5 (36.4, 50.8)	39.6 (33.1, 46.5)	55.2 (48.0, 62.3)	89.6 (83.9, 93.5)	95.8 (91.2, 98.1)
Race/ethnicity									
Malay	91.8 (90.1, 93.3)	84.8 (82.0, 87.2)	40.9 (37.8, 44.1)	79.0 (76.6, 81.3)	35.5 (32.5, 38.5)	34.9 (32.0, 38.0)	49.0 (45.7, 52.2)	86.9 (84.6, 88.8)	95.4 (93.8, 96.5)
Chinese	92.9 (90.4, 94.8)	87.3 (83.6, 90.3)	57.6 (52.0, 63.1)	85.2 (81.3, 88.4)	57.0 (51.2, 62.7)	49.4 (43.4, 55.4)	61.7 (57.0, 66.3)	84.9 (80.8, 88.3)	95.6 (93.0, 97.3)
Indian	91.4 (85.5, 95.0)	83.2 (75.2, 89.0)	43.6 (35.9, 51.5)	76.3 (69.2, 82.3)	42.5 (35.6, 49.8)	41.4 (35.1, 47.9)	52.5 (44.7, 60.1)	90.6 (85.8, 93.9)	95.8 (92.1, 97.8)
Other	79.8 (74.4, 84.3)	72.5 (66.3, 77.9)	38.4 (32.0, 45.3)	69.7 (64.4, 74.5)	34.2 (28.1, 40.8)	31.7 (25.8, 38.2)	39.7 (33.6, 46.1)	74.2 (68.5, 79.1)	87.0 (82.7, 90.5)
Religion									
Muslim	90.0 (88.2, 91.6)	82.6 (79.9, 85.0)	39.9 (37.0, 42.9)	77.9 (75.5, 80.2)	34.4 (31.6, 37.3)	33.8 (31.1, 36.7)	47.2 (44.1, 50.3)	85.1 (82.8, 87.1)	94.6 (93.1, 95.8)
Non-Muslim	91.2 (89.0, 93.0)	85.3 (82.1, 88.0)	52.2 (47.9, 56.3)	80.3 (76.9, 83.3)	51.1 (47.0, 55.2)	45.7 (41.5, 50.0)	56.9 (53.2, 60.4)	85.4 (82.5, 87.9)	93.9 (91.8, 95.6)

[1] Education level is reported only among persons aged ≥25 years.

Table 9.3 (cont.): Percentage of adults aged ≥15 years who thought that indoor smoking should be prohibited in various places, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Who Believe That Smoking Should Be Prohibited Indoors at…								
	Workplaces	Restaurants	Bars	Hotels	Casinos	Discos	Karaoke Centers	Public Transportation Terminals	Shopping Centers
	Percentage(95% CI)								
Current Smokers[1]	83.6 (80.1, 86.6)	72.7 (68.3, 76.7)	34.1 (30.2, 38.1)	70.8 (66.6, 74.7)	29.1 (25.3, 33.4)	26.7 (23.2, 30.5)	38.0 (33.8, 42.4)	77.7 (73.3, 81.5)	92.3 (89.3, 94.5)
Gender									
Male	83.4 (79.9, 86.5)	72.9 (68.4, 76.9)	34.6 (30.7, 38.7)	71.2 (66.9, 75.2)	29.3 (25.3, 33.6)	27.1 (23.5, 31.0)	38.6 (34.3, 43.1)	77.9 (73.4, 81.8)	92.3 (89.3, 94.6)
Female	91.0 (79.0, 96.5)	65.9 (44.6, 82.3)	10.5 (4.2, 23.9)	52.6 (30.5, 73.6)	22.5 (10.0, 43.4)	6.9 (2.3, 18.6)	13.8 (5.5, 30.8)	66.9 (42.2, 84.8)	90.4 (74.2, 96.9)
Age (years)									
15-24	78.9 (68.2, 86.8)	70.8 (59.8, 79.8)	36.3 (26.2, 47.8)	75.1 (64.1, 83.6)	27.4 (18.6, 38.4)	26.5 (17.7, 37.7)	35.8 (25.8, 47.2)	70.5 (58.4, 80.3)	91.4 (80.9, 96.4)
25-44	84.4 (79.5, 88.3)	73.1 (67.0, 78.3)	34.1 (28.8, 39.9)	69.2 (63.1, 74.7)	29.1 (23.4, 35.4)	25.7 (20.9, 31.2)	39.1 (33.6, 45.0)	77.4 (71.9, 82.2)	93.3 (89.0, 96.0)
45-64	88.5 (83.4, 92.1)	74.2 (65.6, 81.2)	34.2 (27.3, 41.8)	74.9 (68.0, 80.8)	34.2 (27.7, 41.3)	31.7 (24.9, 39.4)	41.1 (33.7, 48.9)	86.3 (80.1, 90.8)	93.8 (89.1, 96.6)
65+	70.3 (50.7, 84.5)	69.6 (52.0, 82.9)	23.2 (12.7, 38.6)	49.6 (34.1, 65.2)	12.2 (5.5, 24.9)	12.7 (5.7, 25.9)	19.9 (10.8, 33.8)	68.0 (49.4, 82.2)	76.5 (57.2, 88.8)
Residence									
Urban	84.5 (79.8, 88.3)	71.0 (65.2, 76.2)	33.8 (28.8, 39.1)	70.8 (65.2, 75.9)	27.9 (22.9, 33.5)	26.0 (21.5, 31.0)	37.2 (31.8, 43.0)	75.9 (69.9, 81.0)	92.4 (88.2, 95.2)
Rural	81.5 (76.8, 85.3)	76.8 (71.6, 81.3)	34.8 (29.8, 40.1)	70.8 (65.9, 75.2)	32.2 (27.3, 37.6)	28.4 (23.5, 33.9)	39.9 (34.5, 45.6)	81.9 (77.5, 85.7)	91.9 (88.8, 94.3)
Education level[2]									
Less than primary	68.8 (56.4, 79.0)	63.2 (49.5, 75.0)	28.6 (19.0, 40.6)	57.9 (45.4, 69.5)	20.8 (12.9, 31.7)	21.1 (13.2, 32.0)	25.5 (16.7, 36.9)	70.4 (56.1, 81.6)	77.2 (63.4, 86.9)
Primary	86.2 (80.7, 90.4)	78.1 (70.8, 84.0)	34.0 (27.0, 41.8)	72.6 (64.9, 79.1)	32.4 (25.9, 39.7)	26.7 (20.7, 33.8)	38.9 (31.6, 46.7)	80.8 (73.0, 86.8)	90.9 (83.1, 95.3)
Secondary/high school	88.5 (82.8, 92.5)	72.5 (65.7, 78.5)	34.9 (28.8, 41.5)	71.4 (64.7, 77.4)	29.6 (23.8, 36.2)	29.0 (23.3, 35.5)	42.1 (35.4, 49.1)	82.4 (77.2, 86.7)	97.0 (94.4, 98.4)
College or above	81.3 (66.5, 90.4)	70.7 (53.0, 83.8)	31.8 (19.9, 46.6)	65.2 (47.2, 79.7)	29.8 (15.0, 50.4)	22.6 (12.1, 38.2)	35.1 (22.4, 50.2)	72.3 (54.4, 85.1)	93.3 (80.2, 98.0)
Race/ethnicity									
Malay	85.8 (81.6, 89.2)	75.4 (69.9, 80.1)	33.0 (28.3, 38.1)	72.0 (66.9, 76.6)	28.8 (24.5, 33.4)	27.4 (23.3, 31.9)	39.3 (34.0, 44.9)	79.6 (74.2, 84.1)	93.3 (89.4, 95.9)
Chinese	90.4 (77.2, 96.3)	76.7 (63.4, 86.2)	46.0 (31.9, 60.7)	77.1 (65.5, 85.6)	32.5 (20.3, 47.6)	25.3 (14.5, 40.2)	41.1 (28.4, 55.1)	76.2 (61.3, 86.7)	96.5 (88.8, 99.0)
Indian	83.6 (68.2, 92.4)	77.7 (57.7, 89.9)	32.9 (18.7, 51.2)	82.8 (68.9, 91.3)	34.3 (20.5, 51.4)	31.9 (17.9, 50.3)	46.2 (29.7, 63.6)	87.7 (74.1, 94.7)	95.7 (86.9, 98.7)
Other	70.5 (60.1, 79.2)	57.8 (47.1, 67.9)	29.9 (21.6, 39.7)	56.4 (46.1, 66.3)	25.7 (17.7, 35.8)	22.5 (14.9, 32.6)	27.0 (18.6, 37.5)	66.9 (57.0, 75.4)	83.8 (73.7, 90.5)
Religion									
Muslim	83.0 (78.7, 86.6)	71.7 (66.4, 76.4)	32.4 (28.1, 37.1)	69.8 (65.0, 74.3)	27.7 (23.8, 32.0)	26.5 (22.6, 30.8)	37.4 (32.4, 42.6)	76.9 (71.9, 81.2)	92.7 (89.1, 95.1)
Non-Muslim	85.2 (78.1, 90.2)	75.6 (67.1, 82.6)	38.8 (30.1, 48.2)	73.6 (65.5, 80.3)	33.2 (25.4, 42.0)	27.3 (19.9, 36.1)	39.9 (31.8, 48.6)	79.8 (71.2, 86.4)	91.2 (84.8, 95.1)

[1] Includes daily and occasional (less than daily) smokers.

[2] Education level is reported only among persons aged ≥25 years.

Table 9.3 (cont.): Percentage of adults aged ≥15 years who thought that indoor smoking should be prohibited in various places, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Who Believe That Smoking Should Be Prohibited Indoors at…								
	Workplaces	Restaurants	Bars	Hotels	Casinos	Discos	Karaoke Centers	Public Transportation Terminals	Shopping Centers
	Percentage(95% CI)								
Non-smokers[1]	92.4 (91.1, 93.6)	86.7 (84.6, 88.6)	46.9 (44.1, 49.7)	81.0 (79.0, 83.0)	43.2 (40.4, 46.1)	41.2 (38.4, 43.9)	54.2 (51.6, 56.8)	87.4 (85.6, 89.1)	95.0 (93.8, 96.0)
Gender									
Male	92.5 (90.1, 94.4)	84.0 (80.3, 87.2)	47.2 (42.6, 51.8)	81.0 (77.3, 84.3)	47.3 (42.9, 51.6)	43.4 (39.2, 47.7)	55.4 (51.5, 59.3)	89.2 (86.6, 91.3)	96.7 (95.1, 97.8)
Female	92.4 (90.7, 93.8)	88.3 (86.2, 90.2)	46.7 (43.5, 49.9)	81.0 (78.7, 83.2)	40.8 (37.6, 44.1)	39.8 (36.7, 43.1)	53.5 (50.2, 56.8)	86.4 (83.9, 88.5)	93.9 (92.3, 95.2)
Age (years)									
15-24	91.5 (88.2, 93.9)	85.1 (80.4, 88.9)	46.3 (40.8, 51.9)	83.3 (79.3, 86.7)	42.1 (36.8, 47.5)	40.5 (35.4, 45.8)	56.7 (52.1, 61.2)	88.4 (85.1, 91.1)	96.1 (93.8, 97.6)
25-44	93.6 (91.7, 95.1)	86.6 (83.7, 89.1)	45.0 (41.4, 48.7)	81.1 (78.2, 83.6)	43.9 (40.2, 47.7)	40.9 (37.0, 44.8)	54.8 (51.1, 58.5)	86.8 (83.8, 89.4)	95.2 (93.4, 96.6)
45-64	92.7 (90.3, 94.5)	90.1 (87.4, 92.2)	49.6 (45.1, 54.0)	81.6 (78.0, 84.7)	43.7 (39.4, 48.0)	42.5 (38.2, 46.9)	53.0 (48.8, 57.2)	87.9 (84.8, 90.4)	95.8 (94.0, 97.1)
65+	89.6 (84.4, 93.2)	83.0 (75.4, 88.6)	50.4 (42.9, 57.9)	70.4 (63.1, 76.8)	43.1 (35.9, 50.5)	41.2 (33.8, 49.1)	45.3 (37.8, 53.0)	85.1 (78.9, 89.6)	87.0 (81.6, 91.1)
Residence									
Urban	93.0 (91.3, 94.4)	86.9 (84.1, 89.2)	49.1 (45.5, 52.6)	82.3 (79.7, 84.6)	45.2 (41.6, 48.9)	43.5 (39.9, 47.1)	56.2 (52.8, 59.5)	88.0 (85.7, 90.0)	95.5 (94.0, 96.7)
Rural	90.9 (88.5, 92.8)	86.3 (83.5, 88.7)	41.1 (37.3, 44.9)	77.8 (74.5, 80.8)	38.1 (34.6, 41.7)	35.1 (31.8, 38.5)	49.1 (45.3, 52.8)	85.8 (82.6, 88.5)	93.5 (91.3, 95.1)
Education level[2]									
Less than primary	83.8 (78.4, 88.0)	80.5 (75.3, 84.9)	43.3 (37.1, 49.8)	65.1 (59.4, 70.3)	36.4 (30.8, 42.5)	32.9 (27.5, 38.8)	38.4 (32.6, 44.5)	78.7 (72.8, 83.7)	82.7 (77.7, 86.8)
Primary	91.8 (89.0, 94.0)	87.2 (83.6, 90.2)	49.4 (44.9, 53.8)	79.8 (75.8, 83.3)	46.5 (41.6, 51.6)	44.4 (39.5, 49.3)	53.1 (48.3, 57.9)	85.8 (81.2, 89.3)	95.2 (93.0, 96.7)
Secondary/high school	95.5 (93.7, 96.8)	89.2 (86.2, 91.6)	46.4 (42.2, 50.8)	82.8 (79.4, 85.7)	43.3 (39.1, 47.6)	41.5 (37.4, 45.7)	55.9 (51.8, 60.0)	88.8 (85.8, 91.2)	97.4 (96.0, 98.4)
College or above	96.3 (92.7, 98.2)	89.5 (83.9, 93.3)	47.7 (39.7, 55.8)	88.1 (82.3, 92.1)	46.6 (38.9, 54.4)	43.5 (35.7, 51.6)	59.9 (51.8, 67.4)	93.6 (89.5, 96.1)	96.4 (90.6, 98.7)
Race/ethnicity									
Malay	93.8 (92.1, 95.2)	87.8 (85.1, 90.1)	43.4 (39.9, 47.0)	81.3 (78.7, 83.7)	37.7 (34.3, 41.1)	37.4 (34.1, 40.8)	52.1 (48.6, 55.6)	89.2 (87.1, 91.1)	96.0 (94.5, 97.1)
Chinese	93.4 (91.0, 95.1)	89.3 (86.0, 91.9)	59.7 (53.8, 65.4)	86.7 (82.6, 89.9)	61.5 (55.1, 67.5)	53.8 (47.4, 60.0)	65.5 (60.5, 70.1)	86.5 (82.7, 89.5)	95.5 (92.4, 97.3)
Indian	93.3 (87.6, 96.4)	84.6 (75.2, 90.8)	46.2 (38.2, 54.3)	74.8 (66.7, 81.5)	44.5 (36.5, 52.9)	43.6 (36.3, 51.3)	54.0 (45.1, 62.6)	91.3 (86.0, 94.7)	95.8 (91.3, 98.1)
Other	83.7 (78.1, 88.1)	78.8 (72.5, 83.9)	42.1 (34.7, 49.8)	75.3 (69.4, 80.4)	37.8 (30.9, 45.1)	35.5 (28.7, 43.0)	45.0 (38.1, 52.1)	77.2 (71.1, 82.4)	88.4 (83.5, 92.0)
Religion									
Muslim	92.4 (90.6, 93.9)	86.3 (83.6, 88.6)	42.5 (39.3, 45.8)	80.7 (78.1, 83.0)	36.7 (33.6, 40.0)	36.4 (33.2, 39.6)	50.6 (47.3, 53.9)	87.9 (85.5, 89.9)	95.3 (93.8, 96.4)
Non-Muslim	92.5 (90.3, 94.3)	87.4 (84.0, 90.2)	55.1 (50.6, 59.5)	81.8 (78.1, 84.9)	55.1 (50.4, 59.6)	49.8 (45.2, 54.4)	60.7 (56.8, 64.4)	86.7 (83.8, 89.1)	94.6 (92.3, 96.2)

[1] Includes former and never smokers.

[2] Education level is reported only among persons aged ≥25 years.

Table 9.4: Percentage of adults aged ≥15 years who favoured tobacco control laws, by smoking status and selected demographic characteristics – GATS Malaysia, 2011.

