



International Tobacco Control Southeast Asia Survey

Wave 6

ITC SEA Technical Report

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Preface to Wave 6 ITC SEA Technical Report

This report documents the sixth wave of the International Tobacco Control Policy Evaluation Survey, carried out in Malaysia approximately 24 months after the fifth wave and Thailand approximately 20 months after the fifth wave.

In most parts, the format of this report is similar to the Waves 1 to 5 technical reports. Certain changes in contents and methods were implemented in the fourth and fifth waves and these have been continued into the sixth wave.

Thailand continued to conduct face-to-face surveys at Wave 6. However, Malaysia administered its adult surveys via the Computer Assisted Telephone Interview (CATI) system as in Waves 4 and 5, and the youth surveys were self-administered, sent by mail, as previous waves.

1. Introduction

Background

The International Tobacco Control (ITC) Project is a multi-country prospective cohort study designed to measure the psychosocial and behavioural impact of key policies of the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC).

To examine the effect of the FCTC, the ITC Project is conducting parallel prospective cohort surveys with smokers in 22 countries: the United States, Canada, Australia, the United Kingdom, Ireland, Thailand, Malaysia, South Korea, China, Mexico, Uruguay, France, Germany, the Netherlands, Mauritius, India, Brazil, Bhutan, Bangladesh, New Zealand, Zambia, and Kenya.

The dates of the 6 waves conducted in Malaysia and Thailand are shown below:

Wave	Malaysia	Thailand
1	1 January - 7 March 2005	1 January 7 March 2005
2	31 July 2006 – 25 Jun 2007	1 August – 28 September 2006
3	12 February – 3 September 2008	7 January – 26 March 2008
4	25 July – 18 November 2009	16 April – 2 July 2009
5	5 May 2011 – 30 April 30 2012	5 February – April 2011
6	19 May 2013 – 31 January 2014	13 October – 27 December 2012

Main Objectives

The objectives of the ITC Study in Southeast Asia are:

1) To examine the patterns of smoking behaviour among Thais and Malaysians.

This study provides accurate estimates of current smoking behaviour in Malaysia and Thailand, as well as detailed information about smokers' quitting behaviour, consumption patterns, and other important aspects of smoking behaviour.

2) To examine the impact of specific tobacco control policies being implemented in Thailand and Malaysia.

Each ITC survey follows standardized protocols and includes rigorous measures to assess the impact and identify the determinants of effective tobacco control policies in the following areas:

- Health warning labels and package descriptors
- Smoke-free legislation
- Pricing and taxation of tobacco products

- Education and support for cessation
- Tobacco advertising and promotion

ITC Survey findings will provide an evidence base to guide policies enacted under the FCTC, and to systematically evaluate the effectiveness of these legislative efforts.

3) To compare smoking behaviour and the impact of policies between Malaysia, Thailand, and other ITC countries.

All ITC Surveys are developed using the same conceptual framework and methods, and the survey questions are designed to be identical or functionally equivalent in order to allow strong comparisons across countries. The evaluation studies conducted from the ITC Surveys take advantage of natural environments created when an ITC country implements a policy change. Policy-relevant variables in that country from pre- to post-policy survey waves are compared to other ITC countries where that policy has not changed. This research design provides high levels of internal validity, allowing more confident judgments regarding the possible causal impact of the policy.

4) To measure the uptake of tobacco use among young people.

Tobacco companies' prime target is the youth population. Companies carry out large advertising campaigns to recruit large markets of potential smokers. The ITC survey in Southeast Asia involves youth respondents aged 13-17, to help identify different factors in youth smoking behaviour. In particular, the SEA youth surveys examine tobacco control policies and tobacco companies' youth recruiting strategies that affect likelihood of smoking initiation.

Survey Design

The ITC Project is a longitudinal cohort study, in which recruited respondents are recontacted in later waves for follow-up surveys. It tracks smoking behaviour changes in the population and identifies their predictors, such as the introduction of tobacco-control policies.

The Research Team

The survey was conducted in Malaysia by the National Poison Centre, Universiti Sains Malaysia (USM). The survey was conducted in Thailand by the Institute for Population and Social Research, Mahidol University. The research teams in Malaysia and Thailand are collaborating with an international team of researchers in Australia (The Cancer Council of Victoria), Canada (The University of Waterloo), and the United States (Roswell Park Cancer Institute).

2. The Sampling Design

Target Population

Eligible respondents originally included youth smokers and non-smokers (recruitment age 13-17 in Malaysia; age 13-19 in Thailand), adult smokers (age 18+), and adult non-smokers in Malaysia. Adult non-smokers were not sampled in Malaysia at Waves 4, 5 or 6. Individuals in jail, those living in institutions and non-citizens were ineligible.

Malaysia

As in Wave 5, Wave 6 respondents were located in seven states in Malaysia:

- Kedah
- Penang
- Selangor
- Johore
- Terengganu
- Sabah
- Sarawak

Figure 1: ITC SEA Wave 6 Survey Locations in Malaysia

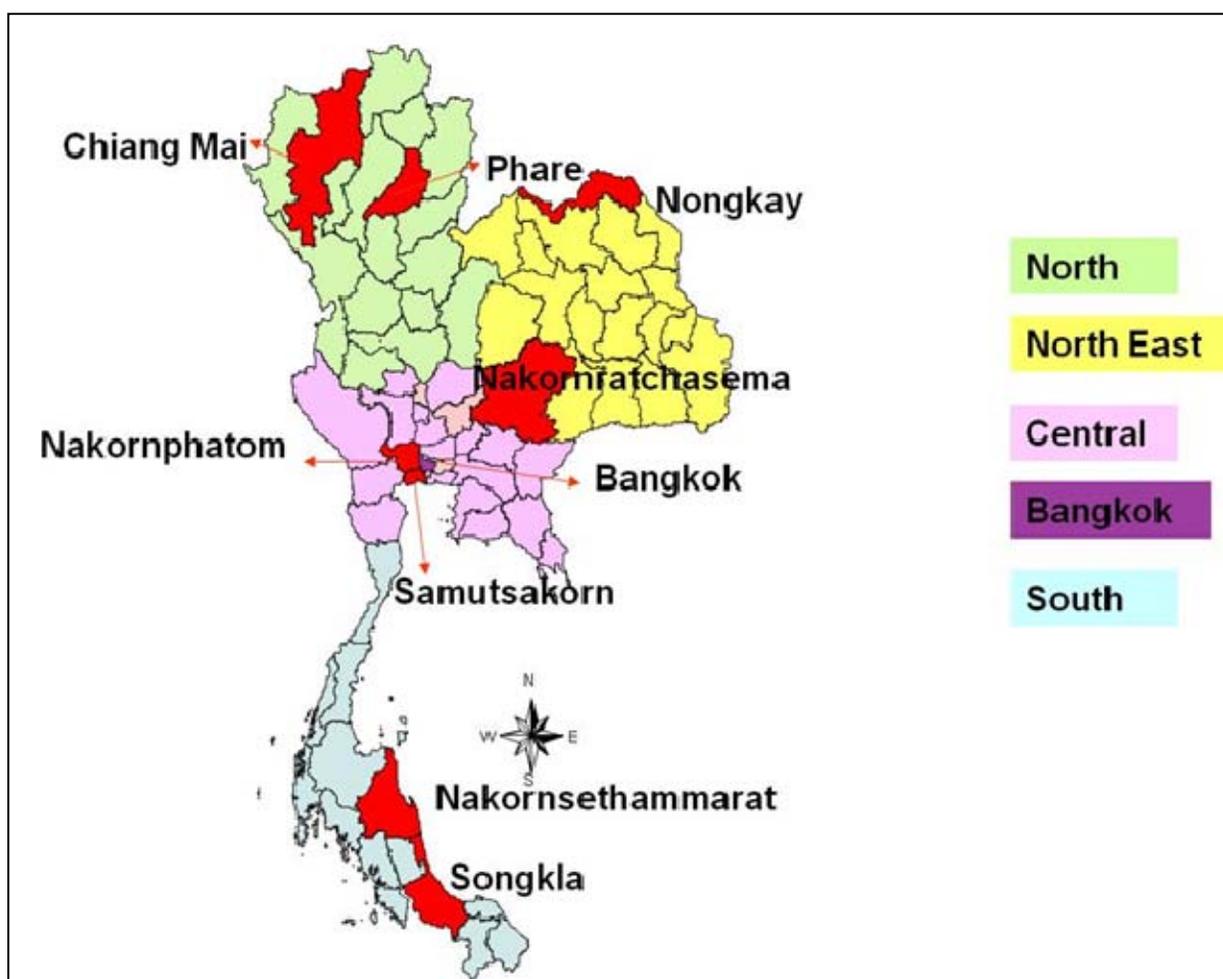


Thailand

As in Wave 5, Wave 6 respondents were located in the following provinces:

- Northern Region
 - Chiang Mai
 - Phrae
- North-Eastern Region
 - Nong Khai
 - Nakhon Ratchasima
- Central Plain Region
 - Bangkok
 - Samut Sakhon
 - Nakhon Pathom
- Southern Region
 - Nakhon Si Thammarat
 - Songkhla

Figure 2: ITC SEA Wave 6 Survey Locations in Thailand



Sample Size

For both countries in every wave, the sample was designed to include:

- 2,000 adult smokers* (or quitters who had been recruited as smokers) (age 18+)
- 1,000 youths (age 13-17, both smokers and non-smokers*)

In Waves 1, 2, and 3 in Malaysia, the sample was designed also to include 1,500 adult non-smokers. In Wave 4 it was decided that the 1,500 adult non-smokers in Malaysia would be retired from the survey. Since Wave 4 no adult non-smokers have been recruited.

The target for the youth sample size was lowered to 950 in Thailand for Wave 5. In Wave 6, the target was further reduced to 900. In Malaysia, the fieldwork ended when the adult quota was filled before reaching the targeted youth sample size of 900.

At each wave, efforts were made to recontact respondents who had participated in earlier waves. The sample at each wave was replenished, to replace respondents who had dropped out.

Replenishment Sampling

In each country, the sampling scheme for households for Wave 1, and replenishment sampling for Wave 2, was a stratified multi-stage design, with inclusion probabilities proportional to size at the first few stages in each stratum. The next-to-last stage units were clusters of dwellings, each cluster having a quota of adult smokers, youth, and non-smokers (Malaysia) to be filled. In Wave 3, it was decided to carry out the recontact and replenishment efforts concurrently, and aim for the areas of new recruitment to be as similar to those of the original cohort as possible. This was thought to be best achieved by recruiting from clusters adjacent to clusters used in Waves 1 and 2, aiming for predetermined sample sizes. The sample lost was replenished within the urban and rural parts of each province in Thailand, and the same policy was carried out in Malaysia to the extent possible. At Wave 4 in Thailand, a decision was made to drop one or two rural sub-districts in each province, and the replenishment scheme was adjusted accordingly. At Wave 4 in Malaysia, since all recruitment for replenishment was being carried out by telephone, a scheme involving random selection of telephone numbers within Administrative Districts was implemented. (For details see Appendix B). At Waves 5 and 6 in Thailand the sample lost was replenished for the most part within the same villages, both in urban and rural areas. For Waves 5 and 6 in Malaysia the same method of recruitment as in Wave 4 was used to recruit new smokers for participation in the ITC survey; a random selection of telephone numbers within Administrative Districts was carried out.

Data Collection in Malaysia

In Malaysia, the feedback from Wave 2 showed that conducting face-to-face surveys was costly, while phone penetration especially in urban areas was quite high. It was decided that for Wave 3 the majority of the interviews could be conducted by phone (about 80%) while in some rural areas, where the phone penetration is low, face-to-face surveys could still be used. For the

phone survey, respondents were first contacted by phone to find out if they would prefer to do the survey over the phone or by having an interviewer visit their homes. In Wave 4, adult survey interviews were conducted by telephone and at Waves 5 and 6, the adult survey data was collected using CATI system and telephone. As with previous waves, youth surveys were self-administered, sent by mail. Note: The actual number of respondents surveyed at each wave in both Thailand and Malaysia can be found in Appendix C.

3. Training in Malaysia

Interviewers' Fieldwork Training

As in previous years, interviewers were recruited to conduct data collection. Out of the pool of applicants 16 interviewers were selected. Training was provided for the newly recruited interviewers on 15 May, 2013. The ITC Wave 6 SEA Survey *Training Manual for Telephone Survey Interviewers and Supervisors* (Malaysia only), and SRC's *General Training, Conducting Surveys Manual* were used for the training. All training activities were held in the Research Call Centre (RCC), National Poison Centre building at the Universiti Sains Malaysia, Penang, Malaysia.

Note: Sample images from the CATI program can be found in Appendix G.