Demographic Characteristic	Adults Who Favoured Increasing Taxes on Tobacco Products			Adults Who Favoured Prohibiting the Display of Tobacco Products at Points-of-Sale		
	Overall	Current Smokers[1]	Non-smokers[2]	Overall	Current Smokers[1]	Non-smokers[2]
	Percentage(95% CI)					
Overall	70.6 (68.5, 72.7)	32.0 (28.1, 36.3)	82.0 (79.9, 84.0)	75.6 (73.6, 77.4)	47.9 (43.5, 52.2)	83.8 (81.8, 85.6)
Gender						
Male	59.8 (56.7, 62.9)	32.1 (28.0, 36.5)	81.2 (77.7, 84.2)	68.3 (65.5, 71.0)	48.0 (43.5, 52.5)	83.9 (80.8, 86.6)
Female	82.0 (79.4, 84.4)	29.4 (14.4, 50.7)	82.6 (80.0, 84.9)	83.2 (80.9, 85.4)	41.3 (22.6, 62.8)	83.7 (81.3, 85.8)
Age (years)						
15-24	72.9 (68.6, 76.8)	28.4 (19.2, 39.8)	81.8 (77.7, 85.3)	77.9 (73.5, 81.7)	44.0 (32.8, 55.9)	84.7 (80.2, 88.3)
25-44	69.8 (66.8, 72.6)	32.8 (27.8, 38.3)	84.5 (81.3, 87.2)	74.7 (71.8, 77.3)	47.2 (41.3, 53.3)	85.7 (83.1, 87.9)
45-64	69.5 (65.9, 73.0)	32.0 (24.9, 40.0)	80.4 (76.6, 83.7)	75.7 (72.2, 78.9)	52.1 (43.7, 60.4)	82.5 (78.8, 85.7)
65+	70.5 (63.8, 76.4)	39.5 (24.5, 56.8)	75.9 (68.9, 81.8)	71.1 (64.7, 76.8)	50.4 (34.3, 66.4)	74.8 (67.7, 80.7)
Residence						
Urban	71.1 (68.4, 73.6)	30.0 (24.9, 35.7)	82.8 (80.0, 85.3)	76.0 (73.5, 78.3)	47.6 (41.9, 53.4)	84.1 (81.5, 86.4)
Rural	69.5 (66.4, 72.5)	36.7 (31.7, 42.1)	80.0 (76.9, 82.8)	74.5 (71.9, 77.0)	48.5 (43.0, 54.1)	82.8 (80.1, 85.3)
Education level						
Less than primary	62.7 (57.5, 67.6)	36.3 (25.0, 49.3)	69.0 (63.2, 74.3)	65.2 (59.9, 70.1)	41.3 (29.8, 53.8)	70.8 (65.1, 76.0)
Primary	65.9 (61.7, 69.9)	28.1 (22.4, 34.5)	80.8 (76.9, 84.2)	71.6 (67.6, 75.3)	44.2 (36.1, 52.6)	82.6 (78.7, 85.9)
Secondary/high school	72.5 (69.3, 75.5)	36.3 (29.8, 43.4)	85.7 (82.5, 88.3)	77.8 (74.7, 80.7)	54.5 (47.7, 61.2)	86.3 (83.1, 88.9)
College or above	77.0 (69.2, 83.4)	32.1 (19.3, 48.2)	87.2 (78.4, 92.8)	81.3 (75.4, 86.0)	48.6 (34.7, 62.8)	88.8 (81.9, 93.2)
Race/ethnicity						
Malay	73.2 (70.4, 75.8)	34.7 (29.7, 40.0)	85.6 (83.1, 87.7)	78.2 (75.9, 80.4)	51.7 (46.7, 56.7)	86.7 (84.3, 88.9)
Chinese	70.3 (65.3, 74.9)	26.5 (15.6, 41.1)	78.0 (73.2, 82.1)	73.3 (68.2, 77.9)	36.4 (24.3, 50.6)	80.1 (75.1, 84.3)
Indian	61.8 (54.5, 68.6)	16.8 (6.7, 36.1)	72.5 (65.5, 78.5)	73.6 (66.6, 79.6)	50.1 (33.7, 66.6)	79.1 (72.4, 84.6)
Other	66.0 (60.4, 71.2)	33.3 (25.0, 42.7)	79.7 (72.7, 85.2)	68.3 (62.9, 73.2)	40.9 (31.3, 51.1)	79.5 (73.9, 84.1)
Religion						
Muslim	72.3 (69.7, 74.7)	34.3 (29.8, 39.0)	85.1 (82.6, 87.2)	76.8 (74.6, 78.9)	49.7 (45.0, 54.4)	86.0 (83.6, 88.0)
Non-Muslim	67.7 (63.9, 71.2)	25.7 (18.8, 34.0)	76.8 (73.1, 80.2)	73.0 (69.4, 76.3)	42.6 (34.3, 51.5)	79.7 (76.1, 82.9)

[1] Includes daily and occasional (less than daily) smokers.
[2] Includes former and never smokers.

10

RECOMMENDATIONS & CONCLUSIONS

10. RECOMMENDATIONS AND CONCLUSIONS

Ultimately, the single item that can eliminate future tobacco-related deaths and illnesses is significant continuous reduction in the prevalence of tobacco use. This can be attained by preventing tobacco uptake especially by youths and tobacco cessation by current users.

Malaysia became a party to the WHO Framework Convention on Tobacco Control (WHO FCTC) in December 2005. This international legal tool, together with its guidelines, provides the foundation for Parties to implement and manage tobacco control measures in their respective nations. The Government of Malaysia, as a Party to this international treaty, is obliged to adhere and fulfill all the provisions contained in this treaty.

However, the provisions in this Convention are widely diverse and each requires various degrees of commitment and resources. Therefore, as lead agency for health that assists countries to realise the objectives of the WHO FCTC, the World Health Organisation had developed and introduced the MPOWER Package; this is a fundamental component of the WHO Action Plan for the Prevention and Control of Non-communicable Diseases.

This Package consists of six prioritised tobacco control measures of proven cost-effectiveness and has the ability to reduce the demand for tobacco and hence subsequently save lives. These are:

1. **M**onitor tobacco use
2. **P**rotect people from tobacco smoke
3. **O**ffer help to quit tobacco use
4. **W**arn about the dangers of tobacco
5. **E**nforce bans on tobacco advertising and promotion
6. **R**aise taxes on tobacco products.

MPOWER Package is meant to help in the planning, building and evaluation of national and international partnerships and encourages policy-makers as well as other stakeholders to envision a world free of tobacco use.

10.1 Recommendations[1]

In this chapter, focus will be primarily given to all the six elements of the MPOWER Package whereby, based on the relevant findings from GATS Malaysia, appropriate recommendations relating to each of these elements will be put forward.

[1] The policy recommendations in this chapter are consistent with the recommendations from the WHO FCTC and MPOWER. These recommendations are views expressed by the Malaysian government and are not necessarily those of the U.S. Centers for Disease Control and Prevention (CDC).

The process from which these recommendations were drawn involved a series of discussions held with tobacco control stakeholders especially officers from the Tobacco Control and FCTC Unit, Disease Control Division, Ministry of Health. These officers are also investigators in the Global Adult Tobacco Survey (GATS).

10.1.1 Monitor Tobacco Use (WHO FCTC Article 20 & 21)

In order to implement and appraise effective tobacco control policies, good reliable data is crucial. Only through accurate measurement of the tobacco epidemic and fair evaluation of the control actions, can interventions be effectively managed and improved.

Prior to GATS Malaysia 2011, prevalence data on tobacco use amongst adults and other tobacco control related statistics were derived from the first, second and third National Health and Morbidity Surveys (NHMS-I, NHMS-II and NHMS-III) that were respectively carried out in 1986, 1996 and 2006. In these studies, smoking is one of over 18 modules being researched. As for statistics on youth tobacco consumption data were gathered from two prior Global Youth Tobacco Surveys (i.e. GYTS 1 & 2) conducted in 2003 and 2009[13,14].

Contrary to NHMS, the Global Adult Tobacco Survey (GATS) is solely focused on the tobacco issue and thus giving it the desired depth to the study. Another superior feature of GATS is the standardisation of its tools that allows for the potentials of results to be compared across countries. Findings of GATS Malaysia will be shared with international community through the WHO and CDC.

Under Article 20 & 21 of the WHO FCTC, Malaysia is obligated to provide regular reports of the country's progress on implementing this treaty. Each report is very detail and has to be submitted to the WHO FCTC Secretariat every 2 years.

Therefore, it is recommended that:

i. GATS Malaysia is repeated every 4 years so as to effectively tract the course of the epidemic against the tobacco control actions being carried out either independently or incorporated with other surveys. Although some tobacco control interventions may take more time to bring about impact, but most intervention like the impact of tobacco tax and price increase/outcome for implementation of pictorial health warning on population's attitude and behavior can be detected within a short period, some even in weeks or days. This frequency of repeating GATS is to synchronize with the cycle for Tobacco Control & FCTC Unit, Disease Control Division to submit country reports to the international FCTC Secretariat in Geneva every 2 to 3 years, whilst the content of the reporting instrument is very detailed that can only be provided from GATS. Hence, it is important that adequate funding to repeat GATS be allocated by the MOH;

ii. The capacity of the Ministry of Health as the key agency responsible for tobacco control and the national Secretariat for WHO FCTC implementation be strengthened. Current status of the Tobacco Control & FCTC Unit could be elevated and reorganised so as to allocate officers with defined roles and responsibilities to efficiently maintain a proposed tobacco control surveillance system. This is in line with Cabinet's decision when that Malaysia was about to ratify the WHO FCTC, whereby it was approved that MOH become the national secretariat where a dedicated organized team was to be established. A proposal paper for posts submitted as part of *Dasar Baru* then was approved by Public Service Department (JPA) but not all designated posts were given upfront. The idea was for the organization to be strengthened and built up with time. It is appropriate that the Malaysian Government, particularly MOH, could put a high priority on this matter since the toll for tobacco especially smoking and the consequences of its use in our society is very huge in terms of health (especially non-communicable diseases), economic and social burden;

iii. Collaboration between MOH tobacco control and research experts with those from other institutions especially the academia be heightened, and a functional network of these experts be established by National Institutes of Health (NIH) within MOH;

iv. The Tobacco Control Research Committee be activated and spearheaded by the MOH in order to update members concerning tobacco related researches nationwide and internationally. This Committee could also determine the future direction and coordination of tobacco related researches in Malaysia. There is much research on tobacco and tobacco control in Malaysia carried out by numerous parties within and outside the health sector. This research includes health, social economic (study on smuggling), and other impacts and can provide valuable input for tobacco control policy development and evaluation for the Government of Malaysia. Hence these studies could be centrally collated for relevant use;

v. Relevant research findings and information derived from the proposed tobacco control surveillance system be more effectively communicated through available channels to the appropriate agencies and/or populations. Formal and informal platforms could be used including the mass media. Friendly leaflets for commune updates and policy briefs for decision makers could be pursued.

10.1.2 Protection from Tobacco Smoke (WHO FCTC Article 8)

Tobacco smoke is highly toxic and there is no safe level for exposure to secondhand smoke (SHS). More than 4000 compounds have been identified in tobacco smoke and over 50 of these are carcinogenic. Air pollution from SHS is increasingly becoming an important human rights concern. The GATS findings show that every month over 30% – 45% of people are forced to breathe SHS at home and/or the workplace.

Apart from protecting non-smokers from the hazards of SHS, smoke-free policies also push smokers to quit and de-normalise the smoking habit within a society. According to the WHO FCTC Article 8 Guidelines, Party countries are encouraged to enact 100% smoke-free laws that would extensively cover public places. Exemptions given for 'smoking rooms' within designated 'no smoking' areas or use of mechanical systems like ventilation or extraction fans do not eliminate the real threats of SHS to public health.

Therefore, it is recommended that:

i. All public eating places both air-conditioned and non-air conditioned be made 100% smoke-free. At present, only air-conditioned restaurants are smoke-free, however, the current law allows premise owners to allocate smoking area;

ii. Effective and efficient enforcement of smoke-free areas be implemented throughout the country. Dedicated teams located at every district health offices could be strengthened to carry out enforcement activities and their performance regularly monitored;

iii. A channel be set up (complaint-line) to encourage the public to inform the authorities of any violations to the smoke-free law;

iv. At the national level, a 100% smoke-free law be enacted which is a national obligation under Article 8 of the WHO FCTC. To be 100% smoke-free, the law should not include any legal enabling clause that provides exemption for smoke-free localities;

v. Designation of 100% smoke-free areas be expanded to pubs, bars, nightclubs, discos and casinos. More public places including open spaces frequented by families like parks could be designated 'no-smoking' areas as well;

vi. Legislative provisions be considered for protection from SHS beyond public places example, at all workplaces and also the home settings, where passive smoking seem to be very prevalent;

vii. Nationwide health promotional campaigns carried out to disseminate truths about SHS and empower the general public especially non-smokers to exercise their rights to breath clean unpolluted air be continued and intensified;

viii. Train young people to understand the smoke-free issue and encourage them to support 100% smoke-free policies.

10.1.3 Offer Help to Quit (WHO FCTC Article 14)

Nicotine in tobacco is an extremely addictive substance that has hooked 4.75 million or an overall 23.1% of all Malaysian adults, and they are indeed the people most at risk to succumb to the tobacco hazards. If tobacco related diseases and deaths in this country are to be averted, these nicotine addicts must quit using tobacco as soon as possible.

Management of non-communicable diseases (NCD) attributed to tobacco like treatment for cancer, cardiovascular diseases, respiratory diseases and stroke incurs heavy financial burden, while premature deaths from these conditions lead to loss of productivity as well as insurance and damages costs to the Government, employers and families. Thus provision of tobacco cessation services is a highly cost-effective investment that brings about huge social and economic returns in the middle and long term.

From the GATS analysis, about half of adults who used tobacco in the 12 months preceding the survey attempted to quit their bad habit, and almost 15% of current smokers were interested to quit in the next 12 months.

Guidelines for WHO FCTC Article 14 provide detailed advice to strengthen or create a sustainable infrastructure that motivates attempts to quit, ensures wide access to support for tobacco users who wish to quit and provides sustainable resources to ensure that such support is available. The guideline also identify the key effective measures needed to promote tobacco cessation and incorporate tobacco dependence treatment into national tobacco control programmes and health-care systems

Therefore, it is recommended that:

i. Extensive promotion about quitting tobacco and availability of MOH smoking cessation services be carried out via numerous channels including posters, leaflets, newspapers, TV, radio, websites and '*Tak Nak Merokok*' campaign materials so as to increase awareness and subsequently utilisation of services;

ii. The revised version of the Clinical Practice Guidelines on Treatment of Tobacco Dependence 2003 be updated with findings from GATS Malaysia 2011 and be published as soon as possible;

iii. Strengthen the Tobacco Control & FCTC Unit in MOH to establish a comprehensive National Tobacco Cessation Programme using the WHO FCTC Article 14 Guidelines as its basis;

iv. Thorough training sessions on tobacco control and smoking cessation as well as capacity building programmes be planned and initiated for broad groups of medical and health providers including doctors, dentist, pharmacist, nurses and other allied health personnel. All health-care workers could be encouraged to become supporters for comprehensive tobacco control interventions;

v. Provision of smoking cessation services be made more extensively available in both government and private health facilities. It could be integrated into the primary health care services with operational targets set and regularly monitored;

    a. For MOH owned health centres, smoking cessation services in the form of brief and intensive intervention be widely provided. However, these clinics need adequate equipment and adequately trained staff in order to expand its coverage for as many clinic attendees as possible;

    b. For MOH hospitals, smoking cessation services be provided for relevant disciplines for the in-patient and out-patient settings. These disciplines include but not limited to cardiovascular, cancer, respiratory, tuberculosis, stroke, psychiatry and others;

    c. For private health facilities like private hospitals, specialist clinics and general practice (GP), the medical and health practitioners be given adequate knowledge and 'incentives' that will encourage them to deliver effective smoking cessation services;

vi. Following the inclusion of nicotine replacement therapy (NRT) and varenicline into the MOH drug list over a year ago, adequate financial allocations be given to the State Health Departments to ensure continuous availability of these drugs;

vii. The current MOH 'Info-line' be upgraded to a professional, toll-free 'Quit-line' service with well trained staff and appropriate infrastructure;

viii. Efforts be made to encourage big corporate organisations (both local and transnational) to facilitate tobacco cessation amongst their staff through special programmes by the 'Human Resource Department' and/or cessation services to be provided by resident doctors or panel clinics / hospitals;

ix. Initiate efforts to include the subject of 'treatment of tobacco dependence' as an integral part of the basic undergraduate curriculum for medical, dental, pharmacy schools, and all relevant allied health graduate education and/or training institutions. Knowledge and skills in smoking cessation is essential in medicine, for this condition is now categorized as a mental and behavioural disease under the International Classification of Disease (ICD-10). Almost all medical students (and most doctors) do not know how to treat nicotine dependence although 5 million of the population have this risk factor with a potential of fatal NCD.

x. Following approval by the Drug Control Authority (DCA) that NRT is now allowed to be advertised, perhaps the next consideration is to have a policy change to make NRT easily accessible over the counter (OTC).

10.1.4 Warn About the Dangers of Tobacco (WHO FCTC Articles 11 & 12)

In Malaysia, not many tobacco users understand the full extent of their health risk. Most are unaware of the degree of harm that tobacco causes and they tend to underestimate the risks to themselves and others. In addition, most people are also oblivious of the powerfully addictive properties of nicotine. Hence, there is critical necessity for clear, simple, direct and truthful information that must be disseminated to the messes especially tobacco consumers.

Health warnings on tobacco packaging reach all smokers and more. As laid in Article 11 of the WHO FCTC, warnings should appear on both the front and back of the packaging, preferably with images and texts that are large, evident and describe specific illnesses caused by tobacco. Pictorial health warnings have been shown to be particularly effective in communicating risks and motivating behavioural change. They detract the attractiveness of tobacco packaging and thus act as a deterrent to new users.

Strong body of evidence has demonstrated that product packaging serves as one of tobacco industry's central vehicles in initiating and maintaining addiction to its lethal products among consumers. WHO FCTC Articles 11 and 13 Guidelines recommend that Parties consider the introduction of **plain packaging**, which would eliminate the tobacco industry's ability to place targeted messages and designs on the packages of its products, increase the impact of health warnings, reduce false and misleading messages that deceive customers into believing that some tobacco products are safer than others and reduce the attractiveness of products to segments of the population targeted by tobacco companies

Over 90% of GATS respondents noticed anti-tobacco messages in the media. The '*Tak Nak Merokok*' Campaign launched in 2004 has been a mainstay for health promotion and tobacco control in Malaysia and is an effective public medium for dissemination of information on tobacco hazard.

Therefore, it is recommended that:

i. The '*Tak Nak Merokok*' Campaign be continued, improved and intensified with adequate funding allocated at national, state and district levels annually. Regular monitoring of the campaign performance be maintained to ensure constant improvement and relevance of the campaign content;

ii. Apart from the MOH, other entities within the Government, private sector and non-government organisation (NGO) be encouraged to participate and/or organize activities to raise awareness on tobacco hazards and cessation;

    a. More local health and consumer NGOs could partake actively in anti-tobacco education and advocacy. The role played by the Malaysian Health Promotion Board (MySihat) in providing financial assistance to NGOs be continued and heightened;

b. The encouraging initiative taken by the Public Service Department (PSD) to promote healthy lifestyles such as requiring body mass index (BMI) measurements be extended to also include smoking cessation for personnel evaluation of government employees;

c. Corporate organisations could also be incentivised to embark on healthy lifestyle campaigns and tobacco cessation drive for their employees and the public;

iii. A second round of pictorial health warnings (PHW) be introduced soon for cigarettes. Since the effectiveness of the first six pictures are declining, new images could replace the present ones. These new warning labels could be larger while the image and text messages remain as, if not more, effective than the current ones. Evaluation of these PHW could be conducted;

iv. All tobacco products (not only cigarettes) in all types of packaging include standardised pictorial health warnings;

v. A collection of good images and effective health warnings from within and outside the country be maintained so as to facilitate future rotation of these messages;

vi. Consider introducing plain packaging for all tobacco products and enacting related legislation to ensure compliance by tobacco industry. This is in adherence with item 46 in the "Guidelines for Implementation of Article 11 of the WHO Framework Convention on Tobacco Control (Packing and Labeling of Tobacco Products)".

10.1.5 Enforce Bans on Tobacco Advertising & Promotion (WHO FCTC Article 13)

A total ban on direct and indirect advertising, promotion and sponsorship as provided in guidelines to Article 13 of the WHO FCTC can substantially reduce tobacco consumption and protect people particularly youths from industry marketing tactics. In order to be effective, bans on tobacco advertising, promotion and sponsorship (TAPS) must be complete and apply to all marketing channels. The tobacco industry strongly opposes such comprehensive bans because they are effective in reducing tobacco use. TAPS create an illusion that tobacco is just an ordinary consumer product rather than a deadly item that kills up to half of its regular users when consumed exactly as the manufacturer intends.

It is important that enforceable measures be out into place to ban not only the traditional forms of direct advertising through media such as television, radio, print publications and billboards. There is also a need to ensure that indirect forms of TAPS such as brand stretching, points of sale display and tobacco industry-sponsored 'corporate social responsibility' (CSR) programmes are also addressed.

Therefore, it is recommended that:

i. Bans on TAPS be strictly enforced as provided in the Control of Tobacco Product Regulations 2004 (CTPR 2004) and rigorous monitoring of the situation be carried out regularly;

ii. A more comprehensive ban on TAPS for all forms of tobacco products be endorsed through an amendment of the current CTPR that includes:

    a. Ban on all direct and indirect TAPS that use tobacco product name or imagery as well as any indication or link to tobacco industry name or imagery. This includes any form of paraphernalia and industry-sponsored CSR activities;

    b. Ban on tobacco product display at points of sale;

    c. Restrictions on cross-border TAPS via cyberspace like the internet and/or social media;

iii. Plain packaging for all forms of tobacco products be introduced with strict pack specifications like size, shape, colours and labels;

iv. A channel be set up (complaint-line) to encourage the public to inform the authorities of any violations to the law for bans on TAPS.

10.1.6 Raise Tobacco Taxes (WHO FCTC Article 6)

The evidence has shown increasing the price of tobacco through higher taxes is the single most effective way to encourage tobacco users to quit and prevent children from starting to smoke. Taxes on inexpensive tobacco products should be equivalent to higher-priced products, such as premium-brand cigarettes, to prevent substitution in consumption. Increasing taxes regularly to correct for inflation and consumer purchasing power is important. Tobacco taxes are generally well accepted by the public and raise government revenues.

Despite worldwide recognition of the importance of tax and price increase to curb tobacco use, in Malaysia, tobacco product especially cigarettes are very affordable to the majority of consumers, especially right now when the Government has just announced salary increase for civil servants.

Unfortunately in many countries including Malaysia, tobacco taxes and prices have not increased enough mainly because of inefficiency of existing tax systems / tax structure and perhaps also weak tax administration. Addressing those will help use the tobacco taxation measure to its full strength, leading to effective increases in prices, reduction in consumption and reduction in tobacco-related burden of disease and death.

Influence of the tobacco industry upon Malaysian policy makers poses a huge challenge on the strategy for continuous tobacco tax hike. The usual argument from the tobacco industry is that raising tobacco tax will lead to increase in smuggling and big losses to Government revenue. The industry propagates the biased results of their self-sponsored cigarette 'litter survey' to estimate the load of tobacco smuggling in the country. Thus unlike past few years, in 2012, there is zero tobacco tax increase.

Therefore, it is recommended that:

i. The price of tobacco products be significantly increased in 2013 and thereafter followed by consistent annual raises in tobacco taxes, since a tax increase is proven to be a very effective tool in tobacco control;

ii. Prices for all tobacco productz in 2013 be increased by a pre-determined quantum, in order to prevent tobacco industry from absorbing the impact and maintaining current retail prices;

iii. Serious discussions be held between MOH and Ministry of Finance, Tax Division and other relevant ministries to study and apply extensive evidence-base tobacco taxation structure, identified globally as best practices. This includes the adoption of a relatively simple tax system that applies equivalent taxes to all tobacco products, with:

    a. At least 70% excise tax share in final consumer price, consistent with recommendations of the WHO and the World Bank[1,9];

    b. Raise in tax that exceeds increases in consumer prices and incomes, to reduce the affordability of tobacco products;

    c. Minimisation of incentives for tobacco users to switch to cheaper brands or products in response to tax increases;

    d. Improvement of tobacco tax administration to reduce opportunities for tax avoidance and tax evasion (including implementing effective monitoring systems for production and transport of traded tobacco products);

iv. Results of independent researches concerning the burden of tobacco smuggling in Malaysia be promoted to replace TI studies. It is important for relevant government agencies to understand the findings from these alternate researches as the basis for policy decisions on tobacco taxation. Adequate finances be allocated so that unbiased independent studies can be carried out regularly;

v. As an active Party during the negotiation of the WHO FCTC Protocol on Article 15 (Illicit Trade), the Malaysian Government ratifies the Protocol soonest when it is adopted.

Most of the above recommendations may be achieved through a comprehensive stand-alone Control of Tobacco Products Act (CTPA). It is thus critical that the CTPA process be fast-tracked and enacted as soon as possible.

A strong commitment is necessary in order for tobacco control to be made one of the top national priorities to achieve positive health of the nation. With the global community movement for prevention and control of non-communicable diseases (NCD), tobacco control takes on a centre stage. Therefore, with that objective in mind, it is important to strengthen the current Tobacco Control & FCTC structure so that all the essential action to achieve effective control can be delivered, using the WHO FCTC and the WHO MPOWER Package.

10.2 Conclusion

Tobacco exacts an enormous toll on the public health, and effective efforts to alleviate this burden require strong commitment from the country as a whole.

The 2011 Malaysian Global Adult Tobacco Survey or GATS Malaysia 2011 is the first comprehensive nationwide cross-sectional survey that uses the internationally standardised research tool provided by the WHO and CDC under the Global Tobacco Surveillance System (GTSS). Besides GATS, Malaysia had also participated twice in another GTSS survey, i.e., the Global Youth Tobacco Survey 2003 and 2009 (GYTS 2003 & GYTS 2009).

Malaysia has conducted three National Health and Morbidity Surveys (NHMS) every 10 years since 1986, where tobacco use has always been an integral module in each of the NHMS. Results on tobacco consumption patterns obtained from these surveys have been used for formulating prior tobacco control initiatives in Malaysia.

GATS Malaysia provides national estimates for tobacco use, classified by residence, gender and other soci-demographic characteristics. Apart for that, GATS Malaysia also provides reliable data on various dimensions of tobacco control, such as exposure to secondhand smoke, exposure to anti-tobacco information through media and campaign, expenditures related to tobacco use, knowledge on diseases caused by smoking, impact of pictorial health warning and extent of willingness to quit smoking.

It is important that GATS Malaysia results be widely disseminated and used as a national resource for monitoring and implementing the WHO FCTC.

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11

APPENDICES

GLOBAL ADULT TOBACCO SURVEY (GATS), MALAYSIA 2011

Household Questionnaire

INTRO. [SCREENED HOUSEHOLD RESPONDENT MUST BE AGED 18 YEARS AND ABOVE AND MUST BE DEEMED ABLE TO GIVE THE EXACT INFORMATION FOR ALL HOUSEHOLD MEMBERS.
[SCREENED HOUSEHOLD RESPONDENT MUST BE AGED 18 YEARS AND ABOVE AND MUST BE DEEMED ABLE TO GIVE THE EXACT INFORMATION FOR ALL HOUSEHOLD MEMBERS.
IF NECESSARY, PLEASE ENSURE THE AGE OF THE RESPONDENT TO ENSURE THAT HE/SHE IS AGED 18 YEARS AND ABOVE.
THE SCREENED HOUSEHOLD MEMBER CAN BE AGED 18 YEARS AND BELOW IF THERE IS NO HOUSEHOLD MEMBER AGED 18 YEARS AND ABOVE.]

INTRO1. An important survey regarding the use of tobacco behavior among adults is being conducted by the Institute of Public Health, Ministry of Health Malaysia in the whole of Malaysia and your house has been selected for this study. All selected houses had been taken from a scientific sample and it is very much hoped that every selected house takes part to ensure the success of this survey. All information taken will be kept and considered confidential. I have a few questions that i need to ask to ensure household members that are eligible to participate in this study.

HH1. First of all, I wish to ask a few questions regarding your household. How many household members live in this house?

[INCLUDING THOSE WHO CONSIDER THIS HOUSE AS A HOME OR LIVING PLACE]

HH2. How many household members are aged 15 years and above?

[IF HH2 = 0 (NO HOUSEHOLD MEMBER ≥ 15 IN THE HOUSEHOLD)]
[NO HOUSEHOLD MEMBER ELIGIBLE]

THANK THE RESPONDENT FOR BEING WILLING TO SPARE HIS/HER TIME
RECORD THIS IN THE RECORD OF CALLS AS A CODE 201]

HH4. Now I wish to gather information about those occupying this household aged 15 years and above. Start from the eldest to the youngest.

HH4a. [What (eldest/second eldest) is his/her name?]

HH4b. What is his/her age?

[IF RESPONDENT DOES NOT KNOW, INVESTIGATE FOR AN ESTIMATE]

[IF REPORTED AGE IS 15 THROUGH 17, BIRTH DATE IS ASKED]

HH4c. In which month was he/she born?

HH4CYEAR. In which year was he/she born?

[IF DO NOT KNOW, ENTER 7777, IF REFUSE TO ANSWER, ENTER 9999]

HH4d. Is this person male or female?

MALE……		1
FEMALE…...		2

HH4e. Does this person currently smoke tobacco, including manufactured cigarette, hand-rolled cigarettes, kreteks, pipes, curuts,cigars, cigarillos, and shisha/hookah?

YES……..		1
NO……		2
DON'T KNOW.....		3
REFUSED TO ANSWER ……		4

HH4f. What is the relationship between this person and the head of the house?

[RESPONDENT SHOULD THINK OF ONLY ONE PERSONAS THE HEAD OF HOUSEHOLD]

HEAD OF HOUSEHOLD.....		1
WIFE /HUSBAND OF HEAD …….....		2
MOTHER/FATHER OF HEAD.....		3
GRANDFATHER / GRANDMOTHER OF HEAD ……..		4
SISTER / BROTHER OF HEAD... ……..		5
CHILD OF HEAD……		6
OTHER FAMILY MEMBER.....		7
NON-FAMILY MEMBER……..		8
DON'T KNOW.....		77
REFUSED TO ANSWER ……..……		99

[REPEAT HH4a – HH4f FOR EACH PERSON REPORTED IN HH2]

HH5. [NAME OF THE SELECTED PARTICIPANT IS: {PLEASE INSERT THE SELECTED PARTICIPANT'S NAME}

ASK IF THE SELECTED RESPONDENT IS READY TO BE INTERVIEWED AND IF YES, PROCEED WITH INDIVIDUAL QUESTIONS.

IF THE SELECTED RESPONDENT IS NOT READY TO BE INTERVIEWED, PLEASE MAKE AN APPOINTMENT AND RECORD AS CALL'S RECORD COMMENT.]

Individual Questionnaire

CONSENT1. [CHOOSE THE APPROPRIATE AGE CATEGORY BELOW. IF YOU HAVE TO, CHECK THE RESPONDENT'S AGE FROM THE "CASE-INFO" SCREEN WHICH CAN BE FOUND UNDER THE "TOOL" MENU.]

15-17.....	☐	1 → TO CONSENT 2
18 OR ABOVE ……	☐	2 → TO CONSENT 5
EMANCIPATED MINOR (15-17)……..	☐	3 → TO CONSENT 5

CONSENT2. Before starting the interview, I must get the consent from [RESPONDENT'S NAME] parents or guardian and from [RESPONDENT'S NAME]

[IF BOTH THE SELECTED PARTICIPANT AND PARENTS/GUARDIAN ARE PRESENT, PROCEED WITH THE INTERVIEW.

IF THE PARENTS/GUARDIAN IS NOT PRESENT, END THE INTERVIEW AND MAKE AN APPOINTMENT FOR AN INTERVIEW IN THE FUTURE

IF RESPONDENT UNDER THE AGE OF 18 IS NOT PRESENT, PROCEED BY GETTING THE CONSENT FROM THE PARENTS.]

CONSENT3. [READ THE STATEMENT BELOW TO THE PARENTS/GUARDIAN AND THE SELECTED RESPONDENT (IF BOTH PARTIES ARE PRESENT):]

I am working with the Institute for Public Health, Ministry of Health Malaysia. This institute is running a survey regarding the use of tobacco products in Malaysia. Information gathered will be used by the Ministry of Health, to plan public health programs.
Your household and [RESPONDENT'S NAME] have been randomly chosen. [RESPONDENT'S NAME] feedback is very important to us and the society. The answer provided will represent the common public.

This interview will take approximately 30-35 minutes. [RESPONDENT'S NAME] participation in this study is voluntary. Confidentiality of the information [RESPONDENT'S NAME] provided is assured and [RESPONDENT'S NAME] will not be identified through you response, personal information will not be shared with anyone including your family and you [RESPONDENT'S NAME] . [RESPONDENT'S NAME] may withdraw from this survey at any point and may refuse to answer any questions.

We will leave information of the number to call should you wish to know more about this study and your rights as a participant to this study.
If you agree with the participation of [RESPONDENT'S NAME] in this study, we will conduct a private interview with the person.

[ASK PARENTS/GUARDIAN:] Do you agree with the participation of [respondent's name]?

YES……..……	☐	1 → TO CONSENT 4
NO……..…	☐	2 → END INTERVIEW

CONSENT4. [IS THE SELECTED "MINOR" RESPONDENT PRESENT?]

YES …….……..	1	☐	TO CONSENT 6
NO …….	2	☐	TO CONSENT 5

CONSENT5. RECITE TO THE SELECTED RESPONDENT

I am working with the Institute for Public Health, Ministry of Health Malaysia. This institute is conducting a survey on the usage of tobacco products in Malaysia. Information gathered will be used to plan public health activities by the Ministry of Health, Malaysia.

Your household and you have been randomly selected. Your response is very important to us and the community. The answers provided will represent common public. This interview will take 30-35 minutes. Your participation in this study is voluntary. The confidentiality of the information you provide is assured and you will not be identified through your feedback, personal information will not be shared with anyone including your family and you. You can withdraw from this study at any time, and you may refuse to answer any question
{FILL IF CONSENT1 = 2: If you smoke cigarettes, you will be asked to show your pack of cigarettes if you have it available and you agree to do so.}

We will leave the necessary contact information with you. If you have any questions about this survey, you can contact the telephone number listed.
{FILL CONSENT IF 4=2}: Parents/guardian has consent your participation to this study. If you agree, we will conduct this session with you.

CONSENT6. [ASK THE SELECTED RESPONDENT:]. Do you agree to participate in this study?

YES ……..…	☐	1	→ CONTINUE INTERVIEW
NO……	☐	2	→ END INTERVIEW

INTLANG. [INTERVIEW LANGUAGE]

MALAY LANGUAGE …. ……..……..….	☐	1
ENGLISH LANGUAGE…….....	☐	2
MANDARIN LANGUAGE……..	☐	3
TAMIL LANGUAGE……..…..	☐	4

Section A. Background Details

A00. I will start by asking a few questions on your background.

A01. [NOTE THE GENDER THROUGH OBSERVATION. ASK ONLY IF NECESSARY]

MALE…….…… ☐ 1
FEMALE…..…… ☐ 2

A02. What is the month and year of your date of birth?

MONTH: ☐☐ IF DON'T KNOW, ENTER "77"
IF REFUSED, ENTER "99"

YEAR: ☐☐☐☐ IF DON'T KNOW, ENTER "7777"/
IF REFUSED, ENTER "9999"

[IF MONTH=77/99 OR YEAR=7777/9999, ASK A03. OTHERWISE SKIP TO A04.]

A03. What is your age?

[IF RESPONDENT STATE UNSURE, PROBE DEEPER FOR ESTIMATES AND RECORDS ANSWER. IF RESPONDENT REFUSED, END THE INTERVIEW AS THE INTERVIEW COULD NOT PROCEED WITHOUT AGE]

☐☐☐

A03a. [WAS RESPONSE ESTIMATED?]

YES…… ☐ 1
NO……..… ☐ 2
DON'T KNOW…….. ☐ 7

A04. What is your highest level of education?

[SELECT ONLY ONE CATEGORY]

NO FORMAL SCHOOLING……	☐	1
LESS THAN PRIMARY SCHOOL COMPLETED.....	☐	2
PRIMARY SCHOOL COMPLETED…….....	☐	3
LESS THAN SECONDARY SCHOOL COMPLETED….....	☐	4
SECONDARY SCHOOL COMPLETED…….....	☐	5
HIGH SCHOOL COMPLETED…….....	☐	6
COLLEGE / UNIVERSITY COMPLETED.....	☐	7
GRADUATE DEGREE COMPLETED……..……	☐	8
DON'T KNOW……..……	☐	77
REFUSED TO ANSWER……..……..	☐	99

[IF A04=1 OR 2, ADMINISTER A12. ELSE GO TO A05]

A12. Can you read and write?