4. Replenishment and Recontact Protocols, and Quality Control

Eligible Types of Dwellings

Private Homes

A private home is any dwelling that is considered to be the *usual place of residence* for at least one of the persons living there. The person may be:

- a family member
- a roomer/boarder
- an employee

Private Home AND Business

A private home and business is any dwelling that serves both as a business and the usual place of residence, such as in the case of a business operating out of the home.

Dwellings Not Eligible

Surveys were not conducted in dwellings that were for *business purposes only* or with *institutions*, such as hospitals, nursing homes, jails, or religious institutions.

Definition of a Household

A household is any persons or group of persons living in a dwelling. It may consist of:

1. one person living alone
2. a family sharing the same dwelling
3. a group of people who are not related but share the same dwelling

To be included on the *Household Enumeration Form* for a particular dwelling, a respondent must have regarded the dwelling as his/her usual place of residence.

Data Collection Methods

Recontact

In Thailand, recontact of households and individuals was majorly carried out through face-to-face interviews, with some face-to-face appointments being made by telephone, particularly in urban areas.

In Malaysia, recontact of households and individuals was carried out by telephone and CATI.

Recruitment of new households and respondents

New households were enumerated, and respondents selected, before the interviews were carried out using the CATI system.

In Thailand, new households and respondents were recruited using the face-to-face mode primarily. Interviews with adults were conducted face-to-face.

In Malaysia, replenishment participants were recruited via telephone and CATI. Telephone numbers were generated by randomizing the last four or five digits of numbers from the first three digits area code number, identified from the telephone directory.

For both Malaysia and Thailand, youth completed self-administered (paper and pencil) questionnaires, which could be mailed in depending on the respondent's convenience.

Main Components of the Recontact Protocol

Prior to the actual fieldwork, the Thai team contacted and coordinated with the key figures in the study sites. Even after five waves, early contact and coordination with authorities to let them know the survey schedule allowed them to be prepared and be more cooperative.

The ITC Survey recontact protocol consisted of four main steps:

1. Household Recontact (including verification and updating of contact information)
2. Participant Recontact and Consent (in Thailand, recontact respondents have given their consent when they first participated and for follow-up surveys, therefore no further consent was needed).
3. Main Questionnaire
4. Exit and Compensation

Main Components of the Replenishment Protocol

The ITC Survey replenishment protocol consisted of four main steps:

1. Household Enumeration (including demographic information)
2. Participant Selection & Consent
3. Main Questionnaire
4. Exit and Compensation

Attempts to Enumerate

A maximum of four attempts were made to enumerate each household.

Length of the interview

The interview for the survey took a total of approximately 50 minutes to complete for adult smokers and 40 minutes for youths.

Participant Gift / Remuneration

In Malaysia, adult respondents received gifts worth RM37.28 while youth respondents received gifts worth RM15.53. For telephone interviews, gifts were mailed to respondents.

In Thailand, adult smoker participants received 300 Baht while youth participants received 150 Baht.

Private interviews

If possible, adult participants were interviewed alone. If another person insisted on being present, the respondent must have approved of his/her presence for the interview to proceed. Youth respondents completed the questionnaire in private.

Proxy Interviews

A proxy interview is an interview conducted with another knowledgeable member of the household on behalf of the selected respondent. ITC survey protocols always ensure that this situation does not occur.

Respondent Not Available

If a respondent was unavailable at the moment, an appointment (hard appointment) was made to interview that respondent.

Fieldwork Teams

A fieldwork team consisted of a field supervisor and several interviewers (Interviewers worked in pairs *at all times*, for efficiency and safety reasons). The number of field supervisors and interviewers assigned to each stratum varied according to the stratum size.

In Malaysia, 4 supervisors and 16 interviewers were recruited and trained to conduct telephone interviews.

In Thailand, there were a total of 5 field supervisors and 30 interviewers. Field Supervisors reported to the principal investigators at the Institute for Population and Social Research, Mahidol University. The principal investigators and research team also visited periodically to the monitor the fieldwork progress. The following describes the team composition for each area.

Table 3: Fieldwork teams in Different Thailand Areas

	North	Central	Northeast	South	Bangkok	Total
Supervisor	1	1	1	1	1	5
Interviewer	5	5	5	5	5	25
Total	6	6	6	6	6	30

Table 4: Fieldwork teams for telephone in Malaysia

	Telephone	Total
Supervisor	4	4
Interviewer	16	16
Total	20	20

Monitoring & Quality Assurance

To ensure the accuracy and quality of the ITC survey, fieldwork was monitored through several means.

The field supervisor travelled with each fieldwork team to provide regular feedback and monitor interviews. The field supervisor also ensured that the survey protocol and data collection standards were being closely followed.

Field Supervisors were responsible for ensuring that household and respondent identification numbers were properly filled out. See *Respondent ID* under *4. Disposition Codes and Retention Rates* for more information about identification numbers.

Field Supervisors were also available to address any questions or concerns from the interviewers.

Progress Reports

Field Supervisors provided daily updates of quotas and any issues to the principal investigators.

Field Supervisors were responsible for providing regular updates to investigator teams, and consulting with investigators on problems encountered in the field. For example, the sample cluster turning out to be non-existent or the fieldwork team being denied permission to sample in a selected area.

Interviewer Training

In Thailand, training for interviewers and field supervisors took place over five days: October 8-12, 2012. The first three days of training was on the objectives of the study, sample selection, survey procedures, questionnaire contents, interviewing methods and ethical procedures. For the next two days, interviewers received practical interviewing training.

In Malaysia, training on conducting telephone and CATI interviews took place over two days: May 15 – 16, 2013. There were 16 telephone interviewers – 10 females and 6 males. Training was done by the ITC Malaysia Project Manager and 4 experienced supervisors. The first day of training covered theoretical aspects of the survey. This included objectives of the study, sample selection, survey procedures, questionnaire content, interviewing techniques, and ethical procedures. During the second day of training, interviewers gained hands-on experience with

the interview process. They engaged in role-play and were given instructions on using the WinCATI and telephone system.

Interviewing Aids

For Thailand, flashcards were provided that could be shown to respondents to save time and to facilitate ease of interviewing.

Household Enumeration

For the replenishment survey, at each dwelling before respondents were selected, information was collected about the household (a roster of *all* household members with age, gender, and smoking status) from any *adult* member. In Malaysia, the ethnicity of the household informant was also coded. The time required to complete the *Household Enumeration Form* was 2-5 minutes.

Recontact respondents were not enumerated.

Identifying Eligible members

There were three categories of eligible respondents in a household:

1. Adult Male Smoker
2. Adult Female Smoker
3. Youth

Selection of Household Members

In Thailand, when there was more than one eligible household member in a category, the Kish Grid, a randomization technique, was employed to select the respondent (Appendix C). In Malaysia, the random selection was programmed into the survey. Substitutions were permitted only for selected household members who

1. Were absent during the entire fieldwork period at the survey location, OR
2. Could not speak the language of the survey, OR
3. Had physical or mental health issues and were unable to participate

Information and Consent

Once a respondent was selected, the information letter was provided and the consent form was administered (face-to-face interview) or the consent script was read aloud (telephone interview). See Appendices F and G for the actual forms.

Handling Multiple Respondents at the Same Time

For face-to-face interviews, if a youth respondent was selected and available, one interviewer would start the youth respondent on the survey, while the other dealt with the adults. Once the youth respondent began to fill out the questionnaire, the second interviewer could return to survey a second respondent, the adult. An interviewer could not interview two adults at the same time.

Language

The survey was conducted in Thai in Thailand, and Malay in Malaysia. Household members were ineligible if they were unable to be interviewed in the survey languages.

For replenishment, refusal rates were higher among Chinese respondents, especially those who had poor communication in the language use by the interviewers who were mainly Malays, whereas the Chinese spoke a local dialect and were not fluent in the national language or English.

Report from the Malaysian Team on their Fieldwork Experience

Before the fieldwork started, reminder letters were sent to households surveyed during previous waves. During fieldwork, attempts were made to contact 2002 adult smokers/quitters, listed in the smart database which was prepared by the Data Management Centre (DMC), UW. 1486 adults were successfully interviewed in a 3-month period; recruitment for replenishment adults was conducted. New recruitment of smokers began on July 23, 2013 and was completed on January 9, 2014. Fieldwork was delayed due to the break in month of Ramadhan and challenges in recruiting participants for the survey.

Report from the Thailand Team on Their Fieldwork Experience

The fieldwork in Thailand for Wave 6 of the survey in 2012 went smoothly; no major problems occurred. A few points contributing to the success of fieldwork are highlighted below:

1. To minimize any unexpected problems, the Thai team prepared document packages prior to fieldwork such as concerns and challenges found in the previous rounds of survey required-access documents for some specific areas, and common fieldwork tools.
2. Useful information from the central coordinators – such as telephone numbers, or notes from the previous wave – were valuable resources during fieldwork. Interviewers were careful to collect relevant contact information from every respondent to facilitate high retention rates for future waves.
3. Fieldwork staff built positive relationship with the respondents based on respect and high moral standard.
4. Fieldwork was closely monitored and supervised by field supervisors and researchers. Field supervisors reviewed the completed questionnaires and facilitated debrief sessions with the team on a daily basis. Researchers with considerable field experience routinely accompanied interviewers in the field. Besides quality monitoring, the researchers also consulted with fieldwork staff on various fieldwork issues. Continuous site visits made the resolution of emerging problems possible.
5. Fieldwork teams were trained to behave responsibly during fieldwork in order to reduce any personal risks. Each staff member was responsible for their own safety and the well-being of their teammates. Interviewers were required to travel together and visit respondents' homes with their assigned partners.

Several challenges were encountered:

1. There were some difficulties in interviewing elderly respondents due to hearing and cognition impairments. Difficulties in travelling were also experienced in some areas due to damaged roads from the 2012 flood. Data collection in the southern region of Thailand was specifically hard because of the rainy season.
2. There were also some difficulties due to language barrier. In the northern region, one of the selected respondents was from Myanmar. In addition, many of the survey areas have their own local dialects thus making it difficult in administering the surveys by interviewers who are not from the same areas.
3. Timing of the fieldwork: The W6 fieldwork took place during harvesting season (October-November-December). This affected our fieldwork in rural areas. Respondents were only available before they went to the rice field, 8-9am. And after tiring work in the field in the afternoon, it was common for respondents to relax and drink, thus it was difficult to administer surveys during that period. At this time of year, it was also a rainy season, especially in the southern region, which is not convenient for the fieldwork.
4. Remote area:
 - a. Limited cell-phone signal coverage in some areas in the north results in difficulties in contacting and coordinating among field staff.
 - b. Some areas (e.g. in the northeast) are quite remote and the roads are still damaged from the flood in previous year. In some sub-districts, there is no gas station. And it takes about 2 hours to get to a gas station in the district town. This delayed the schedule of the fieldwork quite a bit.
5. Some youths work after school which limited their time to complete the questionnaire.

5. Disposition Codes and Retention Rates

Face-to-face Recontact in Thailand

Household outcome codes

- 1 Could not find dwelling
- 2 Household moved, could not trace
- 3 Household moved, out of range
- 4 Threat to Safety
- 5 No Contact – Weather Conditions
- 6 No Answer – 4 attempts
- 7 No Answer – Survey Period Ends
- 8 Household Refusal
- 9 Language Barrier
- 10 No one capable of answering (all adults incapable for reasons of health, mental or physical)
- 11 Recontact prevented for other reasons: Specify
- 12 Recontacted successfully

Individual outcome codes

- 1 Missed (after 4 attempts)
- 2 Language Barrier
- 3 Health/Mentally Incapable
- 4 Proxy Refusal
- 5 Refusal
- 6 Incomplete (start, break off)
- 7 Complete
- 8 Away for the entire survey period