YES…….	☐	1
NO…….	☐	2
DON'T KNOW…….……..	☐	7

A05. Which of the following best describe your "main" employment status within the last 12 months? Government employee, non-government employee, self-employed, student, homemaker, retired, unemployed-able to work, or unemployed-unable to work?

[FARMER IS INCLUDED IN THE SELF-EMPLOYED CATEGORY]

GOVERNMENT SERVANT……..……..…….....	☐	1
NOT A GOVERNMENT SERVANT …….……	☐	2
SELF-EMPLOYED.....……..….	☐	3
STUDENT ……..……	☐	4
HOMEMAKER.……..……	☐	5
RETIREE ……...	☐	6
NOT WORK, CAN WORK…….....	☐	7
NOT WORK, CANNOT WORK …….	☐	8
DON'T KNOW ……	☐	77
REFUSED TO ANSWER……..……	☐	99

A06. Please tell me whether this household or any person living here has the following items?

READ EACH ITEM

	YES (1) ▼	NO (2) ▼	DON'T KNOW (7) ▼	REFUSED TO ANSWER (9) ▼
a. Electric supply				
b. Flush toilet				
c. Telephone landline				
d. Mobile phone				
e. Television				
f. Radio				
g. Refrigerator				
h. Car				
i. Motorcycle / scooter				
j. Washing machine				
k. Computer				
l. Internet access				

AA1. [RECORD THE HOUSE TYPE THROUGH OBSERVATION. ASK ONLY IF NECESSARY]

SINGLE HOUSE (LOW /MEDIUM COST)……	☐	1
SINGLE DETACHED HOUSE (HIGH COST)……..	☐	2
SEMI-DETACHED HOUSE.....…….....	☐	3
SINGLE STOREY TERRACE HOUSE ……	☐	4
DOUBLE STOREY OR TOWN HOUSE……	☐	5
CONDOMINIUM /APARTMENT…..……..	☐	6
FLATS…….	☐	7
LONG HOUSE ……..… ……..	☐	8
BOAT HOUSE……..	☐	9
TRADITIONAL HOUSE…… ……	☐	10
SHOP HOUSE……..……	☐	11
WORKERS' COLONY…….....……	☐	12
SQUATTERS……..	☐	13
OTHERS, PLEASE SPECIFY……	☐	14
DON'T KNOW……..	☐	77

A09. What is your race/ethnic background?

MALAY	☐	1
CHINESE	☐	2
INDIAN	☐	3
OTHER NATIVES	☐	4
OTHERS PLEASE SPECIFY	☐	5
DON'T KNOW	☐	7
REFUSED TO ANSWER	☐	9

A10. What is your religion?

ISLAM	☐	1
BUDDHISM	☐	2
CHRISTIANITY	☐	3
HINDUISM	☐	4
OTHERS PLEASE SPECIFY	☐	5
NONE	☐	6
DON'T KNOW	☐	7
REFUSED TO ANSWER	☐	9

A11. What is your marital status? You may state married, living with partner, separated, divorced, widowed, or single?

MARRIED	☐	1
LIVING WITH PARTNER	☐	2
SEPARATED	☐	3
DIVORCED	☐	4
WIDOWED	☐	5
SINGLE	☐	6
DON'T KNOW	☐	7
REFUSED TO ANSWER	☐	9

Section B. Smoking Tobacco

B00. I would like to ask a few questions about *smoking* tobacco, including manufactured cigarettes, hand rolled cigarettes, kreteks, pipes, curuts, cigars, cigarillos, and shisha/hookah.

B01. Are you *currently* smoke tobacco every day, less than every day or not at all?

EVERY DAY……	☐	1 → TO B04
LESS THAN EVERY DAY……..	☐	2
NOT AT ALL …….....	☐	3 → TO B03
DON'T KNOW …….....	☐	7 → **TO NEXT SECTION**
REFUSED TO ANSWER……	☐	9 → **TO NEXT SECTION**

B02. Have you smoked tobacco every day in the past?

YES ……..……	☐	1 → TO B08
NO……..……	☐	2 → TO B10
DON'T KNOW……..	☐	7 → TO B10
REFUSED TO ANSWER……	☐	9 → TO B10

B03. In the past, did you smoke tobacco every day, less than every day or not at all?

[IF RESPONDENT HAS DONE BOTH "EVERY DAY" AND "LESS THAN EVERY DAY" IN THE PAST, CHECK "EVERY DAY"]

EVERY DAY…… ……..…	☐	1 → TO B11
LESS THAN EVERY DAY……..	☐	2 → TO B13
NOT AT ALL …….....	☐	3 → **TO NEXT SECTION**
DON'T KNOW …….....	☐	7 → **TO NEXT SECTION**
REFUSED TO ANSWER……..	☐	9 → **TO NEXT SECTION**

[CURRENT EVERYDAY SMOKER]

B04. How old were you when you first start smoking tobacco *every day*?

[IF DON'T KNOW OR REFUSED TO ANSWER, ENTER 99]

[IF B04 = 99, ASK B05. OTHERWISE SKIP TO B06.]

B05. How many years ago did you first smoking tobacco *every day*?

[IF REFUSED TO ANSWER, ENTER 99]

B06. On average, how many among the following products that you usually smoke in a day? Also state if you have smoked the product even if not every day?

[IF RESPONDENT REPORTED SMOKING THE PRODUCT, BUT NOT EVERY DAY, ENTER 888

IF RESPONDENT REPORTED IN PACKETS OR CARTONS, PROBE FURTHER TO GET THE AMOUNT IN EACH PACKET OR CARTON AND THE TOTAL AMOUNT]

a. Manufactured cigarettes, not including kreteks?				*A DAY*
a1. [IF B06a=888] On average, how many manufactured cigarette not including kreteks do you currently smoke in a week?				*A WEEK*
b. Hand-rolled cigarettes?				*A DAY*
B1. [IF B06b=888] On average, how many hand-rolled cigarettes do you currently smoke in a week?				*A WEEK*
c. Kreteks?				*A DAY*
c1 [IF B06c=888] On average, how many kreteks do you currently smoke in a week?				*A WEEK*
d. Tobacco filled pipe?				*PER DAY*
d1. [IF B06d=888] On average, how many tobacco filled pipe do you currently smoke in a week?				*PER WEEK*
e. Curut, cigar or cigarillo?				*PER DAY*
e1. [IF B06e=888] On average, how many curut, cigars or cigarillos do you currently smoke each week?				*PER WEEK*
f. Number of shisha/hookah sessions in a day?				*A DAY*
f1. [IF B06f=888] On average, how many shisha/hookah sessions do you currently smoke in a week?				*A WEEK*
g. Bidis?				*A DAY*
g1. [IF B06g=888] On average, how many bidis do you currently smoke in a week?				*A WEEK*
h. Any others? (→ h1. Please state other types of cigarette that you currently smoke every day:_____)				*A DAY*
h1. [IF B06h=888] On average, how many [INSERT PRODUCT] do you currently smoke in a week?				*A WEEK*

B07. How quickly after you woke up from sleep do you usually smoke your first cigarette? Would you say….

WITHIN 5 MINUTE …….……	☐	1
6 TO 30 MINUTES ……..……	☐	2
31 TO 60 MINUTES ……..……..	☐	3
MORE THAN 60 MINUTES ……	☐	7
REFUSED TO ANSWER ……...	☐	9

[TO NEXT SECTION]

[SMOKE LESS THAN EVERY DAY]

B08. What is your age when you first smoked tobacco *every day*?
[IF DON'T KNOW OR REFUSED TO ANSWER, ENTER 99]

[IF B08 = 99, ASK B09. OTHERWISE, SKIP TO B10.]

B09. How many years ago did you first start smoking tobacco *every day*

[IF REFUSED TO ANSWER, ENTER 99]

B10. How many of the following do you currently smoke in a usual week?
[IF RESPONDENT REPORTED DOING SAID ACTIVITY IN THE PAST 30 DAYS, BUT LESS THAN ONCE A WEEK, ENTER 888
IF RESPONDENT REPORTED IN PACKETS OR CARTONS, PROBE FURTHER TO GET THE AMOUNT OF CIGARETTE IN A PACKET OR CARTON AND THE TOTAL AMOUNT]

a. Manufactured cigarettes, not including kreteks?				*PER WEEK*
b. Hand-rolled cigarettes?				*PER WEEK*
c. Kreteks?				*PER WEEK*
d. Tobacco filled pipe?				*PER WEEK*
e. Curut, cigar or cigarillo?				*PER WEEK*
f. Number of shisha/hookah sessions per week?				*PER WEEK*
g. Bidis?				
h. Any others? → g1. Please state other types of cigarette that you currently smoke during a usual week:_____				*PER WEEK*

[TO THE NEXT SECTION]

[FORMER TOBACCO USER]

B11. What is your age when you first smoke tobacco *every day*?

[IF DON'T KNOW OR REFUSED TO ANSWER, ENTER 99]

[IF B11 = 99, ASK B12. OTHERS PROCEED TO B13]

B12. How many years ago did you first start smoking tobacco *every day*

[IF REFUSED TO ANSWER, ENTER 99]

B13. How long have you stopped smoking?

[ONLY INTERESTED IN RESPONDENT WHO HAS STOPPED SMOKING REGULARLY -- DOES NOT INCLUDE RESPONDENTS WHO USED TOBACCO IN RARE INSTANCES]

INSERT UNIT AND NUMBER

YEARS ……		1
MONTHS ……..…… .		2
WEEKS ……..……..		3
DAYS……		4
LESS THAN A DAY……		5 **TO B14**
DON'T KNOW……..……	7	**TO NEXT SECTION**
REFUSED TO ANSWER……..	9	**TO NEXT SECTION**

[IF B13 < 1 YEAR (< 12 MONTH), CONTINUE WITH B14. OTHER THAN THAT, PROCEED TO THE NEXT SECTION].

B14. Did you visit a doctor or other health care provider in the last 12 months?

YES……..…		1
NO……..		2 → TO B18
REFUSED TO ANSWER……..		9 → TO B18

B15. How many times did you visit a doctor or health care provider in the last 12 months? Was it….

1 OR 2 TIMES……..	☐	1
3 TO 5 TIMES……..	☐	2
6 OR MORE TIMES.....	☐	3
REFUSED TO ANSWER …….	☐	9

B16. When you visit a doctor or heath care provider in the last 12 months, were you asked whether you smoke tobacco or not?

YES……..	☐	1
NO……	☐	2 → TO B18
REFUSED TO ANSWER	☐	9 → TO B18

B17. When you visit the doctor or health care provider in the last 12 months, were you advised to quit smoking tobacco?

YES……	☐	1
NO…….....	☐	2 → TO B18
REFUSED TO ANSWER	☐	9 → TO B18

B18. In the last 12 months, have you used the following methods to quit smoking?

	YES (1)	NO (2)	REFUSED TO ANSWER (9)
a. Counseling, including at the quit- smoking clinic……			
b. Nicotine replacement therapy e.g. patch gum?.....			
c. other prescription drugs, e.g. varenicline, bupropion……			
d. Traditional methods, e.g herbal therapy, hypnotherapy, accupunture and aromatherapy.....			
e. A quit line or a smoking telephone info line……			
e1 [IF YES] Did you get the quit line or smoking telephone info line number from the cigarette packet?.....			
f. change to smokeless tobacco use……..			
g. Quit without assistance……..			
h. others? ……..…			

→h1. Please state the method used in the attempt to quit smoking

_____

[TO THE NEXT SECTION]

Section: Shisha/ hookah

ROUTING: B06F/B10F ASK TOTAL AMOUNT OF SHISHA/HOOKAH SESSIONS IN A DAY/WEEK
— IF B01=3 AND B03=3 (NEVER SMOKER), TO NEXT SECTION
— IF B01=3 AND B03=1 OR 2 (FORMER SMOKER), PROCEED TO WP2

— IF B01=1 AND B06F>0 AND <888 (CURRENT EVERY DAY SHISHA/HOOKAH SMOKERS), PROCEED TO WP3
— IF B01=1 AND B06F=888 (CURRENT LESS THAN EVERY DAY SHISHA/HOOKAH SMOKER), PROCEED TO WP1
— IF B01=2 AND B10F>0 AND <=888 (CURRENT LESS THAN EVERY DAY SHISHA/HOOKAHSMOKER), PROCEED TO WP1

— IF (B01=1 OR 2) AND (B06F=0 OR B10F=0), PROCEED TO WP2

— ELSE, GO TO NEXT SECTION

WP1. I would like to ask a few questions about shisha/hookah smoking.

Have you smoked shisha/hookah every day in the past?

YES…….….	☐	1 → TO WP3
NO……...	☐	2 → TO WP3
REFUSED TO ANSWER …….	☐	9 → TO WP3

WP2. I would like to ask a few questions about shisha/hookah smoking.

In the *past*, have you smoked shisha/hookah every day, less than every day or not at all?

[IF RESPONDENT HAS DONE BOTH “EVERY DAY” AND “LESS THAN EVERY DAY” IN THE PAST, MARK “EVERY DAY”]

EVERY DAY…….....	☐	1
LESS THAN EVERY DAY ……	☐	2
NOT AT ALL……	☐	3 → **TO NEXT SECTION**
REFUSED TO ANSWER……..	☐	9

WP3. (I would like to ask a few questions about shisha/hookah smoking.)

What age did you first start smoking shisha/hookah?

[IF DON’T KNOW OR REFUSED TO ANSWER, ENTER 99]

☐☐

[IF WP3=99, ASK WP4. OTHER THAN THAT PROCEED TO THE NEXT INSTRUCTION]

WP4. How many years ago did you first start smoking shisha/hookah?

[IF REFUSED TO ANSWER, ENTER 99]

ROUTING:
– CURRENT SHISHA/HOOKAH SMOKER: IF (B01=1 OR 2) AND [(B06f>0 AND <=888) OR (B10f>0 AND <=888)] PROCEED TO WP5

– OTHERS, PROCEED TO NEXT SECTION

WP5. On the last time you smoked shisha/hookah, how long do you smoke for each session?

HOUR …….		1
MINUTES……..……		2
DON'T KNOW ……..… ……		7→ TO WP6
REFUSED TO ANSWER..……...		9→ TO WP6

[INSERT NUMBER OF (HOURS OR MINUTES)]

WP6. The last time you smoked shisha/hookah, how many people shared the same pipe for that session?

[IF DON'T KNOW OR REFUSED TO ANSWER, ENTER 99]

WP7. During the last session you smoked shisha/hookah, how many times was the container filled with shisha/hookah tobacco?

1 …….....		1
2 …….....		2
3 ……..		3
4 ……..		4
5 OR MORE……		5
DON'T KNOW……..……		7
REFUSED TO ANSWER……...		9

WP8. The last time you smoked shisha/hookah, where did you smoke?

AT HOME…….……..	☐	1
COFFEE SHOP……..……...	☐	2
BAR/CLUB …….	☐	3
RESTAURANT…….……	☐	4
OTHERS ……	☐	5 **PLEASE STATE:___**
DON'T KNOW…….....	☐	7
REFUSED TO ANSWER ……..	☐	9

WP9. The last time you smoked shisha/hookah; did you smoke with flavoured tobacco, non-flavoured tobacco or both?

FLAVORED.....	☐	1
NON-FLAVORED….....	☐	2
BOTH…….……..	☐	3
DON'T KNOW……..	☐	7
REFUSED TO ANSWER ……...	☐	9

[TO THE NEXT SECTION]

Section C. Smokeless Tobacco

C00. The following questions are about the use of smokeless tobacco, e.g. chewing tobacco or snuff. Smokeless tobacco is tobacco that is not smoked, but is sniffed through the nose, held in the mouth, or chewed.

C01. Are you "currently" using smokeless tobacco every day, less than every day or not at all?

[IF RESPONDENT DOES NOT KNOW WHAT A SMOKELESS TOBACCO IS, EITHER SHOW THE FLASHCARD OR READ THE DESCRIPTION FROM THE MANUAL]

EVERY DAY.....	☐	1 → **TO C06**
LESS THAN EVERY DAY…….....	☐	2
NOT AT ALL……..... ……..	☐	3 → **TO C03**
DON'T KNOW ……....	☐	7 → **TO NEXT SECTION**
REFUSED TO ANSWER……....	☐	9 → **TO NEXT SECTION**

C02. Have you used smokeless tobacco every day in the past?

YES……	☐	1→ TO C10
NO……....	☐	2→ TO C10
DON'T KNOW……..……	☐	7→ TO C10
REFUSED TO ANSWER ……..	☐	9→ TO C10

C03. In the *past*, have you used smokeless tobacco every day, less than every day or not at all?

[IF THE RESPONDENT USES SMOKELESS TOBACCO "EVERY DAY" OR "LESS THAN EVERY DAY", MARK "EVERY DAY"]

EVERY DAY ……...	☐	1 → **TO NEXT SECTION**
LESS THAN EVERY DAY ……..……	☐	2 → **TO NEXT SECTION**
ALL……	☐	3 → **TO NEXT SECTION**
DON'T KNOW……..…….....	☐	7 → **TO NEXT SECTION**
REFUSED TO ANSWER……...	☐	9 → **TO NEXT SECTION**

(CURRENT DAILY USER OF SMOKELESS TOBACCO)

C06. .On average, how many times in a day do you use the following products? May I also know whether you are using the product, but not every day?

[IF RESPONDENT REPORTED USING THE PRODUCT BUT NOT EVERY DAY, ENTER 888]

a. Snuff, by mouth?				*A DAY*
a1. **[IF C06a=888]** On average, how many times in a week do you use snuff, by your mouth?				*A WEEK*
b. Snuff, by nose?				*A DAY*
b1 **[IF C06b=888** On average, how many times in a week do you use snuff, with your nose?				*A WEEK*
c. Chewing tobacco?				*A DAY*
c1. **[IF C06c=888]** On average, how many times in a week do you chew tobacco?				*A WEEK*
d. Chew betel quid with tobacco?				*A DAY*
d1. **[IF C06b=888]** On average, how many times in a week do you chew betel quid with tobacco?				*A WEEK*
e. Others? (⟶ e1. Please state other types of use every day: _____)				*A DAY*
e2 **[IF C06e=888]** On average, how many times in a week are you using it? [STATE THE TOBACCO PRODUCT]				*A WEEK*

[TO NEXT SECTION]

(CURRENT OCCASIONAL SMOKELESS TOBACCO USER)

C10. How many times in a week do you use the following?

[IF RESPONDENT REPORTED USING SMOKELESS TOBACCO IN THE LAST 30 DAYS BUT LESS THAN ONCE A WEEK, ENTER 888]

a. Snuff, by mouth	☐☐☐	*TIMES PER WEEK*
b. Snuff, by nose	☐☐☐	*TIMES PER WEEK*
c. Chewing tobacco	☐☐☐	*TIMES PER WEEK*
d.Chew betel quid with tobacco?	☐☐☐	*TIMES PER WEEK*
e. Others	☐☐☐	*TIMES PER WEEK*

e1. Please state other smokeless tobacco that you use in a normal one week:

_____

C19. [ADMINISTER IF B01=2 AND C01=2. ELSE GO TO NEXT SECTION]

You mentioned that you smoke tobacco, but not every day and that you also use smokeless tobacco, but not every day. Thinking about both smoking tobacco and using smokeless tobacco, would you say you use tobacco every day or less than every day?

YES…….……	☐	1
NO ……...	☐	2
REFUSED TO ANSWER ……..……..	☐	9

SECTION: ELECTRONIC CIGARETTES

EC1. Have you ever heard of electronic cigarettes?

YES……..	☐	1
NO ……...	☐	2
REFUSED TO ANSWER ……..	☐	9 TO NEXT SECTION

EC2. Are you currently smoking electronic cigarettes every day, less than every day or not at all?

EVERY DAY ……..……	☐	1
LESS THAN EVERY DAY……	☐	2
NOT AT ALL……....	☐	3 TO EC4
DON'T KNOW…….....	☐	7 TO EC4
REFUSED TO ANSWER ……	☐	9 TO EC4

EC3. What is your primary motive for using electronic cigarettes?

IT PROBABLY HAS NO SERIOUS EFFECT ON HEALTH …….....	☐	1
IT TASTES BETTER……	☐	2
IT IS EASIER TO REDUCE THE NUMBER OF CIGARETTE SMOKE ……..	☐	3
CAN SMOKE IN AREAS WHERE SMOKING IS NORMALLY PROHIBITED…	☐	4
IT MAY HELP YOU TO STOP SMOKING ……	☐	5
OTHERS, PLEASE SPECIFY……..……	☐	6
DON'T KNOW…….....	☐	7
REFUSED TO ANSWER……..……..	☐	9

EC4. In your opinion, are electronic cigarettes more dangerous to health than regular cigarettes, has the same danger level to health as regular cigarettes, or less dangerous to health than regular cigarettes?

MORE DANGEROUS THAN REGULAR CIGARETTE ……	☐	1
HAS THE SAME DANGER LEVEL TO HEALTH ……..	☐	2
LESS DANGEROUS THAN REGULAR CIGARETTE ……..	☐	3
DON'T KNOW ……...	☐	7
REFUSED TO ANSWER……..	☐	9

Section D1. Smoking Cessation

INT: CHECK THE ANSWER FOR B1 AND RECORD BELOW:
B1 = ___

IF B1 = 1 or 2 (RESPONDENT CURRENTLY SMOKES TOBACCO), PROCEED WITH THIS SECTION……..☐1

IF B1 = 3 or 7 (RESPONDENT DOES NOT CURRENTLY SMOKE TOBACCO), GO TO THE NEXT SECTION .....……..☐2

D01. The following questions are regarding the attempt to quit smoking you had carried out in the last 12 months. Please think about tobacco smoking.

In the last 12 months, have you ever tried to quit smoking?

YES…….....	☐	1
NO…….....	☐	2 → TO D04
REFUSED TO ANSWER ……	☐	9 → TO D04

D02. How long were you able to quit smoking the *last time* you tried to qut smoking?

ENTER UNIT AND NUMBER

MONTHS……..……	☐	1	☐☐☐	
WEEKS…….....	☐	2	☐☐☐	
DAYS……	☐	3	☐☐☐	
LESS THAN ONE DAY……	☐	4 TO D03		
DON'T KNOW…….....	☐	7 TO D03		
REFUSED TO ANSWER……...	☐	9 TO D03		

D03. In the last 12 months, have you used the following method to quit smoking?

	YES (1)	NO (2)	REFUSED TO ANSWER (9)
a. Counseling, including at the quit-smoking clinic?.....			
b. Nicotine replacement therapy, e.g. patch, gum?.....			
c. Other prescription drugs, e.g. Varenicline, Bupropion……..			
d. Traditional methods, e.g.herbal therapy, hypnotherapy, accupunture and aromatherapy…….			
e. A quit line or a smoking telephone info line……..…… e1 Did you get the quit line or smoking telephone info line number from a cigarette packet? ..			
f. Change to smokeless tobacco use ……..….			
g. Quit without assistance ……..			
h. Others?.....			

h1 Please state the method used in the attempts to quit smoking:

_____

D04. Did you visit a doctor or other health care provider in the last 12 months?

YES…….....	☐	1
NO…….....	☐	2 → TO D08
REFUSED TO ANSWER ... ……..	☐	9 → TO D08

D05. How many times did you visit a doctor or health care provider in the last 12 months? Was it……

1 OR 2…….....	☐	1
3 TO 5……..….....	☐	.2
6 OR MORE……	☐	3
REFUSEDTO ANSWER	☐	9

D06. When you visit the doctor or other health care provider in the last 12 months, were you asked whether you smoke or not?

YES…….....….….....	☐	1
NO……	☐	2 → TO D08
REFUSED TO ANSWER…….……	☐	9 → TO D08

D07. When you visit the doctor or other health care provider in the last 12 months, were you advised to quit smoking?

YES…….....	☐	1
NO……..……	☐	2
REFUSED TO ANSWER …….....	☐	9

D08. Which of the following describes your thoughts about quitting smoking? I am planning to quit within the next month, I am thinking about quitting within the next 12 months, I will quit someday but not within the next 12 months, or I am not interested in quitting?

I INTEND TO QUIT SMOKING WITHIN NEXT MONTH ……	☐	1
I AM THINKING TO QUIT SMOKING WITHIN NEXT12 MONTHS …….....	☐	2
I SHALL QUIT SMOKING ONE DAY BUT NOT WITHIN THE NEXT 12 MONTHS	☐	3
I AM NOT INTERESTED TO QUIT SMOKING ……..……..	☐	4
DON'T KNOW……...	☐	7
REFUSED TO ANSWER ……..…….	☐	9

Section E. Secondhand Smoke

E01. Now I shall ask questions about smoking in certain places.

Which of the following describes the regulation about smoking in your house. Smoking is allowed in the house, smoking usually is not allowed but there are exceptions, smoking is not allowed in the house at all, or there is no smoking regulation in the house?

ALLOWED	☐	1
USUALLY IS NOT ALLOWED BUT THERE ARE EXCEPTIONS	☐	2
NOT ALLOWED IN THE HOUSE	☐	3 → **TO E04**
NO SMOKING REGULATION	☐	4 → **TO E03**
DON'T KNOW	☐	7 → **TO E03**
REFUSED TO ANSWER	☐	9 → **TO E03**

E02. In your house, is smoking allowed in every room?

YES	☐	1
NO	☐	2
DON'T KNOW	☐	7
REFUSED TO ANSWER	☐	9

E03. How often does "someone" smoke in your house? Is it.....

EVERY DAY	☐	1
EVERY WEEK	☐	2
EVERY MONTH	☐	3
LESS THAN 1 MONTH	☐	4
NEVER	☐	5
DON'T KNOW	☐	7
REFUSED TO ANSWER	☐	9

E04 Do you currently work outside the house?

YES	☐	1
NO / NOT WORKING	☐	2 → TO E09
REFUSED TO ANSWER	☐	9 → TO E09

E05. Do you often work outside or inside a building?

INSIDE A BUILDING	☐	1 → E07
OUTSIDE A BUILDING	☐	2
BOTH PLACES	☐	3 → TO E07
REFUSED TO ANSWER	☐	9

E06. Is there any indoor area within the building in your workplace?

YES…….……	☐	1
NO…….....	☐	2→ TO E09
DON'T KNOW…… ……...	☐	7→ TO E09
REFUSED TO ANSWER ……..	☐	9→ TO E09

E07. Which of the following best describes the smoking policy in the building at your workplace? Smoking is…

ALLOWED EVERYYWHERE….....	☐	1
ALLOWED IN CERTAIN PLACES……..	☐	2
NOT ALLOWED ANYWHERE IN THE BUILDING….....	☐	3
NO POLICY…….……....	☐	4
DON'T KNOW…….....	☐	7
/REFUSED TO ANSWER ……...	☐	9

E08. Within the last 30 days, did anyone smoke in the building at your workplace?

YES…….……....	☐	1
NO……..……...	☐	2
DON'T KNOW……..……	☐	7
REFUSED TO ANSWER.. ……	☐	9

E08a. [ONLY ASK IF ID E08=YES]

How often does anyone smoke in the building where you work? Would you say every day, every week, every month, or less than every month?

EVERY DAY ……..……	☐	1
EVERY WEEK ……..…….	☐	2
EVERY MONTH ……	☐	3
LESS THAN EVERY MONTH…….	☐	4
DON'T KNOW……..……..……	☐	7
REFUSED TO ANSWER ……..	☐	9

E09. In the last 30 days, did you visit any government building or office?

YES…….……..……..	☐	1
NO…….	☐	2 → TO E11
DON'T KNOW……...	☐	7 → TO E11
REFUSED TO ANSWER …..……	☐	9 → TO E11

E10. Did anyone smoke in any of the government building or office you had visited in the last 30 days?

YES…….....	☐	1
NO……..……...	☐	2
DON'T KNOW……..……...	☐	7
REFUSED TO ANSWER……...	☐	9

E11. In the last 30 days, did you visit any health care facility?

YES…….....	☐	1
NO……..…….....	☐	2 → TO E13
DON'TKNOW……..…….	☐	7 → TO E13
REFUSED TO ANSWER.. …….	☐	9 → TO E13

E12. Did anyone smoke in any healthcare facility you visited in the last 30 days?

YES…….....	☐	1
NO……..……..……..	☐	2
DON'T KNOW……..…….	☐	7
REFUSED TO ANSWER……..	☐	9

E13. Within the last 30 days, did you visit any restaurant?

YES…….....	☐	1
NO……..…….	☐	2 → TO E25
DON'T KNOW……..….	☐	7 → TO E25
REFUSED TO ANSWER……...	☐	9 → TO E25

E14. Did anyone smoke in any restaurant you visited in the last 30 days?

YES…….....	☐	1
NO……..……..	☐	2 → TO E25
DON'T KNOW…… ……	☐	7 → TO E25
REFUSED TO ANSWER……	☐	9 → TO E25

EE1. Did any of these restaurants where someone smoked have air conditioning?

YES…….....	☐	1
NO……..……...	☐	2
DON'T KNOW……..…….....	☐	7
REFUSED TO ANSWER…….	☐	9

E25. During the last 30 days, did you visit any bars or night club?

YES…….....	☐	1
NO……..……	☐	2 → TO E27
DON'T KNOW……..…	☐	7 → TO E27
REFUSED TO ANSWER.. ……..	☐	9 → TO E27

E26. Did anyone smoke inside of any bars or night clubs that you visited in the past 30 days?

YES…….....	☐	1
NO……..……	☐	2
DON'T KNOW……	☐	7
REFUSED TO ANSWER……..	☐	9

E27. During the last 30 days, did you visit any cafes, coffee shops, or bistro that did not have air conditioning?

YES…….....	☐	1
NO……..……	☐	2 → TO EE2
DON'T KNOW……..….	☐	7 → TO EE2
REFUSED TO ANSWER.. ……..…	☐	9 → TO EE2

E28. Did anyone smoke inside of any cafes, coffee shops, or bistro and that did not have air conditioning that you visited in the past 30 days?

YES…….....	☐	1
NO……..……	☐	2
DON'T KNOW……..…	☐	7
REFUSED TO ANSWER……	☐	9

EE2. During the last 30 days, did you visit any indoor shopping complex?

YES…….....	☐	1
NO……..……	☐	2 → TO E15
DON'T KNOW…….	☐	7 → TO E15
REFUSED TO ANSWER.. ……..	☐	9 → TO E15

EE3. Did anyone smoke inside of any indoor shopping complex that you visited in the past 30 days?

YES…….....	☐	1
NO……..……	☐	2
DON'T KNOW……..…	☐	7
REFUSED TO ANSWER……	☐	9

E15. Within the last 30 days, did you use any public transport?

YES…….....	☐	1
NO……..……	☐	2 → TO E17
DON'T KNOW……..….	☐	7 → TO E17
REFUSED TO ANSWER.. ……	☐	9 → TO E17

E16. Did anyone smoke inside any of the public transport you used in the last 30 days?

YES…….....	☐	1
NO……..……	☐	2
DON'T KNOW……	☐	7
REFUSED TO ANSWER……	☐	9

E17. Based on what you know or believe, ,does breathing other people's smoke cause serious illness to a non-smoker?

YES…….....	☐	1
NO……..……..…..	☐	2
DON'T KNOW……..…..	☐	7
REFUSED TO ANSWER……	☐	9

E18. Based on what you know or believe, does breathing other people's smoke cause the following illnesses?

	YES (1)	NO (2)	DON'T KNOW (7)	REFUSED TO ANSWER (9)
a. Heart diseases in adults?				
b. Lung diseases in children?				
c. Lung cancer among adults?				

E29. For each of the following public places, state wether you think smoking should or should not be allowed in the building.

ITEM	PUBLIC PLACES	ALLOWED (1)	NOT BE ALLOWED (2)	DON'T KNOW (7)	REFUSED TO ANSWER (9)
a	workplace				
b	restaurant				
c	bar				
d	hotel				
e	casino				
f	disco				
g	karaoke centre				
h	public transport terminal				
I	shopping centre				

Section F. Economics – Manufactured Cigarettes

INT: EXAMINE ANSWERS TO B1, B6A, AND B10A. RECORD BELOW:

B1 = ___
B6A = ___
B10A = ___

IF B1 = 1 OR 2 (RESPONDENT CURRENTLY SMOKES EVERY DAY OR LESS THAN EVERY DAY)

AND

[B6A OR B10A] > 0 OR = 888 (RESPONDENT SMOKES MANUFACTURED CIGARETTE)

CONTINUE WITH THIS SECTION ……..☐1

OTHERWISE, PROCEED TO THE NEXT SECTION ……☐2

F00. The following questions are about the last time you bought manufactured cigarettes for yourself to smoke. *Manufactured cigarettes does not include kreteks*.

F01a. The last time you bought manufactured cigarettes for yourself, how many did you buy?

[MARK UNIT ON THIS SCREEN AND NUMBER ON THE FOLOWING SCREEN]

CIGARETTES (STICK)…….....	☐	1	
PACKET……..……..	☐	2	
CARTON……..….	☐	3	
OTHERS (STATE) …….	☐	4 →	**F01c. [STATE THE UNIT]:___**
NEVER BOUGHT CIGARETTE……	☐	5 →	**TO NEXT SECTION**
REFUSED TO ANSWER……	☐	9 →	**TO F03**

F01b. ENTER NUMBER (STICKS/PACKETS/CARTONS/OTHERS)

☐☐

[IF F01a=STICKS, GO TO F02]
[IF F01a=PACKS, GO TO F01dPack]
[IF F01a=CARTONS, GO TO F01dCart
[IF F01A=OTHER, GO TO F01dOther]

F01dPack. Did every packet contain 20 cigarettes, or another amount?

20…….....	☐	1
OTHER AMOUNT ……...	☐	7 F01dPackA. How many cigarettes were in each packet?
REFUSED TO ANSWER…….....	☐	9

[GO TO F02]

F01dCart. Did every carton contain 200 cigarettes, or another amount?

200…….....	☐	1
OTHER AMOUNT ……..…...	☐	7 F01CartA. How many cigarettes were in each carton?
REFUSED TO ANSWER.....	☐	9

[GO TO F02]

F01dOther. How many cigarettes were in each {OTHER}?

[GO TO F02]

F02. How much money did you spend for this purchase?

[IF DON'T KNOW OR REFUSED TO ANSWER, ENTER 9999]

☐ [RM 0.10 to RM 1000]

F03. What was the cigarette brand the last time you bought for yourself?

DUNHILL ……..……	☐	1
MARLBORO…….	☐	2
CAMEL ……..	☐	3
SALEM …….....	☐	4
WINSTON …….....	☐	5
MILD SEVEN…….....	☐	6
BENSON & HEDGES …….....	☐	7
OTHERS ……..…….	☐	8 → **F03a. [[STATE BRAND] :_____ _**
REFUSED TO ANSWER …….	☐	99

F04. The last time you bought cigarettes for yourself, where did you buy it?

GROCERY STORE ……	☐	1
HOUR CONVENIENCE STORE AND KIOSK…..……..……..…	☐	2
PETROL STATION ……..……	☐	3
NEWSPAPER STAND ……..….....	☐	4
SUPERMARKET ……..……	☐	5
ROAD-SIDE SHOP ……..…..…..	☐	6
FROM VENDOR ON A TRUCK OR CAR……..……	☐	7
MILITARY STORE ……..……..	☐	8
DUTY- FREE SHOP ……..……..	☐	9
OVERSEAS ……..…….	☐	10
THROUGH THE INTERNET ……..……...	☐	11
NIGHT MARKET ……..……...	☐	12
VENDING MACHINE ……..……..	☐	13
OTHERS, STATE ……..…….	☐	14
DON'T REMEMBER ……..……....	☐	77
REFUSED TO ANSWER…….……..……..	☐	99

FF1. In the last 6 months, has there been a time when the money you spent on cigarettes resulted in not having enough money to spend on food?