Figure 3: Flowchart of Thailand Retention Rates: Adult Smokers

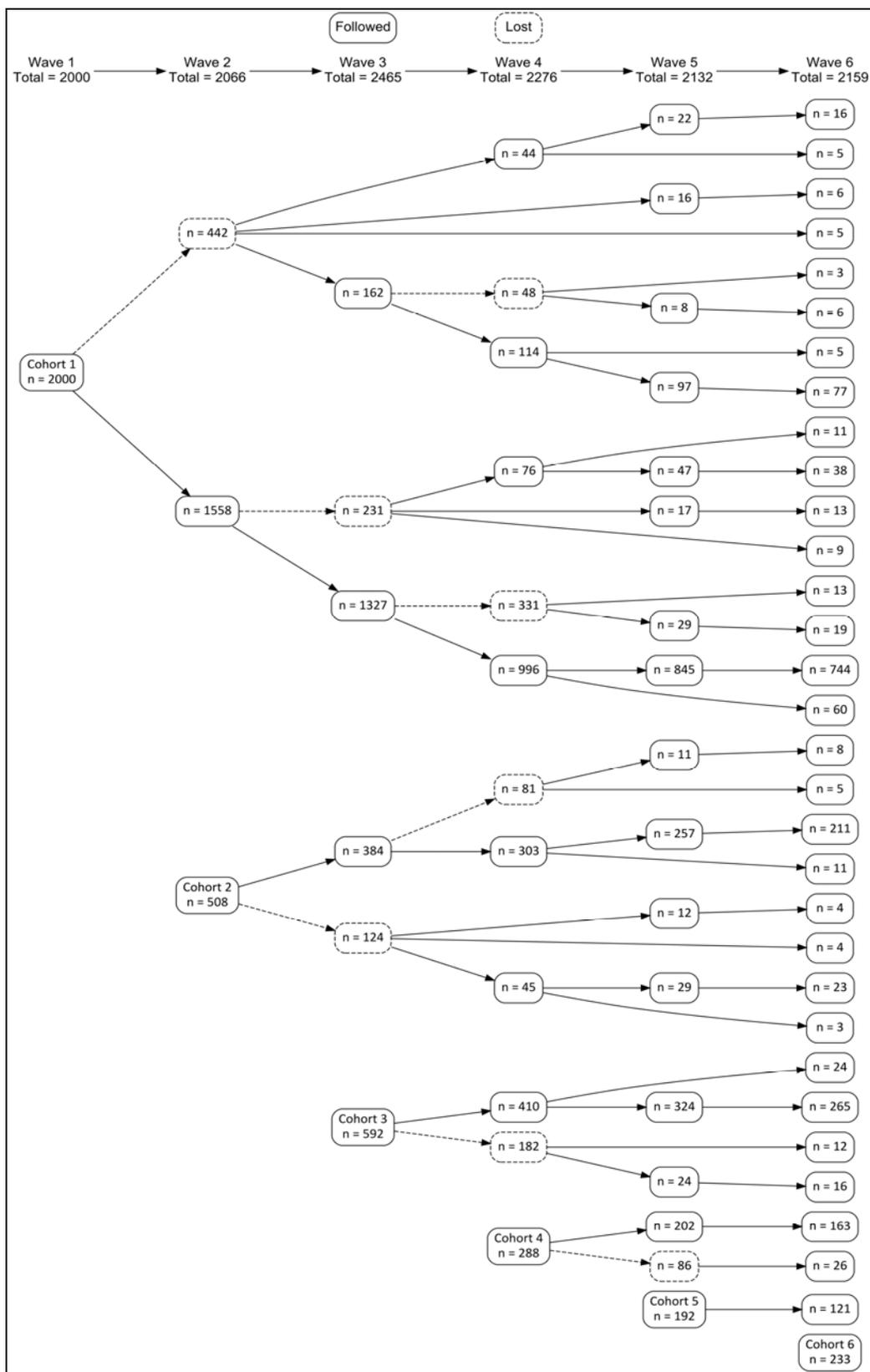
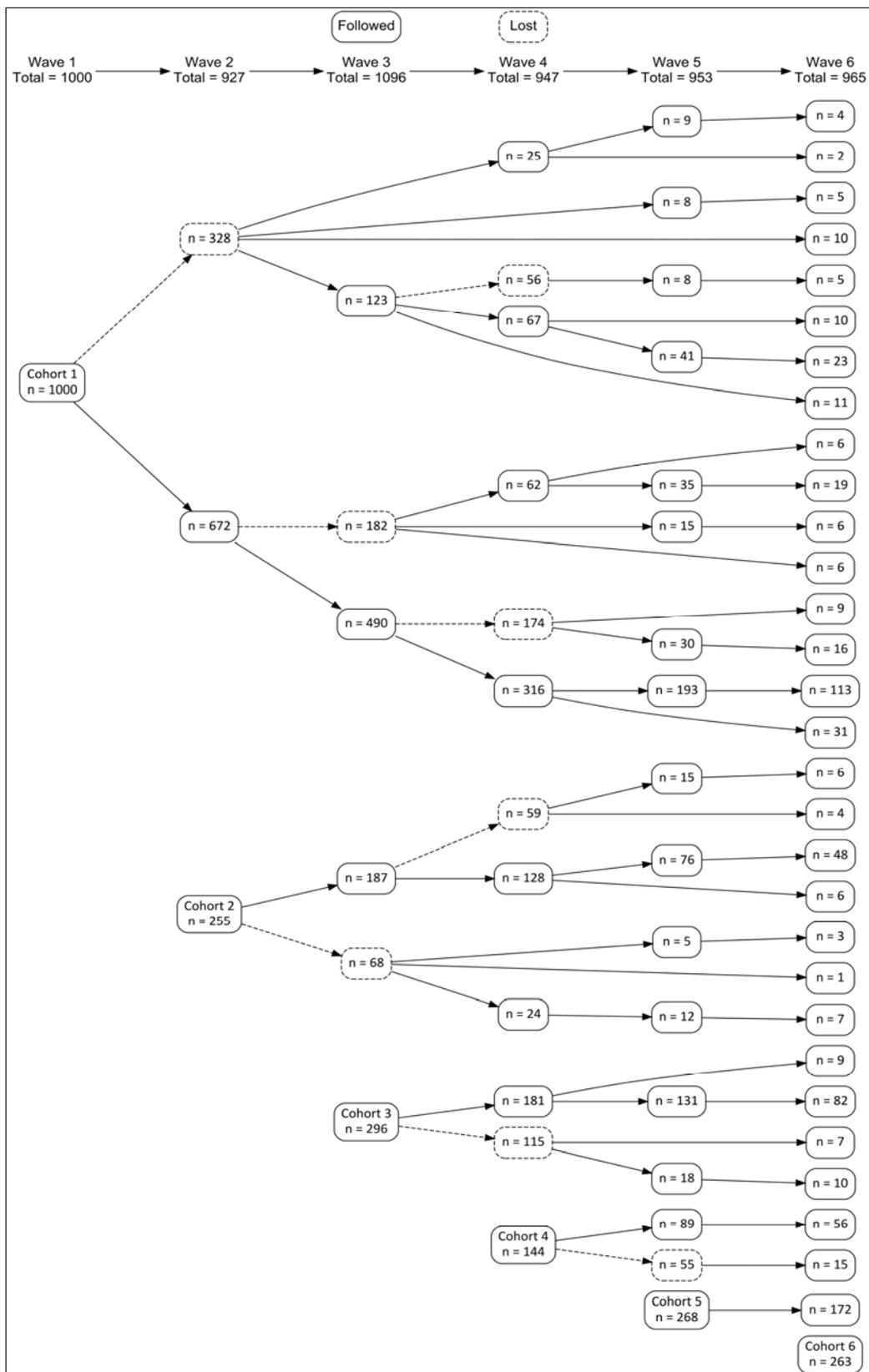


Figure 4: Flowchart of Thailand Retention Rates: Youth



Face-to-face Replenishment

Household outcome codes

- 1 Could not find
- 2 Vacant Dwelling/Lot
- 3 Not a Household (e.g. Business)
- 4 Threat to Safety
- 5 No Contact – Weather Conditions
- 6 No Answer – 4 attempts
- 7 No Answer – Survey Period Ends
- 8 Household Refusal
- 9 Language Barrier
- 10 No one capable of answering (all adults incapable for reasons of health, mental or physical)
- 11 Enumeration prevented for other reasons: Specify
- 12 Enumerated

Individual outcome codes

- 1 Missed (after 4 attempts)
- 2 Language Barrier
- 3 Health/Mentally Incapable
- 4 Proxy Refusal
- 5 Refusal
- 6 Incomplete (start, break off)
- 7 Complete
- 8 Away for the entire survey period

Note: The replenishment outcome rates for Wave 6 Thailand could not be computed due to lack of information.

Table 6: Malaysia Retention Rates: Adult Smokers

Number Recruited	Wave 1 to Wave 2				Wave 2 to Wave 3				Wave 3 to Wave 4				Wave 4 to Wave 5				Wave 5 to Wave 6				
	n	Lost %	n	Retained %	n	Lost %	n	Retained %	n	Lost %	n*	Retained %	n	Lost %	n	Retained %	n	Lost %	n	Retained %	
Wave 1	2004	1136	56.7	868	43.3	284	32.7	584	67.3	269	46.1	315	53.9	77	24.4	238	75.6	56	23.5	182	76.5
								242		129	53.3	113	46.7	26	23.0	87	77.0	20	23.0	67	77.0
													134	25	18.7	109	81.3	15	13.8	94	86.2
													78	18	23.1	60	76.9	11	18.3	49	81.7
Wave 2	772					390	50.5	382	49.5	120	31.4	262	68.6	53	20.2	209	79.8	41	19.6	168	80.4
													86	15	17.4	71	82.6	16	22.5	55	77.5
Wave 3	749									449	59.9	300	40.1	79	26.3	221	73.7	49	22.2	172	77.8
Wave 4	757													240	31.7	517	68.3	167	32.3	350	67.7
Wave 5	495																	146	29.5	349	70.5
Overall		1136	56.7	868	43.3	674	41.1	966	58.9	967	49.4	990	50.6	533	26.1	1512	73.9	521	26	1486	74

* an additional 4 people were present at wave 4 but excluded at earlier waves due to missing data for age, sex or smoking status variables giving a total of 1289 recontact smokers surveyed at wave 4.

Figure 5: Flowchart Malaysia Retention Rates: Adult Smokers

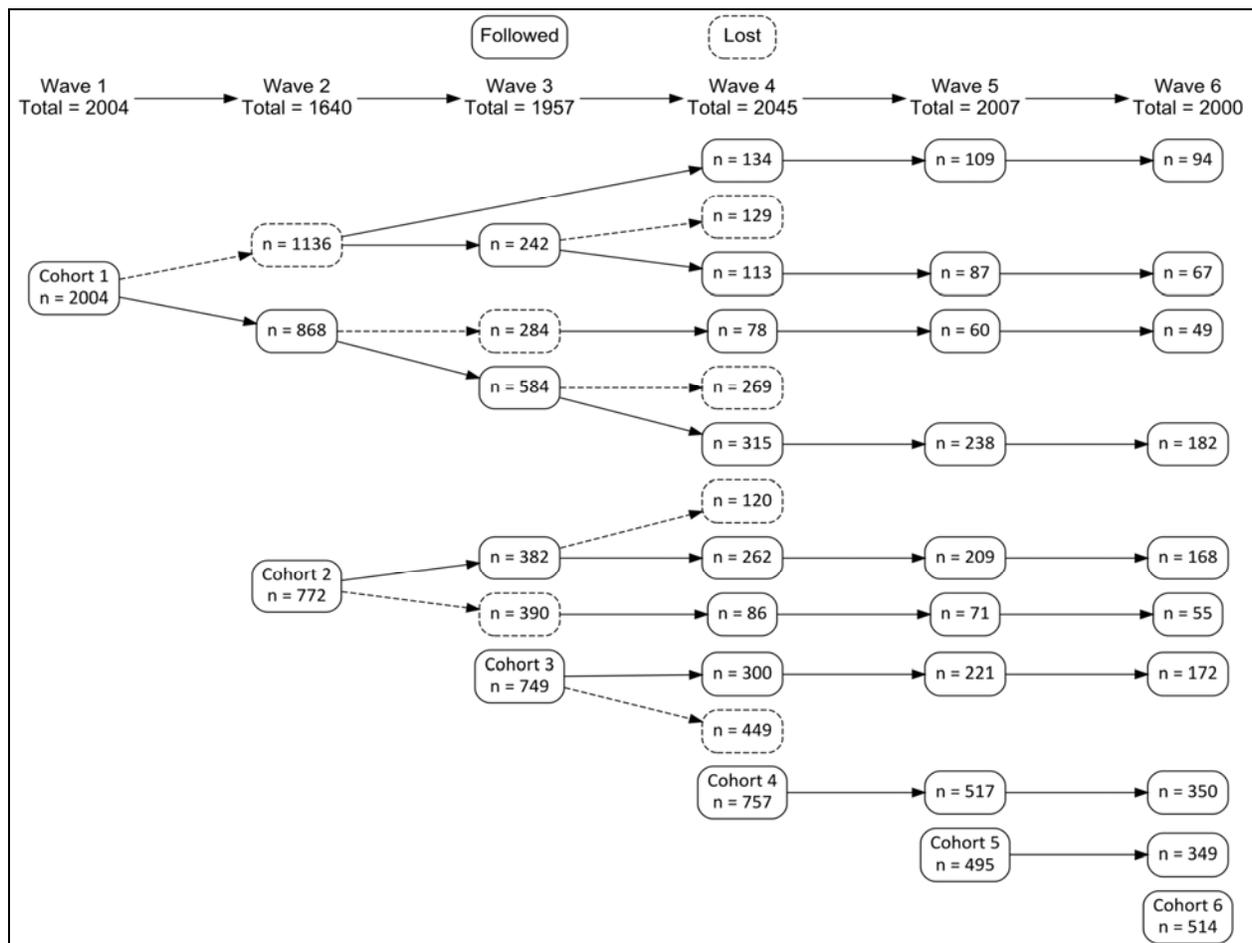


Table 7: Malaysia Retention Rates: Youth

Number Recruited	Wave 1 to Wave 2				Wave 2 to Wave 3				Wave 3 to Wave 4				Wave 4 to Wave 5				Wave 5 to Wave 6				
	Lost		Retained		Lost		Retained		Lost		Retained		Lost		Retained		Lost		Retained		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Wave 1	1009																				
		564	55.9	445	44.1	173	38.9	272	61.1	46	17.0	226	83.0	136	60.2	90	39.8	72	80.0	18	20.0
										36	29.5	86	70.5	54	62.8	32	37.2	27	84.4	5	15.6
														12	50.0	12	50.0	11	91.7	1	8.3
														11	42.3	15	57.7	11	73.3	4	26.7
																		6	100.0	0	0.0
																		7	87.5	1	12.5
																		1	50.0	1	50.0
																		7	87.5	1	12.5
Wave 2	332					198	59.6	134	40.4	39	29.1	95	70.9	60	63.2	35	36.8	15	42.9	20	57.1
														4	44.4	5	55.6	3	60.0	2	40.0
																		1	100.0	0	0.0
																		5	62.5	3	37.5
Wave 3	184									75	40.8	109	59.2	45	41.3	64	58.7	20	31.2	44	68.8
																		1	6.7	14	93.3
Wave 4	303																				
Wave 5	443																				
Overall		564	55.9	445	44.1	371	47.7	406	52.3	196	27.5	516	72.5	441	50.2	437	49.8	193	20.8	735	79.2