YES……....	☐	1
NO….....	☐	2
UNABLE TO STATE ……	☐	7
REFUSED TO ANSWER.....	☐	9

Section G. Media

G01 INTRO. The following questions are about your exposure to media and advertisements in the last 30 days.

G01. In the last 30 days, did you observe *information* about the danger of smoking or motivation to quit smoking in the following places?

	YES (1)	NO (2)	NOT APPLICABLE (7)	REFUSED TO ANSWER (9)
a. In newspaper or magazines……				
b. on television……				
c. on the radio……..				
d. on billboards……				
e. on posters……..….				
f. at the cinemas…….				
g. on windows or inside shops/stalls where you buy cigarettes…….……				
h. internet……..…				
i. other places……..				

[NOT INCLUDING HEALTH WARNING ON CIGARETTE PACKET]

i1. Please state: _____

G02. In the last 30 days, have you observed any information about health warning on cigarette packets?

YES…..……..……..	☐	1
NO……..…...	☐	2→ TO G04
DID NOT SEE ANY CIGARETTE PACKET…..…	☐	3→ TO G04
REFUSED TO ANSWER…... ……...	☐	9→ TO G04

G03. [ASK IF B01 = 1 OR 2. OTHERWISE PROCEED TO G04]

In the last 30 days, have health warning on cigarette packets made you think about quitting smoking?

YES…….....	☐	1
NO…….……..……..	☐	2
DON'T KNOW……..….	☐	7
REFUSED TO ANSWER……	☐	9

GG1. How far does health warnings make you think about health risks (harmful to health) from smoking? Would you say not at all, a little, somewhat, or a lot?

NOT AT ALL.....	☐	1
A LITTLE …….....	☐	2
SOMEWHAT …….	☐	3
A LOT…….....…….	☐	4
DON'T KNOW …….....…….	☐	7
REFUSED TO ANSWER….....	☐	9

GG2. In the last 30 days, did health warnings prevent you from smoking cigarettes when you feel like to smoke one? Would you say never, once, a few times, or a lot of times?

NEVER ……..……..……..	☐	1
ONCE..…….....……	☐	2
A FEW TIMES …….....	☐	3
A LOT OF TIMES…….....…….	☐	4
DON'T KNOW …….....……	☐	7
REFUSED TO ANSWER….....	☐	9

G04. In the last 30 days, did you observe any *advertisements or promotions* about cigarettes in the following places?

	YES (1)	NO (2)	NOT APPLICABLE (7)	REFUSED TO ANSWER (9)
a. a shop where cigarettes are sold.....				
b. on television……..……				
c. radio ……...				
d. on billboards.....				
e. on posters ……...……				
f. in newspapers or magazine……				
g. at the cinemas ……..…….....				
h. on the internet ……..				
i. public transport or public transport stations……..…				
j. public notice board ……				
k. others…….....				

K1. State where: _____

G06. In the last 30 days, did you observe any of the following cigarette promotions?

READ EACH LINE

	YES (1)	NO (2)	DON'T KNOW (7)	REFUSED TO ANSWER (9)
a. free cigarette samples ……				
b. sale or discount on cigarettes……				
c. cigarette coupons? ……				
d. free gift or special discount on other items when buying cigarettes…….				
e. clothes or other merchandise which has a cigarette logo or brand……..……..				
f. mail-order cigarette promotion? ……..				
g. one-to-one sales promotion? ……...				

GG3. In the last 12 month, have you ever seen or heard about "TAK NAK" anti-smoking campaign?

YES ….....	☐	1
NO …….....	☐	2
UNABLE TO STATE… ……..…	☐	7
REFUSED TO ANSWER…..……	☐	9

Section H. Knowledge, Attitudes & Perceptions

The following question is about tobacco smoking

H01. Based on your knowledge or beliefs, does smoking tobacco causes serious illness?

YES ……..	☐	1
NO ……..…	☐	2
DON'T KNOW ……..……..	☐	7
REFUSED TO ANSWER ……..	☐	9

H02. Based on your knowledge or beliefs, does smoking tobacco causes the following illness:

	YES (1)	NO (2)	DON'T KNOW (7)	REFUSED TO ANSWER (9)
a. stroke (blood clots in the brain which cause paralysis)…….				
b. heart attack……..				
c. lung cancer……..				
d. oral cancer ……..…….				
e. premature birth……				
f. throat cancer ……..…….				
g. miscarriage……..…				
h. gangrene …….				
i. bladder cancer ……				
j. stomach cancer …….				
k. bone loss / osteoporosis……...				

H02_3 Do you believe cigarettes are addictive?

YES ……..	☐	1
NO ……	☐	2
DON'T KNOW. ……..……...	☐	7
REFUSED TO ANSWER ……..…..	☐	9

H02_4 Based on your knowledge, does your religion forbid smoking?

YES ……..	☐	1
NO ……	☐	2
DON'T KNOW. ……..……	☐	7
REFUSED TO ANSWER …….....	☐	9

H03. Based on your knowledge or beliefs, does consuming *smokeless tobacco* cause serious illness?

YES …….....	☐	1
NO ……	☐	2
DON'T KNOW. ……..… ……...	☐	7
REFUSED TO ANSWER ……..	☐	9

H05. Do you support or oppose a tax increase on tobacco products?

SUPPORT ……..…	☐	1
OPPOSE ……..……...	☐	2
DON'T KNOW ……..	☐	7
REFUSED TO ANSWER …….	☐	9

H06. Would you support or oppose a law which prohibits the display of cigarettes or tobacco products at points-of-sale?

SUPPORT ……..…	☐	1
OPPOSE ……..……...	☐	2
DON'T KNOW ……..	☐	7
REFUSED TO ANSWER ……..…….	☐	9

H07. Would you support or oppose the restriction of sales on cigarettes and tobacco products by licensing retailers?

SUPPORT ……..…	☐	1
OPPOSE ……..……...	☐	2
DON'T KNOW ……..	☐	7
REFUSED TO ANSWER ……..… …….	☐	9

H08. In your opinion, which of the following anti-smoking actions taken by the Ministry of Health Malaysia could reduce the number of smokers in Malaysia?

	YES (1)	NO (2)	DON'T KNOW (7)	REFUSED TO ANSWER (9)
a. Prohibit smoking in public places?.....				
b. Increase the number of no-smoking zones?.....				
c. Increase the price of cigarettes? …….				
d. Increase the tax on cigarettes?.....				
e. Having more anti-smoking campaign (e.g. the *TAK NAK* campaign)?.....				
f. Making selling of cigarettes illegal?.....				
g. Impose higher fines on smoking related offences? ……..				
h. Provide more quit smoking services? …….				

END INDIVIDUAL QUESTIONNAIRE

I00.

Those are all the questions that I need to ask. Thank you for participating in this important survey.

II1. The quality of data in this survey is very importance to us, could you please give us your telephone number. This number might be used only to monitor my work.

INTERVIEWER: PLEASE RECORD THE RESPONDENT'S TELEPHONE NUMBER

I02. WRITE ANY NOTES REGARDING INTERVIEW:

Appendix B: Sample Design

1. Sampling Strategy and Sample Size:

In Malaysia, the sampling for GATS was a multistage stratified cluster sampling that was representative of Malaysia's population (15 years and above) all over the country except very remote areas in Sabah and Sarawak, where the only access to the areas is by boat or air transport. (The sample did not include those who were visitors (e.g. tourists), institutionalized in hospitals, or residing in an assisted living facility/nursing home, on a military base, or in group quarters or a prison.)

The sampling strategy of the survey was to generate precise cross-sectional estimates at the national level, by gender and by geographical (urban/rural) localities at the national level, and to allow for comparison of the estimates between different countries conducting the survey.

According to the GATS sampling protocol, a sample size of at least 4000 respondents is required (2000 males and 2000 females, and 2000 from both urban and rural areas). The GATS sample size was adjusted for potential ineligibility and non response in determining the number of households to be selected in order to get the required number of respondents. After the adjustment, the final sample size was 5112 respondents. Of this number, 2664 were from urban areas, while 2448 were from rural areas. The response rate in urban areas was usually lower than rural areas in Malaysia. There was no gender assignment made for the selected households.

2. Sampling Method

As Malaysia was conducting the National Health and Morbidity Survey (NHMS) in 2011, after taking into consideration the logistics and resources involved, sampling for the GATS was integrated with the NHMS. This would also meet the requirement for tobacco data in the NHMS.

The sampling process for GATS was done with the following sample design and technique:

a. First-Stage Sample

Primary Sampling Unit (PSU): The PSU is made up of enumeration blocks (EBs) based on information from the 2010 census, as these are the latest available EBs from the Department of Statistics (DOS) at the time of the survey. The list of EBs represents the frame of the first-stage sample.

The first stage of selection was selection of EBs from a list of EBs in Malaysia. Based on the latest census in Malaysia, there were 74,756 EBs in Malaysia, of which 48,574 were in urban areas and 26,182 in rural areas.

A total of 426 EBs were selected for the GATS, 222 from urban areas and 204 from rural areas. The selection of EBs for the GATS was done from the selected EBs for the NHMS (urban and rural EBs for the GATS were selected randomly from the respective urban and rural EBs in the NHMS). There were 794 EBs randomly selected for NHMS (484 from urban areas and 310 from rural areas). The selection of EBs was done proportionate to the population size. The selection was done by Department of Statistics, Malaysia.

b. Second-Stage Sample

Secondary Sampling Unit (SSU): The second stage of selection was selection of living quarters (LQs) from each selected EB. Twelve LQs were selected from each selected EB. The sample frame was composed of a list of all LQs enumerated previously by the Department of Statistics during the 2010 Census within each selected EB. On average, the number of LQs for each EB was about 80 to 120 LQs. The selection of LQs was also done by Department of Statistics, Malaysia

c. Final-Stage Sample:

GATS Final Sampling Unit (FSU) -- Eligible household residents: A random selection method from a roster of eligible household members was used to select an individual from within a sampled household as per the GATS protocol. In summary, this method of selection proceeded as follows:

1. For each household selected into the GATS sample, an interviewer attempted to identify an individual in the household who was 18 years or older and knowledgeable about the household residents. This person was considered to be the screening respondent.
2. An interviewer asked for the presence of eligible respondents in the household to create a roster of all people who were aged 15 years or older regardless of gender and who considered the household to be their usual place of residence. The basic information of applicable household residents was entered into a handheld device from the oldest to the youngest and for the selection of a respondent.
3. The handheld device used a random process to select a respondent, and the name of the selected respondent was displayed on the screen. By using this method of selection, all eligible respondents had an equal chance of selection and the probability of selection was the inverse of the number of eligible people listed.

3. Survey Estimates and Sample Weighting Process

All estimates that derived from the GATS were in the form of percentage distributions, proportions, ratios, or means. Estimates were generated by using a standard statistical package (e.g., SPSS, SUDAN). The sample data were weighted before generating the estimates. Sample weighting and analysis were done with the help of the Centers for Disease Control and Prevention (CDC), Atlanta, USA.

For the GATS sample estimates to be representative of the population, it was necessary to multiply the data by a sampling weight, or expansion factor. The basic weight for each sampled household would be equal to the inverse of its probability of selection (calculated by multiplying the probabilities at each sampling stage).

As per the GATS manual, a three-step process for GATS sample weighting was conducted for GATS Malaysia. The following are the details of computation and example cases.

a. Base weight calculations: The selection probability for p1 and p2 were calculated, where p1 = selection probability for PSUs, p2 = selection probability for households within the PSU. The selection probability for the individual within each household p3 is given by 1/(the number of eligible persons in the household). This is obtained from the survey response data. The overall base weight (*wb*) is calculated as 1/(p1*p2*p3).

$$wb = \frac{1}{p1 * p2 * p3}$$

In addition, the household-level base weight (*wb_hh*) for use in nonresponse adjustments is calculated as:

$$wb\_hh = \frac{1}{p1 * p2}$$

b. Non response adjustment: The nonresponse adjustment was done at two levels: household and respondent. The household nonresponse adjustment was calculated by PSU, so there were 426 adjustment cells – one for each PSU. The household level nonresponse adjustment was calculated as:

$$hh\_nr = \frac{\sum wb\_hh_{eligible\ households}}{\sum wb\_hh_{completed\ rosters}}$$

Due to the small sample size of each PSU (12 households) and low response rates in some PSUs, the household-level nonresponse adjustments ranged from 1.00 to 6.00. Therefore, they were trimmed so that the greatest value of *hh_nr* = 3.00.

The household nonresponse adjusted weight *wr_hh*was the product of the base weight *wb* and the household nonresponse adjustment *hh_nr.*

The person nonresponse adjustment was calculated by residence (urban/rural), gender and smoking status taken from the household roster. Therefore, there were 2*2*2=8 adjustment cells for the person nonresponse adjustment. The person-level non-response adjustment was:

$$pp\_nr = \frac{\sum wb_{eligible\ households}}{\sum wb_{completed\ rosters}}$$

The final nonresponse adjusted weight (*wr_hh_pp*) was the product of the household nonresponse adjusted weight (*wr_hh*) and the person nonresponse adjustment (*pp_nr*).

c. Calibration: The post-stratification adjustment (*r*) was calculated by residence (urban/rural), gender, and the four standard GATS age groups (15-24, 25-44, 45-64, and ≥65) resulting in 16 adjustment cells. Population counts were obtained from the 2010 census in Malaysia. The post-stratification adjustment was calculated as:

$$r = \frac{popproj}{\sum wb\_hh\_pp}$$

The final weight (*wf*) was the product of the nonresponse adjusted weight (wr_hh_pp) and the post-stratification adjustment (*r*).

Appendix C: Estimates of Sampling Errors

The estimates from a sample survey are affected by two types of error: (1) non-sampling errors, and (2) sampling errors. Non-sampling errors are the result of errors that cannot be attributable to sampling and are made in the implementing of data collection and data processing, such as errors in coverage, response errors, nonresponse errors, faulty questionnaires, interviewers recording errors, data processing errors, etc. Although numerous efforts were made during the implementation of GATS in Malaysia to minimize those errors, nonsampling errors are impossible to avoid completely and difficult to evaluate statistically.

The sample of respondents selected in the GATS in Malaysia was only one of the samples that could have been selected from the same population, using the same design and sample size. Each of these samples would yield results that differed somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. The extent of variability is not known exactly, but it can be estimated statistically from the survey results.

The following sampling error measures are presented for each of the selected indicators:

***Standard error (SE)**: Sampling errors are usually measured in term of standard errors for a particular estimate or indicator. The standard error of an estimate is thus the square root of the variance of the estimate, and it is computed in the same units as the estimate.*

***Design effect**: Design effect denoted by 'deff' is the ratio of actual variance of an indicator, under the sampling method used in the survey, to the variance calculated under the assumption of simple random sampling. The square root of the design effect denoted by 'deft' is used to show the efficiency of the sample design and is calculated for each estimate as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A 'deft' value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a 'deft' value of above 1.0 indicates the increase in the standard error due to the use of a more complex sample design. In general, for a well-designed survey, 'deft' usually ranges from 1 to 3. It is common, however, for 'deft' to be much larger, up to 7 or 8.*

***Relative standard error (RSE)**: Relative standard error, also known as coefficient of variation (CV), is the ratio of the standard error to the value of the indicator.*

***Margin of error (MOE)**: A statistic expressing the amount of random sampling error in a survey's results. Defined as the "radius" of a confidence interval for a particular statistic from a survey. MOE is defined as 1.96*Standard error.*

***Confidence limits**: Confidence limits are calculated to show the interval within which the true value for the population can be reasonably assumed to fall. For any given statistic calculated from the survey, the value of that statistic will fall within a range of plus or minus two times the standard error of the statistic in 95% of all possible samples of identical size and design.*

Calculation of Standard Error

The sampling design for GATS Malaysia 2011 was a complex sampling design. Therefore, it is necessary to use appropriate formulae for the analysis. For calculation of sampling errors for the estimates, SUDAAN 10.1 software was used. The method used in the calculation was Taylor series linearization.

The Taylor series linearization method treats any percentage or average as ratio estimates, r = y/x, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula below:

$$SE^2(r) = \text{var}(r) = \frac{1-f}{x^2}\sum_{h=1}^{2}\left[\frac{m_h}{m_h-1}\left(\sum_{i=1}^{m_h} Z_{hi}^2 - \frac{Z_h^2}{m_h}\right)\right]$$

In which, $Z_{hi} = y_{hi} - rx_{hi}$, and $Z_h = y_h - rx_h$

where h(=1 or 2) represents the stratum which is urban or rural,

m_h *is the total number of PSUs selected in the hth stratum,*

y_{hi} *is the sum of weighted values of variable y in the ith PSU in the hth stratum,*

x_{hi} *is the sum of weighted number of cases in the ith PSU in the hth stratum, and*

f is the overall sampling fraction, which is so small that it is ignored

The results are presented in this appendix for the county as a whole, for urban and rural areas, and for gender. In addition to the sampling error measures, the tables include unweighted and weighted counts of denominators for each indicator (Tables C.1-C.5).

Table C.1: Sampling errors of key indicators for overall adults aged 15 years or older, GATS Malaysia 2011.