† an additional 14 youth were present at wave 4 but excluded at earlier waves, giving a total of 625 recontact youth surveyed at wave 4

Figure 6: Flowchart of Malaysia Retention Rates: Youth

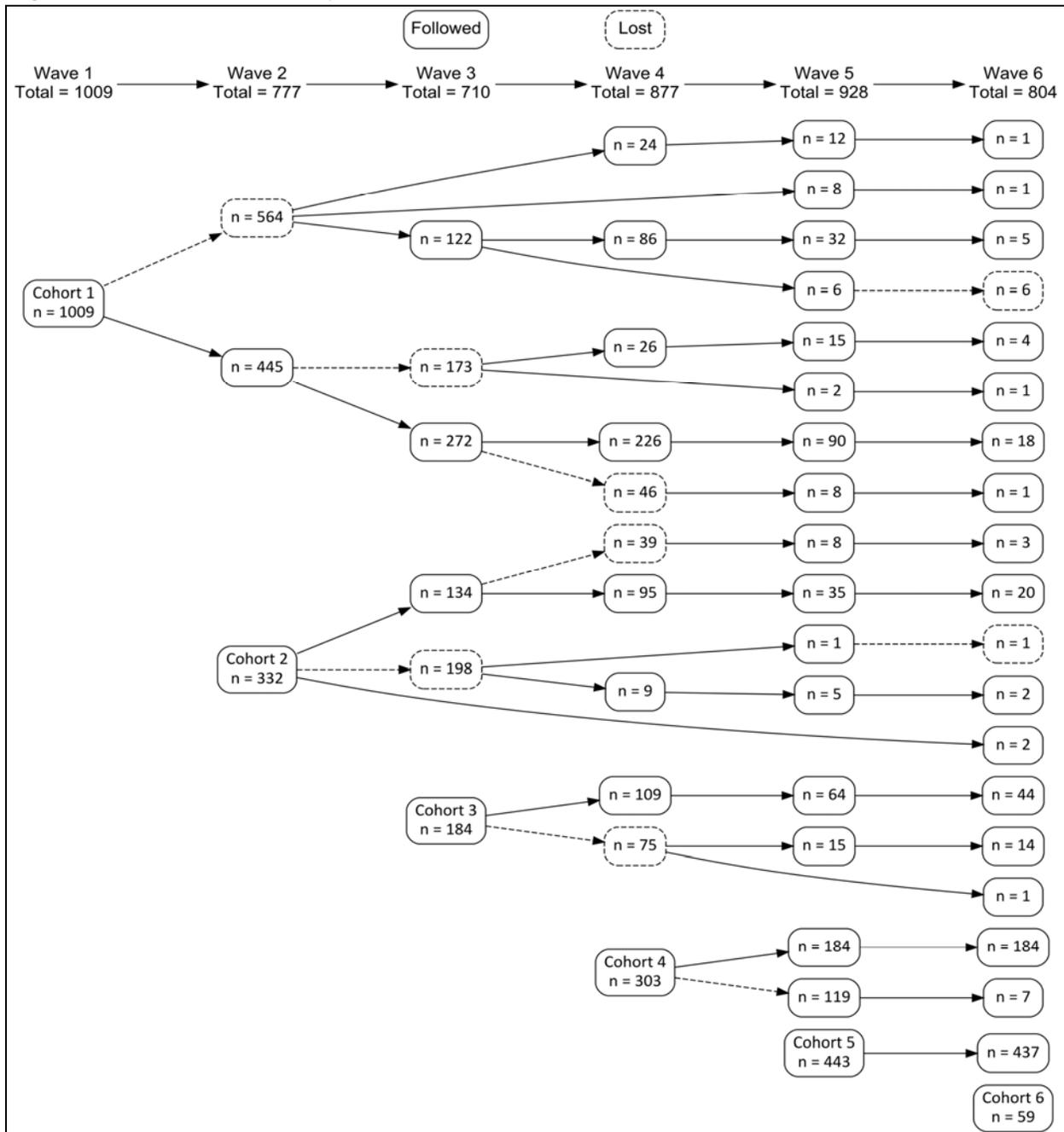


Table 8: Malaysia Retention Rates: Non-smokers (Waves 1-3)*

	Number Recruited	Wave 1 to Wave 2				Wave 2 to Wave 3			
		Lost		Retained		Lost		Retained	
		n	%	n	%	n	%	n	%
Wave 1	1555	686	44.1	869	55.9	283	32.6	586	67.4
Wave 2	703					368	52.4	335	47.6
Wave 3	388								
Overall		686	44.1	869	55.9	651	41.4	921	58.6

*Non-smokers were not surveyed in Waves 4-6.

Replenishment outcome rates for Malaysia

The use of the CATI system made it possible to compute replenishment response rates for adults in Malaysia, in a more detailed manner than was possible for Wave 5.

Table 9: Malaysia replenishment survey household response rates

DISPOSITION CODE	DESCRIPTION	QUANTITY
1	FAX/modem	107
3	non-residential	99
4	cell phone/mobile phone	14
5	Callback/Callback partial	8
7	breakoffs (immediate hang up)	9
11	number not in service	507
40	rings only	1017
41	busy; no answering machine	37
42	nswering machine; not clear if residential	4
43	answering machine; residential	19
44	number answered, but unknown if residential	8
45	number answered, but no suitable MKI in HH, either at time of initial call or later	3
80	MKI contacted but hangs up in intro, before HH enumeration	3
81	MKI refuses to complete HH enumeration -- sent to BI1202	9
90	interviewer termination: MKI has language problem	6
91	interviewr termination: MKI is incompetent	1
92	interviewer termination: other problem with MKI	4
99	HH enumeration successfully completed - sent to DE11788	826
unknown	unknown disposition code	149

total	total number of telephone numbers tried in the replenishment (green records)	2830
ineligible	known ineligible telephone numbers: #1 + #3 + #4 + #11 + #45 + #90 + #91 + #92	741
possibly ineligible	possibly ineligible telephone numbers: #40 + #41 + #42 + #44 + 'unknown'	1215
eligible	known eligible households: total-ineligible-possibly ineligible	874
eligible household contacted	eligible household contacted: eligible - #43 (namely #5 + #7 + #80 + #81 + #99)	855
known ineligibility rate	known ineligibility rate: ineligible/(eligible+ineligible)	45.88%
estimated ineligibility	estimated ineligibility count for 'possibly ineligible' numbers: known ineligibility rate * possibly ineligible	557
total estimated eligibility	total estimated number of eligible households: eligible +possibly ineligible - estimated ineligibility count	1532
HH enumeration rate 1 (based on disposition code 99)	household enumeration rate: #99/total estimated eligibility	53.93%
HH enumeration rate 2 (based on # of records in the Enumeration data)	household enumeration rate: 743 records /total estimated eligibility	48.51%
HH enumeration rate 3 (based on # of records in the Enumeration data without location missing)	household enumeration rate: 595 records /total estimated eligibility	38.85%
HH cooperation rate	HH cooperation rate: #99/eligible household contacted	96.61%

Table 10: Malaysia replenishment survey adult individual response rates

DISPOSITION CODE	DESCRIPTION	QUANTITY
2	Non-residential	1
3	Callback; not successful	0
4	Callback partial	4
5	Callback	0
9	Complete	514
11	Number not in service	3
12	appt with resp never kept	1
26	consent and survey form are mailed to interviewee and parent	0
27	selected interviewee is reached but refuses before screener	2
28	MKI refuses to transfer call to selected interviewee	2
29	selected interviewee unavailable this wave	0
30	selected interviewee refuses to give date of birth/age or refuses to answer 100 cigarettes question (BK501) - interviewer terminated	7
32	selected interviewee is ineligible (is too young, or is old enough for adult survey but < 100 cigarettes in lifetime (BK501) or smokes < monthly (i.e.rSmoke > 3)	0
33	selected interviewee hangs up/refuses during screener	5
35	selected interviewee refuses at consent	2
40	rings only	41
41	line busy	2
42	fax, modem	2
43	Answering machine	2
46	Line problem	0
80	Refuse	5
83	selected interviewee completes screener and consent and some of the interview,but hangs up before end of	0

	interview	
84	selected interviewee completes screener and consent, skips some questions, but reaches end of interview	2
93	interviewer termination: selected interviewee has language problem	2
94	interviewer termination: selected interviewee is incompetent	3
95	interviewer termination: other problem with selected interviewee	4
96	terminate by interviewer (other)	0
total	total number of selected individuals: sum of above disposition code (green records, assuming those are eligible individuals selected from the above 826 enumerated households)	601
selected individuals	selected individuals: sum of bi11369 in the enumeration data	552
individual adult smoker response rate 1	individual adult smoker response rate: # 9 / total	85.52%
individual adult smoker response rate 2	individual adult smoker response rate: # 9 / selected individuals	93.12%

Table 11: Malaysia replenishment survey overall adult response rates

overall adult response rate 1	based on the numbers in the above disposition code: HH enumeration rate 1*individual adult smoker response rate 1	46.13%
overall adult response rate 2	based on disposition code and enumeration data: HH enumeration rate 3*individual adult smoker response rate 2 [#]	36.18%

[#] given that bi11369=1,2, or 3 are all among the 595 household with location info, HH enumeration rate 3 (instead of HH enumeration rate 2) were used to calculate the overall adult response rate 2

For the youth replenishment, since 98 were sent surveys and 59 actually returned surveys, the individual return rate was $59/98 = 61\%$. The youth replenishment response rate would be 59 divided by the number of youth selected for interview. That number is not available for Wave 6.

6. Weight Construction

Wave 1 weights

Here is a brief summary of the computation of the Wave 1 household and individual weights.

At Wave 1, each household in the sample was given a household weight $HWTWV1$ which could be interpreted as the number of households that it represented in the urban or rural part of its state (Malaysia) or province (Thailand). (In this description, take Bangkok to have the status of both a province and a region in Thailand.)

Following this, an individual weight $IHWTWV1$ was constructed for each individual within his/her household. ($W1a$ in Wave 1 documentation.)

The product of household weight and individual within-household weight was then raised to the urban or rural part of its state (Malaysia) or province (Thailand), to produce weights $W4aWV1$.

These were further raised to the national level and calibrated to national population figures, to produce weights $W6WV1$.

Finally, the weights were rescaled to national sample sizes for pooled analyses, yielding weights $RWTWV1$.

Wave 2 weights

Three sets of weights for Wave 2 were constructed.

The Wave 1- Wave 2 longitudinal weights were computed for households and individuals from Wave 1 who were re-contacted and interviewed again in Wave 2. They were essentially the Wave 1 weights adjusted for differential attrition at a high level, calibrated to the Wave 1 populations to produce weights $W6WV12$, and then rescaled to sum to national sample sizes for youth, adult smokers and adult non-smokers to produce weights $RWTWV12$.

The Wave 2 new cohort weights were computed for households and individuals newly recruited in Wave 2. The household weights were called $HWTWV2$, and the individual within household weights may be called $IHWTWV2$ (or $W1a$ in Wave 2 documentation). The Wave 2 new cohort weights were computed in a similar manner as the original Wave 1 weights, but theoretically calibrated to the Wave 2 populations to produce weights $W6WV2$, and rescaled to national sample sizes to produce weights $RWTWV2$.

The Wave 2 cross-sectional weights were computed for all households and individuals present in Wave 2. They were calibrated to the Wave 2 populations to produce weights $W6WV2X$, and $W6WV2X$ weights in Thailand and the $W4cWV2X$ weights in Malaysia were rescaled to sum to combined sample size within each country and sampling category (adult smokers, youth), to produce weights $RWTWV2X$.

Wave 3 weights

Four sets of weights for Wave 3 were constructed.

The Wave 1- Wave 3 longitudinal weights were computed for households and individuals from Wave 1 who were re-contacted and interviewed again in Wave 3. They were essentially the Wave 1 weights adjusted for differential attrition at a high level, calibrated to the Wave 1 populations to produce weights *W6WV13*, and then rescaled to sum to national sample sizes for youth, adult smokers and adult non-smokers to produce weights *RWTWV13*. On the final data file, *W6WV13* is *cDE11923v*, and *RWTWV13* is *cDE11953v*.

The Wave 1-Wave 2-Wave 3 longitudinal weights were computed for households and individuals from Wave1 who were re-contacted and interviewed again in Wave 2 and Wave 3. They were essentially the Wave 1 weights adjusted for differential attrition at a high level, calibrated to the Wave 1 populations to produce weights *W6WV123*, and then rescaled to sum to national sample sizes for youth, adult smokers and adult non-smokers to produce weights *RWTWV123*. In the final data file *W6WV123* is *cDE11921v* and *RWTWV123* is *cDE11951v*.

We computed longitudinal Wave 2- Wave 3 weights for new recruits at Wave 2 present in Wave 3, to aid in construction of cross-sectional weights.

The Wave 3 new cohort weights were computed for households and individuals newly recruited in Wave 3. The household weights were called *HWTWV3*, and the individual within household weights may be called *IHWTWV3*. The Wave 3 new cohort weights were computed in a similar manner as the original Wave 1 weights, but theoretically calibrated to the Wave 3 populations to produce weights *W6WV3*, and rescaled to national sample sizes to produce weights *RWTWV3*. On the final data file, *W6WV3* is *cDE11915v* and *RWTWV3* is *cDE11917v*.

The Wave 3 cross-sectional weights were computed for all households and individuals present in Wave 3. They were calibrated to the Wave 3 populations and rescaled to sum to combined sample size within each country and sampling category (adult smokers, youth), to produce weights *RWTWV3X*. On the final data file, *RWTWV3X* is *cDE11919v*.

Wave 4 weights

Three sets of weights for Wave 4 were constructed. Note that at Wave 4, non-smokers were dropped from the cohorts in Malaysia. In Thailand, the decision was made to drop one or two rural sub-districts from each of the sample provinces; to carry out recontact and replenishment to Wave 3 levels in the rural sub-districts that were retained; and to bring up the adult smoker and youth sample sizes to previous levels overall by increasing the sample sizes in Bangkok and the other urban areas.

The Wave 1- Wave 4 longitudinal weights were computed for households and individuals from Wave 1 who were re-contacted and interviewed again in Wave 4. They were essentially the Wave 1 weights adjusted for differential attrition at a high level, calibrated to the Wave 1 populations to produce weights *W6WV14*, and then rescaled to sum to national sample sizes for youth and adult smokers, to produce weights *RWTWV14*. (*dDE11923v* on the adult dataset, *dDE12923v* on the youth dataset).

The Wave 1-Wave 2-Wave 3-Wave 4 longitudinal weights were computed for households and individuals from Wave1 who were re-contacted and interviewed again in Wave 2, Wave 3 and Wave 4. They were essentially the Wave 1 weights adjusted for differential attrition at a high

level, calibrated to the Wave 1 populations to produce weights *W6WV1234*, and then rescaled to sum to national sample sizes for youth and adult smokers, to produce weights *RWTWV1234*. (dDE11921v adults; dDE12921v youth)

The Wave 4 new cohort weights were computed for households and individuals newly recruited in Wave 4. They were computed in a similar manner as the original Wave 1 weights, but theoretically calibrated to the Wave 4 populations to produce weights *W6WV4*, and rescaled to national sample sizes to produce weights *RWTWV4*. These weights are not on the final data file.

The Wave 4 cross-sectional weights were computed for all households and individuals present in Wave 4. They were calibrated to the Wave 4 populations and rescaled to sum to combined sample size within each country and sampling category (adult smokers and youth), to produce weights *RWTWV4X*. (dDE11919v adults; dDE12919v youth).

The population figures used for calibration were the same as for Wave 3 in Thailand, but updated with new figures for Malaysia.

Wave 5 sampling designs

In Thailand, the proposal for Wave 5 was to replenish the adults to numbers achieved at Wave 1, and the youth to somewhat smaller numbers. This meant that relatively little replenishment would be needed for adults, but fairly substantial replenishment would be needed for youth. It was decided to try to replenish youth from the same EDs and villages that were visited in Wave 4, from households that had not been enumerated in previous waves, where this would not yield too many more than 8 youths in total from a village/ED. If it appeared that this would suffice for replenishment of youth, the adults would also be replenished from the same EDs and villages. If it appeared that one or more ED or village needed to be added to the sample, they would be selected as usual with probability proportional to size, and up to 8 youth and some adults would be taken from each until the target sample sizes for the province crossed with urban-rural were reached. In the end, some villages not in Wave 4 but in earlier waves were revisited. Compared to the list of EDs and VIs in Waves 1 through 4, 1 new ED was added in Bangkok; no new EDs were added in urban areas outside Bangkok; 1 new village (VI) was added in a rural area outside Bangkok: from Nakhonratsema province, Kamsakaekang district, Muangkasert subdistrict. Compared to the list of EDs and VIs in Wave 4 only, 19 additional EDs from Waves 1 to 3 and the one new ED were added in Bangkok; 34 additional EDs from Waves 1 to 3 were used in urban areas outside Bangkok; and 57 additional VIs and the one new VI were used in rural areas.

In Thailand, efforts were made to recontact youth respondents from earlier waves, even if they had missed Wave 4. Altogether, 99 youth respondents were in this category: 61 from those recruited at Wave 1, 20 from those recruited at Wave 2, and 18 from those recruited at Wave 3. There were also 117 adults recontacted in Wave 5 who were not present in Wave 4: 70 were recruited in Wave 1, 23 in Wave 2 and 24 in Wave 4.

In Malaysia, targets were set for adult smokers and youth at the AD level, totaling 2000 adult smokers and 1000 youth. The targets were set to be equal to the Wave 4 targets, except that no replenishment was planned in rural Sabah and rural Sarawak, and the targets in rural Penang, rural Terengganu, and urban Sabah were increased to compensate.

Enumeration/recruitment, and adult recontact and replenishment interviews were carried out by telephone; youth interviews were completed on paper and mailed in, except in the case of some recontact youth who used email. While one adult male smoker and one youth were randomly selected in each enumerated household where they existed, attempts were made to interview all adult female smokers who were enumerated.

In Malaysia, efforts were made to recontact respondents from earlier waves, even if they had missed Wave 4. There were no adult respondents, but there were 43 youth respondents, in this category.

Sets of Wave 5 weights

Three sets of weights for use with Wave 5 data were constructed.

The Wave 1- Wave 5 longitudinal weights were computed for households and individuals from Wave 1 who were re-contacted and interviewed again in Wave 5. They were essentially the Wave 1 weights adjusted for differential attrition at a high level, calibrated to the Wave 1 populations to produce weights *W6WV15*, and then rescaled to sum to national sample sizes for youth and adult smokers, to produce weights *RWTWV15*. (eDE11923v on the adult dataset, eDE12923v on the youth dataset).

The Wave 1-Wave 2-Wave 3-Wave 4-Wave 5 longitudinal weights were computed for households and individuals from Wave1 who were re-contacted and interviewed again in Wave 2, Wave 3, Wave 4 and Wave 5. They were essentially the Wave 1 weights adjusted for differential attrition at a high level, calibrated to the Wave 1 populations to produce weights *W6WV12345*, and then rescaled to sum to national sample sizes for youth and adult smokers, to produce weights *RWTWV12345*. (eDE11921v adults; eDE12921v youth). There were 238 cohort 1 adults left in Malaysia and 845 in Thailand. For youth, there were 89 left in Malaysia and 193 in Thailand.

In Malaysia and Thailand, Wave 5 new cohort weights were computed for households and individuals newly recruited in Wave 5. In Malaysia, they were computed in a similar manner as the original Wave 1 weights, but theoretically calibrated to the Wave 5 populations to produce weights *W6WV5*, and rescaled to national sample sizes to produce weights *RWTWV5*. In Thailand, in view of the new replenishment design, a somewhat modified method was used, in which the new cohort household weights were “borrowed” from earlier recruited households in the same ED/VI, and the individual weights were reconciled with enumeration figures at the subdistrict or district level rather than the ED/VI level. The resulting weights *W6WV5* were not rescaled; no *RWTWV5* is provided, since the new cohort is not designed to be representative of the population on its own.

In both countries, the Wave 5 cross-sectional weights were computed for all households and individuals present in Wave 5. They were calibrated to the Wave 5 populations and rescaled to sum to combined sample size within each country and sampling category (adult smokers and youth), to produce weights *RWTWV4X*. (eDE11919v adults; eDE12919v youth).

The population figures used for calibration were the same as for Wave 3 in both Thailand and Malaysia.

Wave 6 Sampling Design

In Thailand, the proposal for Wave 6 was to try to recontact everyone from Wave 5, and to replenish the sample up to 2000 adult smokers/quitters and 900 youth members. An effort would be made to reach specified targets within each province crossed with urban/rural classification. As in Wave 5, it was decided to try in Wave 6 to replenish youth from the same EDs and villages that were visited in Wave 5, from households that had not been enumerated in previous waves, where this would not yield too many more than 8 youths in total from a village/ED. If it appeared that this would suffice for replenishment of youth, the adults would also be replenished from the same EDs and villages. If it appeared that one or more ED or village needed to be added to the sample, they would be selected as usual with probability proportional to size, and up to 8 youth and some adults would be taken from each until the target sample sizes for the province crossed with urban-rural were reached. In the end, some villages not in Wave 5 but in earlier waves were revisited. Compared to the list of EDs and VIs in Waves 1 through 5, no new ED or village was added. Compared to the list of EDs and VIs in Wave 5 only, 2 additional EDs from Waves 1 to 4 were added in Bangkok.

In Thailand, efforts were made to recontact youth respondents from earlier waves, even if they had missed Wave 5. Altogether, 126 youth respondents were obtained in this category: 85 from those recruited at Wave 1, 11 from those recruited at Wave 2, 15 from those recruited at Wave 3, and 15 from those recruited at Wave 4. There were also 196 adults recontacted in Wave 6 who were not present in Wave 5: 111 were recruited in Wave 1, 23 in Wave 2, 36 in Wave 3 and 26 in Wave 4.

In Malaysia, targets were set for adult smokers/quitters and youth at the AD level, totaling 2000 adult smokers/quitters and 1000 youth. The targets were set to be equal to the Wave 5 targets, except that target numbers for both youth and adults were shifted from Kuala Langat to Hulu Selangor. This shift was made to try to make the weights less variable in rural Selangor from new recruits. Enumeration/recruitment, and adult recontact and replenishment interviews were carried out by telephone; youth interviews were completed on paper and mailed in, except in the case of some recontact youth who used email. While one adult male smoker and one youth were randomly selected in each enumerated household where they existed, attempts were made to interview all adult female smokers who were enumerated.

In Malaysia, it was considered to excuse all youth respondents from Wave 5 who would be of age 18 or over at the time of commencing the youth survey in February 2013. It was estimated that this would mean excluding 509 Wave 5 youth respondents. Thus this was not done. As well, replenishment fieldwork for the youth was very slow and had to be stopped prematurely. In the end, there were 749 recontact youth respondents (4 of them were excluded due to lack of weighting information at earlier waves), and 59 replenishment youth respondents.

Sets of Wave 6 Weights

Three sets of weights for use with Wave 6 data were constructed.

The Wave 1- Wave 6 longitudinal weights were computed for households and individuals from Wave 1 who were re-contacted and interviewed again in Wave 6. They were essentially the Wave 1 weights adjusted for differential attrition at a high level, calibrated to the Wave 1 populations to produce weights $W6WV16$, and then rescaled to sum to national sample sizes for youth and adult smokers/quitters, to produce weights $RWTWV16$. (fDE11923v on the adult dataset, fDE12923v on the youth dataset).

The Wave 1-Wave 2-Wave 3-Wave 4-Wave 5-Wave 6 longitudinal weights were computed for households and individuals from Wave 1 who were re-contacted and interviewed again in Wave 2, Wave 3, Wave 4, Wave 5 and Wave 6. They were essentially the Wave 1 weights adjusted for differential attrition at a high level, calibrated to the Wave 1 populations to produce weights $W6WV123456$, and then rescaled to sum to national sample sizes for youth and adult smokers/quitters, to produce weights $RWTWV123456$. (fDE11921v adults; fDE12921v youth). There were 182 cohort 1 adults left in Malaysia who had participated in all waves, and 744 in Thailand. For youth, there were 18 left in Malaysia who had participated in all waves, and 113 in Thailand.