Indicator	Estimate (R)	Standard Error (SE)	Sample size (n)	Design Effect (DEFF)	Relative Error (SE/R)	Margin of Error (MOE)	Confidence limits	
							Lower Limit (R-1.96SE)	Upper Limit (R+1.96SE)
Current Tobacco Smokers	23.1	1.01	4,250	2.46	0.04	1.99	21.13	25.11
Current Cigarette Smokers	22.9	1.01	4,250	2.45	0.04	1.98	20.94	24.89
Current Users of Smokeless Tobacco	0.7	0.17	4,133	1.69	0.23	0.34	0.40	1.09
Daily Tobacco Smoker	20.9	0.99	4,250	2.53	0.05	1.94	18.91	22.80
Daily Cigarette Smokers	20.6	0.98	4,250	2.50	0.05	1.92	18.69	22.54
Former Daily Tobacco Smokers Among All Adults	2.3	0.27	4,250	1.37	0.12	0.53	1.79	2.85
Former Tobacco Smokers Among Ever Daily Smokers	9.5	1.11	1,079	1.56	0.12	2.19	7.28	11.65
Time to First Tobacco use within 5 minutes of waking	12.3	1.76	891	2.57	0.14	3.45	8.82	15.73
Time to First Tobacco use within 6-30 minutes of waking	35.3	2.35	891	2.16	0.07	4.61	30.65	39.87
Smoking Quit Attempt in the Past 12 Months	48.6	2.33	989	2.15	0.05	4.57	44.05	53.19
Health Care Provider Asked about Smoking	67.6	3.66	308	1.87	0.05	7.17	60.39	74.73
Health Care Provider Advised Quitting Smoking	52.6	4.48	308	2.47	0.09	8.77	43.82	61.36
Use of Pharmacotherapy for Smoking Cessation	9.0	2.02	414	2.05	0.22	3.96	5.05	12.96
Use of Counseling/Advice or Quit Lines for Smoking Cessation	4.4	1.03	416	1.04	0.23	2.02	2.42	6.46
Planning to quit, thinking about quitting, or will quit smoking	70.7	2.13	985	2.15	0.03	4.17	66.53	74.87
Exposure to SHS at Home	38.4	1.32	4,110	3.03	0.03	2.59	35.86	41.03
Exposure to SHS at Workplace	39.8	2.06	1,018	1.80	0.05	4.03	35.81	43.88
Exposure to SHS in Government Buildings/Offices	20.0	1.99	988	2.43	0.10	3.89	16.13	23.92
Exposure to SHS in Health Care Facilities	8.7	0.98	1,720	2.08	0.11	1.92	6.75	10.58
Exposure to SHS in Restaurants	71.0	1.61	2,125	2.67	0.02	3.15	67.83	74.13
Exposure to SHS on Public Transportation	28.2	2.59	705	2.34	0.09	5.08	23.07	33.23
Last cigarette purchase in grocery store	79.6	2.02	798	2.00	0.03	3.96	75.69	83.61
Last cigarette purchase in convenience store or kiosk	6.5	1.22	798	1.97	0.19	2.39	4.06	8.84
Noticed Anti-tobacco Information on radio or television	87.1	0.89	4,244	2.97	0.01	1.74	85.34	88.82
Noticed Health Warning Labels on Cigarette Packages	92.8	1.19	985	2.10	0.01	2.34	90.46	95.14
Thinking of Quitting Because of Health Warning Labels on Cigarette Package	45.8	2.31	969	2.08	0.05	4.53	41.27	50.33
Noticed Any Cigarette Advertisement or Promotion	35.6	1.43	4,208	3.76	0.04	2.81	32.81	38.42
Believes that Tobacco Smoking Causes Serious Illness	92.2	0.63	4,236	2.34	0.01	1.23	91.01	93.47
Believes that Tobacco Smoking Causes Strokes	80.7	1.05	4,240	3.02	0.01	2.06	78.63	82.76
Believes that Tobacco Smoking Causes Heart Attacks	88.8	0.80	4,242	2.75	0.01	1.58	87.19	90.34
Believes that Tobacco Smoking Causes Lung Cancer	93.7	0.52	4,244	1.95	0.01	1.02	92.66	94.71
Believes that SHS Causes Serious Illness in Non-Smokers	85.8	0.76	4,244	2.04	0.01	1.50	84.34	87.34
Number of Cigarettes Smoked per Day (by daily smokers)	13.9	0.40	889	1.88	0.03	0.79	13.11	14.69
Age at Daily Smoking Initiation	17.2	0.31	351	2.82	0.02	0.60	16.62	17.82
Monthly Expenditure on Manufactured Cigarettes	178.8	19.53	782	1.34	0.11	38.27	140.5	217.0

Table C.2: Sampling errors of key indicators for men aged 15 years or older, GATS Malaysia 2011.

Indicator	Estimate (R)	Standard Error (SE)	Sample size (n)	Design Effect (DEFF)	Relative Error (SE/R)	Margin of Error (MOE)	Confidence limits	
							Lower Limit (R-1.96SE)	Upper Limit (R+1.96SE)
Current Tobacco Smokers	43.9	1.69	2,104	2.44	0.04	3.32	40.61	47.24
Current Cigarette Smokers	43.6	1.69	2,104	2.43	0.04	3.31	40.27	46.88
Current Users of Smokeless Tobacco	0.9	0.30	2,034	2.04	0.33	0.59	0.31	1.48
Daily Tobacco Smoker	39.9	1.71	2,104	2.56	0.04	3.35	36.52	43.22
Daily Cigarette Smokers	39.4	1.69	2,104	2.52	0.04	3.32	36.09	42.72
Former Daily Tobacco Smokers Among All Adults	4.4	0.53	2,104	1.38	0.12	1.03	3.38	5.44
Former Tobacco Smokers Among Ever Daily Smokers	9.4	1.13	1,042	1.55	0.12	2.21	7.24	11.66
Time to First Tobacco use within 5 minutes of waking	12.5	1.79	866	2.53	0.14	3.50	8.98	15.99
Time to First Tobacco use within 6-30 minutes of waking	35.6	2.38	866	2.14	0.07	4.66	30.90	40.23
Smoking Quit Attempt in the Past 12 Months	48.7	2.38	956	2.16	0.05	4.66	44.02	53.34
Health Care Provider Asked about Smoking	67.3	3.73	294	1.85	0.06	7.31	60.04	74.65
Health Care Provider Advised Quitting Smoking	52.2	4.56	294	2.44	0.09	8.94	43.24	61.11
Use of Pharmacotherapy for Smoking Cessation	9.2	2.05	399	2.01	0.22	4.03	5.16	13.21
Use of Counseling/Advice or Quit Lines for Smoking Cessation	4.4	1.04	401	1.03	0.24	2.03	2.33	6.40
Planning to quit, thinking about quitting, or will quit smoking	70.4	2.17	952	2.14	0.03	4.25	66.20	74.69
Exposure to SHS at Home	43.3	1.75	2,043	2.54	0.04	3.43	39.87	46.72
Exposure to SHS at Workplace	46.2	2.65	603	1.71	0.06	5.20	41.03	51.44
Exposure to SHS in Government Buildings/Offices	20.1	2.30	595	1.96	0.11	4.51	15.61	24.64
Exposure to SHS in Health Care Facilities	7.8	1.45	756	2.20	0.19	2.84	4.95	10.62
Exposure to SHS in Restaurants	73.1	1.89	1,156	2.09	0.03	3.70	69.38	76.78
Exposure to SHS on Public Transportation	32.1	4.09	283	2.16	0.13	8.01	24.11	40.13
Last cigarette purchase in grocery store	79.5	2.04	780	1.99	0.03	4.00	75.46	83.47
Last cigarette purchase in convenience store or kiosk	6.4	1.24	780	1.98	0.19	2.43	4.02	8.87
Noticed Anti-tobacco Information on radio or television	86.0	1.29	2,102	2.89	0.01	2.52	83.44	88.49
Noticed Health Warning Labels on Cigarette Packages	93.2	1.20	951	2.15	0.01	2.35	90.86	95.55
Thinking of Quitting Because of Health Warning Labels on Cigarette Package	45.7	2.32	935	2.02	0.05	4.54	41.12	50.21
Noticed Any Cigarette Advertisement or Promotion	39.0	1.86	2,088	3.02	0.05	3.64	35.36	42.64
Believes that Tobacco Smoking Causes Serious Illness	90.7	1.00	2,096	2.48	0.01	1.96	88.69	92.61
Believes that Tobacco Smoking Causes Strokes	79.2	1.38	2,102	2.43	0.02	2.71	76.45	81.87
Believes that Tobacco Smoking Causes Heart Attacks	86.9	1.16	2,101	2.46	0.01	2.26	84.61	89.14
Believes that Tobacco Smoking Causes Lung Cancer	92.7	0.79	2,103	1.91	0.01	1.54	91.12	94.21
Believes that SHS Causes Serious Illness in Non-Smokers	84.1	1.13	2,100	2.01	0.01	2.22	81.83	86.28
Number of Cigarettes Smoked per Day (by daily smokers)	14.0	0.40	865	1.83	0.03	0.79	13.18	14.76
Age at Daily Smoking Initiation	17.2	0.31	343	2.91	0.02	0.61	16.62	17.84
Monthly Expenditure on Manufactured Cigarettes	180.6	19.86	764	1.34	0.11	38.92	141.7	219.5

Table C.3: Sampling errors of key indicators for women aged 15 years or older, GATS Malaysia 2011.

Indicator	Estimate (R)	Standard Error (SE)	Sample size (n)	Design Effect (DEFF)	Relative Error (SE/R)	Margin of Error (MOE)	Confidence limits	
							Lower Limit (R-1.96SE)	Upper Limit (R+1.96SE)
Current Tobacco Smokers	1.0	0.24	2,146	1.15	0.23	0.46	0.59	1.51
Current Cigarette Smokers	1.0	0.23	2,146	1.17	0.23	0.46	0.54	1.45
Current Users of Smokeless Tobacco	0.6	0.17	2,099	1.04	0.29	0.33	0.25	0.92
Daily Tobacco Smoker	0.7	0.19	2,146	1.09	0.27	0.37	0.33	1.06
Daily Cigarette Smokers	0.7	0.19	2,146	1.10	0.27	0.37	0.32	1.05
Former Daily Tobacco Smokers Among All Adults	0.1	0.05	2,146	0.43	0.42	0.09	0.02	0.20
Former Tobacco Smokers Among Ever Daily Smokers	10.0	4.35	37	0.75	0.43	8.53	1.52	18.58
Time to First Tobacco use within 5 minutes of waking	0.0	0.00	25	.	.	0.00	0.00	0.00
Time to First Tobacco use within 6-30 minutes of waking	16.8	7.51	25	0.97	0.45	14.71	2.06	31.49
Smoking Quit Attempt in the Past 12 Months	45.7	11.86	33	1.81	0.26	23.24	22.51	68.98
Health Care Provider Asked about Smoking	75.2	15.62	14	1.70	0.21	30.61	44.60	105.8
Health Care Provider Advised Quitting Smoking	67.4	16.65	14	1.64	0.25	32.63	34.74	100.0
Use of Pharmacotherapy for Smoking Cessation	0.0	0.00	15	.	.	0.00	0.00	0.00
Use of Counseling/Advice or Quit Lines for Smoking Cessation	8.3	5.20	15	0.50	0.63	10.20	-1.94	18.45
Planning to quit, thinking about quitting, or will quit smoking	82.8	8.06	33	1.46	0.10	15.80	67.04	98.64
Exposure to SHS at Home	33.3	1.59	2,067	2.35	0.05	3.12	30.13	36.37
Exposure to SHS at Workplace	30.1	2.90	415	1.66	0.10	5.69	24.38	35.76
Exposure to SHS in Government Buildings/Offices	19.8	2.93	393	2.11	0.15	5.74	14.10	25.57
Exposure to SHS in Health Care Facilities	9.4	1.34	964	2.02	0.14	2.62	6.81	12.05
Exposure to SHS in Restaurants	68.4	2.28	969	2.33	0.03	4.47	63.97	72.92
Exposure to SHS on Public Transportation	25.2	3.17	422	2.24	0.13	6.21	18.96	31.38
Last cigarette purchase in grocery store	90.8	5.72	18	0.66	0.06	11.22	79.55	102.0
Last cigarette purchase in convenience store or kiosk	6.9	5.10	18	0.69	0.74	10.00	-3.07	16.93
Noticed Anti-tobacco Information on radio or television	88.3	1.04	2,142	2.25	0.01	2.04	86.22	90.31
Noticed Health Warning Labels on Cigarette Packages	74.7	8.75	34	1.34	0.12	17.15	57.54	91.83
Thinking of Quitting Because of Health Warning Labels on Cigarette Package	51.7	11.20	34	1.66	0.22	21.96	29.77	73.69
Noticed Any Cigarette Advertisement or Promotion	32.0	1.73	2,120	2.90	0.05	3.38	28.64	35.41
Believes that Tobacco Smoking Causes Serious Illness	93.9	0.67	2,140	1.67	0.01	1.31	92.61	95.23
Believes that Tobacco Smoking Causes Strokes	82.3	1.23	2,138	2.23	0.01	2.41	79.90	84.73
Believes that Tobacco Smoking Causes Heart Attacks	90.8	0.86	2,141	1.88	0.01	1.68	89.09	92.45
Believes that Tobacco Smoking Causes Lung Cancer	94.8	0.62	2,141	1.64	0.01	1.21	93.56	95.98
Believes that SHS Causes Serious Illness in Non-Smokers	87.7	0.95	2,144	1.78	0.01	1.85	85.88	89.59
Number of Cigarettes Smoked per Day (by daily smokers)	9.5	1.22	24	0.97	0.13	2.40	7.05	11.85
Age at Daily Smoking Initiation	16.6	1.81	8	1.10	0.11	3.55	13.08	20.18
Monthly Expenditure on Manufactured Cigarettes	68.5	20.60	18	1.93	0.30	40.37	28.16	108.9

Table C.4: Sampling errors of key indicators for urban adults aged 15 years or older, GATS Malaysia 2011.

Indicator	Estimate (R)	Standard Error (SE)	Sample size (n)	Design Effect (DEFF)	Relative Error (SE/R)	Margin of Error (MOE)	Confidence limits	
							Lower Limit (R-1.96SE)	Upper Limit (R+1.96SE)
Current Tobacco Smokers	22.7	1.33	2,065	2.08	0.06	2.60	20.07	25.27
Current Cigarette Smokers	22.4	1.32	2,065	2.07	0.06	2.59	19.85	25.02
Current Users of Smokeless Tobacco	0.7	0.23	1,981	1.46	0.32	0.44	0.26	1.15
Daily Tobacco Smoker	20.5	1.30	2,065	2.13	0.06	2.54	17.96	23.05
Daily Cigarette Smokers	20.2	1.28	2,065	2.10	0.06	2.51	17.73	22.75
Former Daily Tobacco Smokers Among All Adults	2.2	0.34	2,065	1.14	0.16	0.67	1.49	2.83
Former Tobacco Smokers Among Ever Daily Smokers	9.0	1.44	492	1.25	0.16	2.83	6.18	11.84
Time to First Tobacco use within 5 minutes of waking	13.5	2.38	408	1.98	0.18	4.67	8.83	18.17
Time to First Tobacco use within 6-30 minutes of waking	33.5	3.06	408	1.71	0.09	5.99	27.49	39.47
Smoking Quit Attempt in the Past 12 Months	51.0	3.05	453	1.69	0.06	5.98	44.98	56.95
Health Care Provider Asked about Smoking	65.5	4.75	139	1.38	0.07	9.31	56.22	74.84
Health Care Provider Advised Quitting Smoking	49.6	5.85	139	1.89	0.12	11.47	38.18	61.11
Use of Pharmacotherapy for Smoking Cessation	9.3	2.58	209	1.63	0.28	5.06	4.29	14.40
Use of Counseling/Advice or Quit Lines for Smoking Cessation	3.7	1.24	210	0.89	0.33	2.43	1.31	6.18
Planning to quit, thinking about quitting, or will quit smoking	70.0	2.85	450	1.74	0.04	5.58	64.43	75.60
Exposure to SHS at Home	35.7	1.69	1,991	2.49	0.05	3.32	32.41	39.06
Exposure to SHS at Workplace	41.6	2.46	636	1.58	0.06	4.82	36.81	46.45
Exposure to SHS in Government Buildings/Offices	21.5	2.51	539	2.01	0.12	4.92	16.60	26.45
Exposure to SHS in Health Care Facilities	9.2	1.29	811	1.60	0.14	2.52	6.70	11.74
Exposure to SHS in Restaurants	71.3	1.93	1,298	2.37	0.03	3.79	67.55	75.12
Exposure to SHS on Public Transportation	27.8	3.29	361	1.94	0.12	6.45	21.40	34.30
Last cigarette purchase in grocery store	76.3	2.65	389	1.51	0.03	5.20	71.06	81.46
Last cigarette purchase in convenience store or kiosk	7.9	1.64	389	1.45	0.21	3.22	4.64	11.09
Noticed Anti-tobacco Information on radio or television	86.0	1.18	2,061	2.38	0.01	2.31	83.70	88.32
Noticed Health Warning Labels on Cigarette Packages	94.4	1.51	452	1.96	0.02	2.97	91.45	97.38
Thinking of Quitting Because of Health Warning Labels on Cigarette Package	47.4	3.11	439	1.69	0.07	6.09	41.30	53.47
Noticed Any Cigarette Advertisement or Promotion	38.1	1.85	2,048	2.98	0.05	3.63	34.46	41.72
Believes that Tobacco Smoking Causes Serious Illness	92.8	0.79	2,058	1.91	0.01	1.55	91.24	94.34
Believes that Tobacco Smoking Causes Strokes	81.7	1.36	2,061	2.53	0.02	2.66	79.02	84.34
Believes that Tobacco Smoking Causes Heart Attacks	89.3	1.03	2,061	2.27	0.01	2.01	87.31	91.33
Believes that Tobacco Smoking Causes Lung Cancer	94.0	0.66	2,063	1.60	0.01	1.30	92.66	95.26
Believes that SHS Causes Serious Illness in Non-Smokers	86.6	0.94	2,060	1.57	0.01	1.85	84.72	88.41
Number of Cigarettes Smoked per Day (by daily smokers)	14.1	0.51	410	1.43	0.04	1.00	13.06	15.05
Age at Daily Smoking Initiation	17.0	0.37	199	2.30	0.02	0.73	16.27	17.73
Monthly Expenditure on Manufactured Cigarettes	202.0	26.57	383	0.95	0.13	52.07	149.9	254.0

Table C.5: Sampling errors of key indicators for rural adults aged 15 years or older, GATS Malaysia 2011.