Other sets of longitudinal weights for different sets of waves can be computed on request.

In Malaysia and Thailand, Wave 6 new cohort weights were computed for households and individuals newly recruited in Wave 6. In Malaysia, they were computed in a similar manner as the original Wave 1 weights, but theoretically calibrated to the Wave 6 populations to produce weights $W6WV6$, and rescaled to national sample sizes to produce weights $RWTWV6$. In Thailand, in view of the new (starting in Wave 5) replenishment design, the new cohort household weights were “borrowed” from earlier recruited households in the same ED/VI, and the individual weights were reconciled with enumeration figures at the sub-district or district level rather than the ED/VI level. The resulting weights $W6WV6$ were not rescaled; no $RWTWV6$ is provided, since the new cohort is not designed to be representative of the population on its own.

In both countries, the Wave 6 cross-sectional weights were computed for all households and individuals present in Wave 6. They were calibrated to the Wave 6 populations and rescaled to sum to combined sample size within each country and sampling category (adult smokers/quitters and youth), to produce weights $RWTWV6X$. (fDE11919v adults; fDE12919v youth).

For the population figures, the regional male and female smoker population in Thailand was updated to 2011 figures. All other figures used for calibration were the same as for Wave 3 in Thailand and Wave 4 in Malaysia.

Wave 1- Wave 6 longitudinal weights

For each Wave 1 household which was re-contacted and in which at least one interview was achieved at Wave 6, a new household weight $HWTWV16$ was computed. Within each “pseudo-PSU” -- urban or rural part of the state (Malaysia) or province (Thailand) – the total of the $HWTWV16$ over the re-interviewed households is the same as the total of the $HWTWV1$ over the Wave 1 households where adult smokers and/or youth respondents were found. Thus, for example, for a household in an urban part of a state in Malaysia,

$$HWTWV16 = HWTWV1 \times \frac{\sum_{urbanS} HWTWV1}{\sum_{urbanS,rect} HWTWV1}$$

where \sum_{urbanS} denotes the sum over all Wave 1 households containing an adult smoker or a youth respondent in the urban part of the state, and $\sum_{urbanS,rect}$ denotes the sum over all Wave 1 households re-contacted with an interview in Wave 6 in the urban part of the state.

For each re-interviewed individual the state (Malaysia) or province (Thailand) level weight was obtained by multiplying $HWTWV16$ by $IHWTWV1$ to produce $W4WV16$, and rescaling. The rescaling adjustment was done so that the new totals were equal to the original Wave 1 totals, within the urban or rural part of the state or province, and within the same age category (youth or adult), gender (for adults) and baseline smoking status (in Malaysia). For example, for a youth in an urban part of a province of Thailand,

$$W4aWV16 = W4WV16 \times \frac{\sum_{urbanP,dem} W4aWV1}{\sum_{urbanP,dem,rect} W4WV16}$$

where the summation in the numerator was over all Wave 1 interviewed youths in the urban part of the same province, and the summation in the denominator was over all such youths re-interviewed in Wave 6.

Because the longitudinal weights were intended for analytic purposes, no further adjustment was applied in the Malaysia data before rescaling to total sample size. In the Thailand data, the weights $W6WV16$ were formed to sum to the same totals as the weights $W6WV1$ within regions. For example, for an adult female in the rural part of a province,

$$W6WV16 = W4aWV16 \times \frac{\sum_{ruralP,dem} W6WV1}{\sum_{ruralP,dem,rect} W4aWV16}$$

where the summation in the numerator is over all Wave 1 interviewed adult females in the rural part of the province, and the summation in the denominator is over all such adult females re-interviewed in Wave 6.

The $RWTWV16$ were obtained by rescaling the final weights in each country to sum to national Wave 1-Wave 6 sample size, for youth and adult smokers/quitters.

Wave 1- Wave 2- Wave 3- Wave 4- Wave 5-Wave 6 longitudinal weights

For each Wave 1 household which was re-contacted and in which at least one interview was achieved at each of Wave 2, Wave 3, Wave 4, Wave 5 and Wave 6, a new household weight $HWTWV123456$ was computed. Within each “pseudo-PSU” -- urban or rural part of the state (Malaysia) or province (Thailand) – the total of the $HWTWV123456$ over the re-interviewed households is the same as the total of the $HWTWV1$ over the Wave 1 households. Thus, for example, for a household in an urban part of a state in Malaysia,

$$HWTWV123456 = HWTWV1 \times \frac{\sum_{urbanS} HWTWV1}{\sum_{urbanS,rect} HWTWV1}$$

where \sum_{urbanS} denotes the sum over all Wave 1 households containing an adult smoker or youth respondent in the urban part of the state, and $\sum_{urbanS,rect}$ denotes the sum over all re-contacted households with interviews in Waves 1, 2, 3, 4, 5 and 6 in the urban part of the state.

For each re-interviewed individual the state (Malaysia) or province (Thailand) level weight was obtained by multiplying $HWTWV123456$ by $IHWTWV1$ to produce $W4WV123456$, and rescaling. The rescaling adjustment was done so that the new totals were equal to the original Wave 1 totals, within the urban or rural part of the state or province, and within the same age category (youth or adult), gender (for adults) and baseline smoking status (in Malaysia). For example, for a youth in an urban part of a province of Thailand,

$$W4aWV123456 = W4WV123456 \times \frac{\sum_{urbanP,dem} W4aWV1}{\sum_{urbanP,dem,rect} W4WV123456}$$

where the summation in the numerator was over all Wave 1 interviewed youths in the urban part of the same province, and the summation in the denominator was over all such youths re-interviewed in Waves 2, 3, 4, 5 and 6.

Because the longitudinal weights were intended for analytic purposes, no further adjustment was applied in the Malaysia data before rescaling to total sample size. In the Thailand data, the weights $W6WV123456$ were formed to sum to the same totals as the weights $W6WV1$ within regions. For example, for an adult female in the rural part of a province,

$$W6WV123456 = W4aWV123456 \times \frac{\sum_{ruralR,dem} W6WV1}{\sum_{ruralR,dem,rect} W4aWV123456}$$

where the summation in the numerator is over all Wave 1 interviewed adult females in the rural part of the region, and the summation in the denominator is over all such adult females re-interviewed in Waves 2, 3, 4, 5 and 6.

The $RWTWV123456$ were obtained by rescaling the final weights in each country to sum to national Wave 1-Wave 2-Wave 3-Wave 4-Wave 5-Wave 6 sample size, for youth and adult smokers.

Wave 5-Wave 6 longitudinal weights

For each re-interviewed individual the state (Malaysia) or province (Thailand) level weight was obtained by recalibration or rescaling. The rescaling adjustment was done so that the new totals were equal to the Wave 5 totals, within the urban or rural part of the state or province, and within the same age category (youth; adult age up to 34; 35 and older) crossed with gender (for both youth and adults). For example, for a female person recruited as a youth in an urban part of a province of Thailand,

$$W7WV56 = W7WV5 \times \frac{\sum_{urbanP,dem} W7WV5}{\sum_{urbanP,dem,rect} W7WV5}$$

where $W7WV5$ is the Wave 5 cross-sectional inflation weight for the individual, the summation in the numerator was over all Wave 5 interviewed female (recruited as) youths in the urban part of the same province, and the summation in the denominator was over all such (recruited as) female youths interviewed in Waves 5 and 6.

The *RWTWV56* were obtained by rescaling the final weights in each country to sum to national Wave 5-Wave 6 sample size, for youth and adult smokers/quitters.

In order to perform the recalibration for adults into age groups “up to 34” and “35 or older”, it was necessary to impute age group for 28 adults who are part of the Wave 5 sample but for whom age is missing. This was done as follows:

Imputation of age group

For the following who are the only ones with missing age in their pseudo-PSU crossed with gender, the age group was taken to be the age group of the median age within the cell of pseudo-PSU crossed with gender:

MY 101 rural male
MY 107 rural male
TH 246 urban male
TH 251 urban male
TH 251 urban female
TH 251 rural female
TH 222 urban male
TH 237 rural male
TH 263 urban male

For the following pairs with missing age in their pseudo-PSU crossed with gender, one was randomly chosen to be in the first age group, and the other was assigned to the second age group:

two MY 101 urban males
two TH 201 urban males
two TH 227 rural females
two TH 223 urban males
two TH 270 rural males

The 6 MY 113 rural males with missing age were assigned in random order to the age groups of the youngest adult age, the 4th youngest adult age, the 7th youngest, the 10th, the 13th and the 16th among the 16 other males within their pseudo-PSU.

For the 3 TH 227 rural males with missing age, one chosen at random was assigned to age group 1, and the other two to age group 2.

The imputed age group was computed only for purposes of producing these longitudinal weights.

Wave 6 new cohort weights (Malaysia)

In this part, the sample sizes referred to all relate to the new cohort.

For any newly recruited individual, that individual’s household had been recorded and at least to some extent enumerated. Thus we constructed a household weight for each household in the replenishment sample, within its “pseudo-PSU”, namely the urban or rural part of state (Malaysia). Following this we constructed an individual weight for each individual within his/her

household. The product of household weight and individual within-household weight was then raised to the national level. Finally, the weights were rescaled to national sample sizes for pooled analyses.

In Malaysia, the Wave 6 new cohort weights were constructed in a manner similar to that of Wave 2.

In what follows, the term *sampling categories* refers to the categories adult smoker and youth, the categories for which quotas were set. The term *refined categories* refers to the same categories, but with the first divided according to gender.

Computation of household weights HWTWV6 (Malaysia)

Step H1: For each enumerated household, a district (AD) level weight *HW1* has been computed:

$$HW1 = H_{AD} / h_{AD}$$

where H_{AD} is an estimated number of households in the AD of the household in question, and h_{AD} is the number of households enumerated in Wave 6 in that AD.

Step H2: For each newly enumerated household in a rural area, a state level weight *HWTWV6* has been computed. This is the approximate number of households in the same state in rural areas represented by the enumerated household. Similarly, for each enumerated household in an urban area, a state level weight *HWTWV6* has been computed. This can be taken to be the approximate number of households in the same state in urban areas represented by that enumerated household.

The formulae are:

$$HWTWV6 = N_{ruralS} \times HW1 / (nn \times H_{AD} \times NUMBAR)$$

or

$$HWTWV6 = N_{urbanS} \times HW1 / (nn \times H_{AD} \times NUMBAR)$$

where $NUMBAR = (\sum_{AD} (HW1 \times NUM) / \sum_{AD} HW1)$,

NUM is the number of people or the number of people aged 13 and over (whichever is available) in the household, N_{ruralS} is the rural population of the state, \sum_{AD} denotes the sum over enumerated **households** (not interviewed people) in the district or city (*AD*), and N_{urbanS} is the urban population of the state; *nn* is a factor from the sampling design which is given by

$$nn = n_{AD}$$

where n_{AD} is the number of districts taken from the rural part or the number of cities taken from the urban part of the state.

Computation of individual level weights to state level (Malaysia)

Step I1: Each interviewed individual in a newly recruited household has been given a household level weight $W1$. This is interpreted as the number of people in the same household in the same refined category:

- for an adult male smoker, $W1$ is the number of adult male smokers in the same household
- for an adult female smoker, $W1$ is the number of adult female smokers in the same household, divided by the number of adult female smokers interviewed in the household.
- for an adolescent aged 13-17, $W1$ is the number of adolescents aged 13-17 in the same household.

In fact, we have capped the value of $W1$ at 2 to reduce the potential variability of the weights. Step I1a ensures that each individual still represents a correct number at the AD level.

Step I1a: Each interviewed individual has been given an adjusted household level weight $W1a$. This adjustment guarantees that hypothetical prevalence estimates based on the $HWTWV6$ weights and on the final individual weights for new individuals will be the same, in spite of the fact that quotas in one sampling category might be filled earlier than in the other.

For Malaysia, let AS_{AD} and Y_{AD} be respectively the numbers enumerated in the AD of adult smokers and adolescents. Let $W1AS_{AD}$ and $W1Y_{AD}$ be respectively the sums of $W1$ for all interviewed adult smokers and adolescents in the AD.

- for an adult smoker, $W1a$ is given by

$$W1a = AS_{AD} \times W1 / W1AS_{AD}$$

- similarly for adolescents

Step I2: Each interviewed individual was given a preliminary state level weight $W4WV6$. For an individual in a rural area $W4WV6$ is thought of as the number of people in the same state or province in rural areas and the same sampling category (adult smoker and adolescent) represented by that individual. Similarly, each interviewed individual in an urban area was given a state level weight $W4WV6$. This is thought of as the number of people in the same state in urban areas and the same refined category represented by that individual.