Indicator	Estimate (R)	Standard Error (SE)	Sample size (n)	Design Effect (DEFF)	Relative Error (SE/R)	Margin of Error (MOE)	Confidence limits	
							Lower Limit (R-1.96SE)	Upper Limit (R+1.96SE)
Current Tobacco Smokers	24.3	1.21	2,185	1.73	0.05	2.37	21.91	26.64
Current Cigarette Smokers	24.2	1.21	2,185	1.74	0.05	2.37	21.79	26.52
Current Users of Smokeless Tobacco	0.8	0.22	2,152	1.21	0.26	0.43	0.42	1.28
Daily Tobacco Smoker	21.8	1.18	2,185	1.78	0.05	2.31	19.47	24.09
Daily Cigarette Smokers	21.6	1.18	2,185	1.80	0.05	2.32	19.28	23.91
Former Daily Tobacco Smokers Among All Adults	2.7	0.40	2,185	1.32	0.15	0.79	1.95	3.52
Former Tobacco Smokers Among Ever Daily Smokers	10.5	1.51	587	1.42	0.14	2.96	7.58	13.50
Time to First Tobacco use within 5 minutes of waking	9.4	1.70	483	1.64	0.18	3.32	6.03	12.68
Time to First Tobacco use within 6-30 minutes of waking	39.5	3.04	483	1.86	0.08	5.95	33.57	45.47
Smoking Quit Attempt in the Past 12 Months	42.9	2.83	536	1.75	0.07	5.55	37.36	48.47
Health Care Provider Asked about Smoking	72.8	3.85	169	1.26	0.05	7.54	65.29	80.37
Health Care Provider Advised Quitting Smoking	60.2	4.16	169	1.21	0.07	8.15	52.09	68.39
Use of Pharmacotherapy for Smoking cessation	8.0	2.39	205	1.58	0.30	4.68	3.33	12.69
Use of Counseling/Advice or Quit Lines for Smoking Cessation	6.5	1.73	206	1.01	0.27	3.39	3.07	9.85
Planning to quit, thinking about quitting, or will quit smoking	72.3	2.34	535	1.46	0.03	4.59	67.76	76.93
Exposure to SHS at Home	45.4	1.88	2,119	3.03	0.04	3.69	41.69	49.07
Exposure to SHS at Workplace	33.1	3.17	382	1.73	0.10	6.22	26.85	39.30
Exposure to SHS in Government Buildings/Offices	15.4	2.34	449	1.88	0.15	4.58	10.85	20.01
Exposure to SHS in Health Care Facilities	7.3	1.20	909	1.92	0.16	2.34	4.97	9.66
Exposure to SHS in Restaurants	69.6	2.31	827	2.08	0.03	4.52	65.10	74.14
Exposure to SHS on Public Transportation	29.0	3.34	344	1.86	0.12	6.56	22.47	35.58
Last cigarette purchase in grocery store	88.7	2.19	409	1.95	0.02	4.28	84.42	92.99
Last cigarette purchase in convenience store or kiosk	2.7	0.90	409	1.28	0.34	1.77	0.90	4.44
Noticed anti-tobacco Information on radio or television	89.8	0.90	2,183	1.92	0.01	1.76	88.08	91.60
Noticed Health Warning Labels on Cigarette packages	88.9	1.83	533	1.81	0.02	3.59	85.29	92.48
Thinking of Quitting Because of Health Warning Labels on Cigarette Package	42.1	2.59	530	1.46	0.06	5.08	36.98	47.14
Noticed Any Cigarette Advertisement or Promotion	29.2	1.76	2,160	3.22	0.06	3.44	25.74	32.62
Believes that Tobacco Smoking Causes Serious Illness	90.8	0.96	2,178	2.39	0.01	1.87	88.94	92.69
Believes that Tobacco Smoking Causes Strokes	78.1	1.40	2,179	2.51	0.02	2.75	75.38	80.88
Believes that Tobacco Smoking Causes Heart Attacks	87.3	1.13	2,181	2.53	0.01	2.22	85.11	89.55
Believes that Tobacco Smoking Causes Lung Cancer	93.0	0.74	2,181	1.83	0.01	1.45	91.52	94.43
Believes that SHS Causes Serious Illness in non-smokers	84.0	1.25	2,184	2.54	0.01	2.45	81.52	86.43
Number of Cigarettes Smoked per Day (by daily smokers)	13.5	0.61	479	2.16	0.05	1.20	12.31	14.70
Age at Daily Smoking Initiation	18.0	0.40	152	2.44	0.02	0.79	17.18	18.75
Monthly Expenditure on Manufactured Cigarettes	116.1	10.31	399	0.90	0.09	20.20	95.94	136.3

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Appendix E: Glossary of Terms

Questionnaire and Indicator Terminology	
Acupuncture	Acupuncture, which is one of the main forms of treatment in traditional Chinese medicine, It involves the use of sharp, thin needles that are inserted in the body at very specific points called “acupuncture spots.” This process is believed to adjust and alter the body's energy flow into healthier patterns and is used to treat a wide variety of illnesses and health conditions.
Aromatherapy	Aromatherapy is the art and science of helping living things move toward wholeness and balance using the essential oils that can be extracted from plants.
Awareness of cigarettes advertising, promotion and Sponsorship	Respondents who have noticed cigarettes at point of sale, free gifts, or discount offers on other products when they buy cigarettes, or any advertisement or signs promoting cigarettes in stores where cigarettes are sold in the last 30 days, or who have noticed any advertisement or signs promoting cigarettes of a cigarettes company, sponsorship of a sporting event or other event that was in the store where cigarettes are sold in the last 30 days.
Beliefs about the dangers of secondhand smoke	Respondents who believe that breathing the smoke of others causes serious illness and specific disease in non-smokers, i.e., heart disease in adults, lung illness in children, lung cancer in adults, emphysema, low birth weight (< 2,500 grams), and premature birth (<37 weeks).
Beliefs about the dangers of tobacco smoking	Respondents who believe that tobacco smoking causes serious illness and specific diseases, i.e., stroke, heart attack, lung cancer, mouth cancer, larynx cancer, impotence, and emphysema.
Bidis	Small cigarette made of tobacco minced into flakes and rolled in the leaves of a typical Asian plant into a conical shape. The “*bidi*” is imported mainly from India and may or may not have flavors (chocolate, strawberry, etc.)
Cigar	Cylinder of tobacco leaves either handmade or machine made, usually closed in one of its extremities, which after the removal of the head (closed part of the cigar), is lit on the other extremity and smoked from the opening made by the cut.
Cigarette	Rolled tobacco product that emits smoke. The following are considered in this category: manufactured cigarettes, kreteks, and hand-rolled cigarette.
Current smoker	Smoker who daily or occasionally smokes any tobacco product.
Curut	A device like a cigar but with two closed ends.

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Daily smoker	Person who currently smokes any tobacco product every day.
E-cigarette	An e-cigarette, or electronic cigarette, looks like a cigarette made from tobacco but actually has just one thing in common with the real thing: nicotine. It converts nicotine liquid into water vapor. The e-cigarette has three main parts: a battery, an atomizer, and cartridge**.** The battery, the largest part, has an indicator light on one side and screws onto the atomizer. The heart of every e-cigarette is the atomizer, which converts the e-liquid into smoke. The cartridge, a cylindrical inhaler that contains the e-liquid, attaches to the atomizer.
Enumeration block	An enumeration block is a geographically contiguous area of land with identifiable boundaries, artificially created to have about 80 to 120 living quarters.
Ever daily smoker	This person may or may not be a current smoker. Includes persons that are 'current daily smokers', 'current occasional smokers, formerly daily' or 'current non-smokers, formerly daily smokers'
Exposure to anti-smoking information	Respondents who have noticed information on various media in the last 30 days about the dangers of cigarette smoking and those encouraging quitting.
Exposure to secondhand smoke	Includes seeing somebody else smoke, smelling the smoke, or seeing tobacco butts inside (indoor areas) the following public places during their visit in the past 30 days, i.e.: • Government building: covering indoor areas, which are nonsmoking areas by the national smoke-free laws • Health-care facilities: covering indoor areas of both public and private health care facilities, which are nonsmoking areas by the national smoke-free laws. • Restaurants: covering food- and/or beverage-selling places inside the building, not including places in front of any building or on the wayside. • Bars or nightclubs: covering indoor areas, beverage-selling place inside the building, not including places in front of any building or on the wayside. • Cafés, coffee houses, bistros: covering food- and/or beverage-selling place inside the building, not including places in front of any building or on the wayside. • Indoor shopping complexes: covering indoor areas, which are nonsmoking areas by the national smoke-free laws. • Public transportation: All public transport with both air conditioner or no air conditioner. • Outside market: means a place provided for vendors to show

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	and exchange goods and services on a regular, temporary, or specific-day basis.
Exposure to secondhand smoke at home	Emphasize inside the respondent's home, not including areas outside such as patios, balcony, garden, etc. that are not fully enclosed.
FCTC	FCTC World Health Organization Framework Convention on Tobacco Control
Former daily smoker	A person who, in the past, made use of at least one smoked tobacco product daily for a period of one month or more.
Former smoker	A person who, in the past, made use of at least one smoked tobacco product occasionally for a period of three months or more, or daily for a period of one month or more.
Hand-rolled cigarettes	A product composed, basically, of a tobacco portion (in threads or rolled), inserted in corn straw (straw cigarette, *paieiro*, *palheiro*) or paper (licked). The hand-rolled cigarette is generally prepared manually, but it can also be found in packages.
Health-care providers	Health-care providers include various health professionals such as medical doctors, nurses, pharmacists, health workers, etc.
Herbal therapy	The use of plants or plant extracts, especially plants that are not part of the normal diet or medication.
Hypnotherapy	Hypnotherapy is the treatment of a variety of health conditions by hypnotism or by inducing prolonged sleep.
Interest in quitting smoking	Refers to current tobacco smokers who are planning or thinking about quitting smoking within the next month, 12 months, or someday.
Kretek	A tobacco product imported from Southeastern Asia, especially Indonesia, which contains a mixture of tobacco, dried clove, and other chemical substances. The kretek is aromatic, and its smoke has a sweet smell.
Living quarters	Living quarters have been defined for census purposes as places of abode, which are structurally separate and independent; built or converted for living (e.g., house, flat, apartment, shop house, makeshift hut, hotel, hostels)
Manufactured cigarettes	Product composed of a small dried and minced tobacco portion, rolled in thin paper, manufactured, either equipped with a filter system or not.

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MPOWER	MPOWER 2008 WHO publication with six key strategies on Tobacco Control
	Monitor tobacco use and prevention policies
	Protect people from tobacco smoke
	Offer help to quit tobacco use
	Warn about the dangers of tobacco
	Enforce bans on tobacco advertising, promotion and sponsorship
	Raise taxes on tobacco
Nicotine	Liquid yellow substance with an unpleasant smell and poisonous, which constitutes the main active element of tobacco.
Nicotine replacement	Treatment based on nicotine patch, gum, tablet, or spray, aimed to gradually reduce the nicotine levels in the blood until the person does not feel the need to smoke anymore, alleviate the desire to smoke, and mitigate the withdrawal symptoms.
Non-smoker	Person currently does not smoke at all.
Non-user of smokeless tobacco	Person currently does not use smokeless tobacco at all.
Occasional smoker	Person who uses at least one of the smoked tobacco products, but not daily, regardless of the time he/she has been smoking.
Pharmacotherapy	Nicotine replacement therapy (e.g., chewing gum, patches, tablets, inhaler and other agents containing nicotine), prescription drugs (e.g., Tabex, Zyban, Champix), and other pharmaceutical agents.
Pipe	Instrument used to smoke composed of a bowl and a holder. The tobacco is placed in the bowl, which is adapted to a tube through which smoke is inhaled by the mouth.
Prevalence (%)	Statistical concept referring to the number of occurrences of tobacco use that are present in a particular population, aged 15 years or over, at a given time
Quit attempt	Refers to current tobacco smokers who tried to quit during the past 12 months and former tobacco smokers who have been abstinent for >12 months
Quit ratio (among daily smokers)	Indicates how many 'ever daily smokers' were able to successfully quit ('former daily smoker'/ 'ever daily smoker')
Secondhand smoke	Inhalation of smoke from tobacco products used by others.
Smokeless tobacco use status	Classified into three categories: 1. 'Current/Daily smokeless user' means the person uses at least one smokeless tobacco product every day, over a period of one month or more. 2. 'Current/Occasional smokeless user' means the person uses

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	smokeless tobacco products less than daily (either formerly daily or never daily). 3. 'Non-smokeless tobacco user' means the person currently does not use smokeless tobacco at all. This includes 'Former daily user' and 'Never daily user'.
Smokeless tobacco user	Person who uses any smokeless tobacco product.
Smoking cessation	Smoking cessation or quitting smoking is a process of discontinuing the practice of inhaling a smoked substance.
Smoking status / smoking frequency	Classified into three categories: 1. 'Current/Daily smoker' means the person currently smokes at least one tobacco product every day, over a period of one month or more. 2. 'Current/Occasional smoker' means the person currently smokes less than daily (either formerly daily or never daily). 3 'Non-smoker' means the person currently does not smoke at all. This includes 'Former daily smoker' (currently a non-smoker but had previously smoked daily) and 'Never daily smoker' (currently a non-smoker and has never smoked daily, but instead occasionally or a never smoker).
Snuff (by mouth)	Tobacco product presented as powder, moistened, placed between the gum and the upper lip and kept there for a period of time that may vary from a few minutes to several hours. The most commonly found form is the snuff in portions, prepackaged in little tea sacks, sold in little plastic cans, but the product can also be found without prepackage. In this case, the user gets a "pinch" and places it directly in contact with the gum.
Snuff (by nose)	Tobacco product presented in powder or grains, especially prepared to be inhaled.
Thinking of quitting because of pictorial health warning on cigarettes package	Current tobacco smokers who thought about quitting smoking in the last 30 days because of the pictorial health warning on cigarettes or shredded tobacco package
Tobacco	Common name given to the plants of the genus *Nicotiana,* especially the *Nicotiana tabacum* from South America, from which the substance called nicotine is extracted.
Tobacco products	Two types of tobacco products: 1. Smoked tobacco: manufactured cigarettes, hand-rolled cigarettes, kreteks, others smoked tobacco such as pipe, curut / cigar / cigarillos, water pipes/shisha/ hookah, bidis/ and others 2. Smokeless tobacco: snuff by keeping in mouth/nose, chewing tobacco, betel quid with tobacco, electronic cigarettes, and others.

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Water pipes /shisha / hookah	Hubble-bubble or narghile. It has been used uniformly unless where anecdotes and historical records are mentioned. The hookah is an Indian water pipe. A type of pipe often used by Hindu, Persian, and Turkish individuals, comprised of a pipe bowl, a long tube, and a small receptacle containing aromatic water, through which smoke passes before getting to the mouth. For being smoked by one person alone or a group of individuals, being prepared with a special mixture of tobacco, sugar-cane syrup, and fruit or seasoning.

Appendix F: MPOWER Summary Indicators

Table F.1: MPOWER Summary Indicators, GATS Malaysia, 2011.

Indicator	Overall	Gender		Residence	
		Male	Female	Urban	Rural
M: Monitor tobacco use and prevention policies*					
Current tobacco use	24.0	44.9	1.7	23.6	24.9
Current tobacco smokers	23.1	43.9	1.0	22.7	24.3
Current cigarette smokers	22.9	43.6	1.0	22.4	24.2
Current manufactured cigarette smokers	20.1	38.3	0.7	20.3	19.4
Current smokeless tobacco use	0.7	0.9	0.6	0.7	0.8
Average number of cigarettes smoked per day[1]	13.9	14.0	--	14.1	13.5
Average age at daily smoking initiation[2]	17.2	17.2	--	17.0	18.0
Former daily tobacco smokers among ever daily smokers	9.5	9.4	10.0	9.0	10.5
P: Protect people from tobacco smoke*					
Exposure to secondhand smoke at home at least monthly	38.4	43.3	33.3	35.7	45.4
Exposure to secondhand smoke at work†	39.8	46.2	30.1	41.6	33.1
Exposure to secondhand smoke in public places†,[3]:					
Government buildings/offices	20.0	20.1	19.8	21.5	15.4
Health-care facilities	8.7	7.8	9.4	9.2	7.3
Restaurants	71.0	73.1	68.4	71.3	69.6
Bars or night clubs	78.7	81.4	70.2	85.6	63.3
O: Offer help to quit tobacco use					
Made a quit attempt in the past 12 months	48.6	48.7	45.7	51.0	42.9
Advised to quit smoking by a health-care provider	52.6	52.2	--	49.6	60.2
Attempted to quit smoking using a specific cessation method:					
Pharmacotherapy	9.0	9.2	--	9.3	8.0
Counseling/advice	4.4	4.4	--	3.7	6.5
Interest in quitting smoking within next 12 months	14.3	14.3	14.3	15.1	12.3
W: Warn about the dangers of tobacco*					
Belief that tobacco smoking causes serious illness	92.2	90.7	93.9	92.8	90.8
Belief that smoking causes stroke, heart attack, and lung cancer	77.5	75.2	79.9	78.5	74.9
Belief that breathing other peoples' smoke causes serious illness	85.8	84.1	87.7	86.6	84.0
Noticed anti-cigarette smoking information at any location†	94.0	93.5	94.5	93.7	94.8
Thinking of quitting because of health warnings on cigarette packages	45.8	45.7	51.7	47.4	42.1
E: Enforce bans on tobacco advertising, promotion, and sponsorship*					
Noticed any cigarette advertisement, sponsorship or promotion†	35.6	39.0	32.0	38.1	29.2
R: Raise taxes on tobacco					
Average manufactured cigarette expenditure per month (*local currency*)	178.8	180.6	--	202.0	116.1
Average cost of 20 manufactured cigarettes (*local currency*)	10.1	10.1	--	11.0	7.2
Last cigarette purchase was from a store	79.6	79.5	--	76.3	88.7

Notes:

*Among all adults.

† In the last 30 days.

[1] Among daily cigarette smokers.

[2] Among ever daily smokers aged 20-34.

[3] Among those who had visited the place.

-- Estimate suppressed because it was based on fewer than 25 unweighted cases.

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