The weight $W4WV6$ is given by

$$W4WV6 = HWTWV6 \times W1a.$$

Calibration of individual new cohort weights at the state level (Malaysia)

Step C1: For Malaysia, each interviewed individual in an urban area has been given a calibrated state-level weight

$$W4aWV6 = W4WV6 \times N_{urbanS,cat} / W4_{urbanS,cat}$$

where $N_{urbanS,cat}$ is an estimated number of people in the urban part of the state in the same sampling category (adult smoker, youth) as the individual, and $W4_{urbanS,cat}$ is the sum of the $W4WV6$ weights for interviewed individuals in the urban part of the same state, in the same sampling category.

Each interviewed individual in a rural area has been given a calibrated state-level weight

$$W_{4a}WV6 = W_{4}WV6 \times N_{ruralS,cat} / W_{4,ruralS,cat}$$

where $N_{ruralS,cat}$ is an estimated number of people in the rural part of the state in the same sampling category as the individual, and $W_{4,ruralS,cat}$ is the sum of the $W_{4}WV6$ weights for interviewed individuals in the rural part of the same state, in the same refined category.

Raising of new cohort individual level weights to the zone level (Malaysia)

Step I3: Each interviewed individual has been given a zone level weight $W_{6}WV6$. This represents the number of people in the same stratum and the same refined category represented by that individual. (This weight $W_{6}WV6$ is a last-stage “basic” survey weight for the individual, in the sense that $W_{6}WV6$ can also be thought of as the number of people in the entire country represented by that individual.)

In Malaysia, urban parts, $W_{6}WV6$ is

$$W_{6}WV6 = N_{urbanZ,cat} \times W_{4a}WV6 / W_{4a,urbanZ,cat}$$

where $N_{urbanZ,cat}$ is an estimated number of people in the urban part of the zone in the same sampling category as the individual, and $W_{4a,urbanZ,cat}$ is the sum of the $W_{4a}WV6$ weights for interviewed individuals in the urban part of the same zone, in the same refined category.

In Malaysia, rural parts, $W_{6}WV6$ is

$$W_{6}WV6 = N_{ruralZ,cat} \times W_{4a}WV6 / W_{4a,ruralZ,cat}$$

where $N_{ruralZ,cat}$ is the known number of people in the rural part of the zone in the same sampling category as the individual, and $W_{4a,ruralZ,cat}$ is the sum of the $W_{4a}WV6$ weights for interviewed individuals in the rural part of the same zone, in the same refined category.

Rescaling of new cohort weights (Malaysia)

Finally, the weights in Malaysia have been rescaled within each sampling category (youth, adult smokers) to sum to national sample sizes, for use in pooled analyses.

The formula used for the final weights is as follows:

$$\text{Rescaled weight } RWTWV6 = n_c \times W_{6}WV6 / \sum_c W_{6}WV6,$$

where n_c is the actual (i.e. unweighted) size of the country subsample for the sampling category, and \sum_c denotes a sum over that subsample of the original weights.

Wave 6 cross-sectional weights (Malaysia)

The Wave 6 cross-sectional weights for the combined sample (recontacts and new cohort) have been calculated bearing in mind two features of the design:

- (i) Continuing sample members who were interviewed as youth in Wave 1, Wave 2, Wave 3, Wave 4 or Wave 5 were reinterviewed as youth in Wave 6, whether or not they were still under 18; there were no 13-17 year olds left in the Wave 1 cohort, no 13-14-15 year olds left in the Wave 2 cohort, no 13-14 year olds left in the Wave 3 cohort, and no 13 year olds left in the Wave 4 cohort.
- (ii) The new cohort was sampled to replenish the sample within sampling categories and within pseudo-PSUs.

In Malaysia, the components of the Wave 6 cross-sectional weights are $W4aWV1$, $W4aWV2$, $W4aWV3$, $W4aWV4$, $W4aWV5$ and $W4aWV6$. These are the individual level cross-sectional weights at recruitment, calibrated to refined sampling category at the state level.

First, within each pseudo-PSU, the sample numbers n_{x1} , n_{x2} , n_{x3} , n_{x4} , n_{x5} and n_{x6} of age x at Wave 6, recruited at Waves 1, 2, 3, 4, 5 and 6 respectively, were computed, for $x = 13, 14, 15, 16, 17, 18$ or over. For youth of current age x recruited at Wave 1, let

$$W4bWV1 = W4aWV1 \times \frac{n_{x1}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}} .$$

For youth of current age x recruited at Wave 2, let

$$W4bWV2 = W4aWV2 \times \frac{n_{x2}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}} .$$

For youth of current age x among the new recruits at Wave 3, let

$$W4bWV3 = W4aWV3 \times \frac{n_{x3}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}} .$$

For youth of current age x among the new recruits at Wave 4, let

$$W4bWV4 = W4aWV4 \times \frac{n_{x4}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}} .$$

For youth of current age x among the new recruits at Wave 5, let

$$W4bWV5 = W4aWV5 \times \frac{n_{x5}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}} .$$

For youth of current age x among the new recruits at Wave 6, let

$$W4bWV6 = W4aWV6 \times \frac{n_{x6}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}} ..$$

For all adults recruited in Wave 1, let $W4bWV1=W4aWV1$. For adults recruited in Wave 2, let $W4bWV2=W4aWV2$. For adults recruited in Wave 3, let $W4bWV3=W4aWV3$. For adults

recruited in Wave 4, let $W4bWV4=W4aWV4$. For adults recruited in Wave 5, let $W4bWV5=W4aWV5$. For adults recruited in Wave 6, let $W4bWV6 = W4aWV6$.

The weights $W4bWV1$, $W4bWV2$, $W4bWV3$, $W4bWV4$, $W4bWV5$ and $W4bWV6$ were then each rescaled to sum to sample size within each pseudo-PSU and sampling category, and put together to produce $RW4WV6X$ (where X denotes cross-section).

The weights $RW4WV6X$ weights were then raised to the state level within sampling category, to produce weights $W4cWV6X$. For example, for an adult smoker in the urban part of a state in Malaysia,

$$W4cWV6X = N_{urbanS,cat} \times \frac{RW4WV6X}{\sum_{urbanS,cat} RW4WV6X}$$

where $N_{urbanS,cat}$ is the estimate of the number of adult smokers in the urban part of the state, and the summation in the denominator is over adult smokers in the combined sample in the urban part of the state.

The weights $W4cWV6X$ were then raised to the national level, to produce weights $W6WV6X$.

For an adult smoker in a zone in Malaysia,

$$W6WV6X = N_{zone,cat} \times \frac{W4cWV6X}{\sum_{zone,cat} W4cWV6X}$$

where $N_{zone,cat}$ is the census estimate of the number of adult smokers in the zone.

Finally, for analytic purposes pooling across countries, the $W4cWV6X$ weights in Malaysia have been rescaled to sum to combined sample size within each country and sampling category (adult smokers, youth), to produce weights $RWTWV6X$. The Malaysia analytic weights are not calibrated for ethnicity, and it is recommended to use ethnicity in modeling.

Note on calibration in Malaysia

Malaysia has a large non-Malay population in some urban areas. Because of the clustered nature of the sampling plan and differential response rates, the different ethnic groups (Malay, Chinese, Indian and Other) were not sampled in proportion to their numbers, either at the state level or the zone level. For (rare) descriptive purposes we have calibrated the final individual weights ($W6WV6X$) by sampling category within zones. However, it should be noted that the new cohort weights do not correct for the differential rate of recruitment of ethnic groups. Again, we recommend using ethnicity in modeling.

Wave 6 new cohort weights (Thailand)

Computation of household weights $HWTWV6$ (Thailand)

For each newly enumerated household *with at least one interview* in an old ED or VI, the following stand-in for the household weight has been computed. Let $RWTWV5$ be the rescaled weights for Wave 5 respondents in that ED or VI, and for each Wave 5 respondent,

compute $H5 = RWTWV5/W1$, where $W1$ is the person within-household weight assigned to the respondent when recruited. Let $MEANH5$ be the average of the $H4$ within the ED or VI, over all Wave 5 respondents. For each Wave 6 newly enumerated household *with interview(s)* in the ED or VI, let $HWTWV6 = MEANH5$.

For newly enumerated households *with at least one interview* in a new ED or VI, or in an old ED or VI not included in Wave5, let $HWTWV6 = MEANH5$, the average of $H5=RWTWV5/W1$ over all Wave 5 respondents in the same subdistrict as the new VI.

For the small number of enumerated households in the new ED in Bangkok, let $HWTWV6 = MEANH5$, the average of $H5=RWTWV5/W1$ over all Wave 5 respondents in the same district as the new ED. Note that in Bangkok, there is only one subdistrict sampled in each district.

The CVs of $HWTWV6$ for new households within Bangkok and the rural and urban parts of each province are satisfactorily low.

Computation of individual level weights for new recruits (Thailand)

Step I1: Each newly recruited and interviewed individual has been given a within household weight $W1$. This is interpreted as the number of people in the same household in the same refined category:

- for an adult male smoker, $W1$ is the number of adult male smokers in the same household
- for an adult female smoker, $W1$ is the number of adult female smokers in the same household
- for an adolescent aged 13-17, $W1$ is the number of adolescents aged 13-17 in the same household.

We have capped the value of $W1$ at 2 to reduce the potential variability of the weights.

Step I2: Each newly recruited and interviewed individual has been given a new cohort weight $W7WV6 = HWTWV6*W1$. These weights are about the same size as the rescaled cross-sectional weights of waves before Wave 5.

Wave 6 cross-sectional weights (Thailand)

The Wave 6 cross-sectional weights for the combined sample (recontacts and new cohort) have been calculated in the same way as for Malaysia.

The components of the Wave 6 cross-sectional weights are $W4aWV1$, $W4aWV2$, $W4aWV3$, $W4aWV4$, $W7WV5$ and $W7WV6$. These are the individual level cross-sectional weights at recruitment, and the first four are calibrated to refined sampling category at the province level.

First, within each pseudo-PSU, the sample numbers n_{x1} , n_{x2} , n_{x3} , n_{x4} , n_{x5} , n_{x6} of age x at Wave 6, recruited at Waves 1, 2, 3, 4, 5 and 6 respectively, were computed, for $x = 13, 14, 15, 16, 17, 18$ or over in the youth survey. For youth of current age x recruited at Wave 1, let

$$W4bWV1 = W4aWV1 \times \frac{n_{x1}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}} .$$

For youth of current age x recruited at Wave 2, let

$$W4bWV2 = W4aWV2 \times \frac{n_{x2}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}}.$$

For youth of current age x among the new recruits at Wave 3, let

$$W4bWV3 = W4aWV3 \times \frac{n_{x3}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}}.$$

For youth of current age x among the new recruits at Wave 4, let

$$W4bWV4 = W4aWV4 \times \frac{n_{x4}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}}.$$

For youth of current age x among the new recruits at Wave 5, let

$$W4bWV5 = W7WV5 \times \frac{n_{x5}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}}.$$

For youth of current age x among the new recruits at Wave 6, let

$$W4bWV6 = W7WV6 \times \frac{n_{x6}}{n_{x1} + n_{x2} + n_{x3} + n_{x4} + n_{x5} + n_{x6}}$$

For all adults recruited in Wave 1, let $W4bWV1=W4aWV1$. For adults recruited in Wave 2, let $W4bWV2=W4aWV2$. For adults recruited in Wave 3, let $W4bWV3=W4aWV3$. For adults recruited in Wave 4, let $W4bWV4=W4aWV4$. For adults recruited in Wave 5, let $W4bWV5=W7WV5$. For newly recruited adults, let $W4bWV6=W7WV6$.

The weights $W4bWV1$, $W4bWV2$, $W4bWV3$, $W4bWV4$, $W4bWV5$ and $W4bWV6$ were then each rescaled to sum to sample size within each pseudo-PSU and sampling category, and put together to produce $RW4WV6X$ (where X denotes cross-section).

The weights $RW4WV6X$ weights were then raised to the province level within gender and age category, to produce weights $W4cWV6X$. For example, for an adult male smoker/quitter in the urban part of a province in Thailand,

$$W4cWV6X = \hat{N}_{urbanP,dem} \times \frac{RW4WV6X}{\sum_{urbanP,dem} RW4WV6X}$$

where $\hat{N}_{urbanP,dem}$ was an estimate from Wave 1 of the number of adult male smokers/quitters in the urban part of the province, as used also in the weights computation for Wave 5.

The weights $W4cWV6X$ were then raised to the national level, to produce weights $W6WV6X$.

For example, for an adult male smoker/quitter in a region in Thailand,

$$W6WV6X = N_{region,dem} \times \frac{W4cWV6X}{\sum_{region,dem} W4cWV6X}$$

where $N_{region,dem}$ is an estimate at the time of Wave 6 of the number of adult male smokers/quitters in the region.

Finally, for analytic purposes pooling across countries, the $W6WV6X$ weights have been rescaled to sum to combined sample size within the country and sampling category (adult smokers, youth), to produce weights $RWTWV6X$.

7. Thailand Biomarker Sub-Study

General Background

The sub-study to the main ITC Project is being conducted in six countries that currently conduct annual (or bi-annual) ITC Surveys, including: China, Mexico, Thailand, United States, United Kingdom, and Mauritius. The sub-study is led by the ITC Project investigators at Roswell Park Cancer Institute in the United States. The overall goal of the sub-study is to examine variability in cigarette characteristics among leading cigarette brand varieties, and how these relate to tobacco control policies, and smoker exposures and behaviours across different countries. As FCTC parties move toward implementing tobacco product regulations, it is important to understand how, if at all, variation in products and smoker populations may systematically influence the effectiveness of such policies.

The sub-study uses either a mail-based or face-to-face supplemental data collection to collect cigarette packs, smoked cigarette filter butts, and saliva from subsamples of persons already participating in the ITC cohort surveys in China, Mexico, Thailand, United States, United Kingdom, and Mauritius. The supplemental data collection is optional, and declining to provide samples does not disqualify a subject's participation in future survey waves.

In Thailand, eligible, consenting respondents were asked to provide an unopened pack of their cigarettes, 5 smoked cigarette butts, and a saliva sample. For their time and effort, respondents received 795 Baht (approximately USD25) as a token of appreciation.

Main Objectives

To explore the interplay of smoking behaviours, exposures, and product characteristics, including design features as well as issues related to contraband and counterfeit cigarettes, by:

- 1) Characterizing tobacco products obtained directly from ITC survey respondents for key design and physical features that can influence smoke chemistries and acceptability.
- 2) Assessing international variability in smoking behaviour, nicotine intake, and rate of nicotine metabolism.

Survey Design

Eligible respondents in the survey had the opportunity to also participate in the sub-study to collect specimens (including a saliva sample, 5 smoked cigarette butts, and a full unopened pack of cigarettes). Directly after completing the Wave 5 Survey, the interviewer assessed eligibility for the sub-study, and if appropriate, proceeded to obtain informed consent, and then to collect the saliva sample, and to provide the instructions and materials for butt and cigarette pack specimen collection. The interviewer returned later at an agreed-upon time and date to collect the samples. Samples were collected from 300 respondents in several provinces in Thailand.

Respondents in the sub-study are part of the sub-study cohort and will be asked to provide the same three types of specimens (saliva, smoked cigarette butts, and an unopened pack of cigarettes) at the next survey wave, and possibly two more additional survey waves.

Eligible Respondents

An eligible respondent in the sub-study had the following characteristics:

- Was aged 18 years or older
- Participated in the ITC Wave 6 Thailand Survey
- Was a daily exclusively factory-made cigarette smoker or daily factory-made cigarette and roll-your-own smoker. Those who smoked both factory-made and roll-your-own cigarettes were asked to provide only the factory-made cigarette butts.
- Resided in Thailand.

Remuneration

Each respondent in the **sub-study** was given 795 Baht after he/she completed the sub-study data collection, as a token of appreciation.

Obtaining Informed Consent

Written consent was obtained for the main ITC survey. However, respondents who agreed to participate in the sub-study only needed to provide spoken consent. Respondents were provided with a separate the Sub-study *Letter of Information* to keep. Based on the spoken consent, the interviewer signed and dated the ITC Thailand (SEA) Project – Wave 6 Sub-study Verbal Consent Form.

Every sub-study respondent provided spoken consent before the sub-study data collection procedures were initiated.

The data collector had a discussion about informed consent discussion with each sub-study participant and:

- Provided the *Respondent Information Letter - Biomarkers Sub-Study* to the respondent
- Provided a brief overview of the study by describing the content in the *Information Letter*. Showed the *Information Letter* to the respondent and briefly went over the main points before handing the letter to the respondent.
- Answered any questions the respondent asked.

Each respondent provided spoken consent to participate in the sub-study. The interviewer signed and dated two copies of the ITC Thailand (SEA) Project – Wave 5 Sub-study Verbal Consent Form. Two copies of the sub-study consent form were completed. The interviewer retained one copy and provided the other to the survey respondent.

Data Collection Procedures

Just as in Wave 5 in Thailand, survey data were collected through a 'face-to-face' interview method using the ITC survey questionnaires which have been designed by the ITC SEA Team. The biomarkers sub-study data was also collected using a face-to-face method, and specimen collection kits.

Saliva, one pack of cigarettes and up to 5 cigarette butts were collected from a maximum of 300 respondents.

After an eligible sub-study participant had provided their informed consent to participate, the data collector immediately collected one saliva sample from the participant. The data collector provided the participant with the Sub-study Sample Collection Instructions and all specimen collection materials, and scheduled a date and time to return to the participant's house in order to retrieve the cigarette pack and cigarette butt samples, and deliver the samples to the field supervisor.

After receiving the completed sub-study specimen collection kits from the field staff, the field supervisor deposited the samples in a freezer until they were sent to Roswell Park Cancer Institute.

The **Biomarkers Sub-study** (for eligible respondents only) consists of the following main steps:

- a) Documentation of spoken consent by the interviewer using the Sub-Study Verbal Consent Form.
- b) Collection of the saliva sample, provision of the instructions and materials for the samples of 5 smoked cigarette butts, and for an unopened pack of cigarettes.
- c) Return visit to collect the samples of the smoked cigarette butts and pack of cigarettes.
- d) Provision of 795 Baht in cash per respondent.

Collection Kit

Each kit for this sub-study includes the following:

- instructions for providing a sample;
- one Salivette cotton wool swab saliva sample collection device;
- one plastic container in which the Salivette is sealed;
- one cigarette butt collection container, with 5 separate compartments for 5 cigarette butts;
- one cigarette pack storage bag;
- one secondary storage bag (e.g. zip lock type) marked with the biohazard symbol;
- extra sub-study ID number labels for linkage with the respondent's survey ID number.

The Salivette saliva sample collection device is a standardized means of collecting saliva samples. Subjects simply place the swab under their tongue, allowing the swab to absorb their saliva.

Saliva Collection

Respondents were asked to provide a saliva sample as soon as they consented to participate in the sub-study. Respondents placed a Salivette swab in their mouths for approximately 2 minutes to absorb the saliva, placed the swab into a container, sealed the container tightly, and gave the container to the interviewer. The interviewer then stored the sample in a cooler that s/he carried with him/her until s/he returned from the field at the end of the day or when the field supervisor collected it from him/her.

Cigarette Pack Collection

Respondents were asked to provide one unopened pack of their usual brand of cigarettes that had been purchased at the location where they usually purchased their cigarettes/loose tobacco. Respondents were provided with a plastic zip top bag, labelled with a unique sub-study ID number. They were instructed to place their pack of cigarettes into the plastic bag.

Interviewers arranged to visit the household to pick up the cigarette pack sample on the same day that the sample was generated. If the sample had to be picked up on an alternate day, the respondent was asked to keep their saliva sample in the fridge (if they had one at home).

Note: Respondents in the sub-study received remuneration 795 Baht (in addition to the 300 Baht that they are provided for participating in the ITC Thailand Survey). A portion of the remuneration was intended to cover the cost of a full pack of cigarettes, and the remaining portion was intended for the respondent to keep.

Cigarette Butt Collection

Respondents were given a set of 5 containers for 5 different cigarette butts. Each container was labelled with the butt number for an individual butt, going from 1 to 5. Labels were taped onto the device and **used to record the date and time of all cigarette butts collected.**

Participants were instructed to provide:

- The butt from their first cigarette of the day, and
- Any four additional cigarette butts from the same day.

Thus, if the respondent smoked fewer than five cigarettes in that day, then the total number of cigarettes sampled was equal to the number smoked. If the respondent smoked 5 or more cigarettes, any five cigarettes that they smoked could be sampled—they did not need to be consecutive. Respondents were instructed to not extinguish their cigarettes in liquid prior to dropping the butt in the container, and were requested to tap out the cigarettes gently to extinguish them.

The interviewer arranged to visit the household to pick up the sample of cigarette butts at the end of the day when the sample was volunteered or another time convenient for the participant. The interviewer stored the sample in a cooler that he/she carried with him/her until he/she

returned from the field at the end of the day or when the field supervisor collected it from him/her.

Documentation of sub-study participation

The interviewers/data collectors, was provided with a tracking record for each sub-study respondent, so that they could record the follow-up date for specimen collection (i.e., to pick up the 5 smoked cigarette butts and the unopened pack of the respondent's usual brand of cigarettes) and whether or not all required specimen samples were collected.

Assigning the Sub-study Identification Number

Each Sub-study Data Collection Kit was labeled with a unique identification number that was different from the unique identification number associated with the survey respondent. Each specimen sample collection vial, container, or bag, in a given data collection kit was labeled with the same unique sub-study identification number. Once the sub-study data collection kit was assigned to an eligible and consenting sub-study respondent, the sub-study ID number was linked to the respondent's ITC survey ID number.

Each Wave 6 Smoker Survey (Recontact or Replenishment survey) had a table on the cover of the questionnaire which contained a "Data Collection Sub-study Eligibility Checklist and a Sub-study Identification Number" linkage field. To link the sub-study and the survey ID numbers, the interviewer took one of the pre-printed labels from the sub-study kit, and affixed it to the Sub-study Identification Number field on the cover page of the respondent's smoker ITC survey questionnaire.

Ending the sub-study and providing remuneration

After all sub-study specimens were collected, the participant was provided with 795 Baht as a token of appreciation.

Appendix A: FCTC Policies in Malaysia

Background

Malaysia has an estimated population of 30 million people, approximately 73% of whom live in urban areas.¹ In 2013, the GDP per capita was US \$17,500. Smoking prevalence estimates indicate that 43.9% of males, 1.0% of females, and 23.1% of overall (4.7 million adults) are currently smoked tobacco² Tobacco control policies in Malaysia are weaker in comparison to neighbouring Thailand. This has prompted the Malaysian government to implement stronger policies to reduce smoking prevalence.

Since 2005, multi-million dollar 'Tak Nak' (Say No) anti-smoking campaigns have been launched on print and electronic media to encourage Malaysians to quit smoking as well as to educate the young to avoid taking up the habit. In October 2008, the government extended the ban on smoking to include places such as national service camps and corridors around shopping malls. In January 2009, the Malaysian government rolled-out 6 rotating graphic warning labels covering 40% on the front and 60% on the back of the pack. The impact of graphic health warnings have been presented to Malaysian Ministry of Health recently from the ITC wave 5 data. 95.0% adult smokers noticed these graphic health warnings. Almost 60% have stopped many times from having a cigarette when they about to smoke one and more than 20% had thought a lot about likelihood to quit. In 2010, the popular 'kiddie packs' (cigarettes with 14 sticks) were also banned. In addition, several state governments in Malaysia are currently in the process of making their major cities smoke-free—with the capital city of Malacca being the first to become smoke-free in April 2010. The Malaysian Health Promotion Board released RM3.4million for Malacca to implement their smoke-free initiatives. The Board has also approved RM250,000 to Penang, Johore, Kelantan and Sarawak for their respective states' smoke-free initiatives.

In an effort to promote healthy lifestyles and reduce social ills, it is expected that the Malaysian government will continue to raise excise duties for tobacco to discourage smoking over the forecast period. However, this may cause price-sensitive smokers and young smokers to resort to illicit cigarettes which are more affordable. The tobacco companies in Malaysia have recently presented to the Malaysian government some data showing an increase in smuggling of cigarettes with an estimated smuggling rate of about 40%. The industry attributed this to excessive increase in taxation and excessive tobacco control regulations. The Confederation Malaysia of Tobacco Manufacturers (CMTM) Malaysia tried to persuade the government not to raise the tax on cigarettes excessively. However, ITC SEA Wave 5 Survey findings in Malaysia suggest that the tobacco industry's estimate is too high, as data collected report the smuggling rate to be 20%. A presentation was given to the Malaysian Ministry of Finance to provide research evidence to support the increase of tobacco taxes despite the alleged increase in smuggling following the tax increase. In the recent 2011 Malaysian Budget, the Prime Minister made the announcement of an increase of excise duty on cigarettes by 3 sen a stick to 22 sen a stick across the board effective from October 1, 2010.

On June 15, 2013, the government of Malaysia amended the Control of Tobacco Product Regulations of 2004, prohibiting the promotion of the sale of tobacco products, both directly and indirectly. The amendment set the minimum price for each packet of twenty sticks at RM7.00, and declared that manufacturers and importers of cigarettes would need to submit an application for any change to the retail selling price of a tobacco product. The Amendment also expanded the scope of the Malaysia's smoke-free laws, ensuring that smoke-free spaces included the surrounding area up to the borders of the fence or lot of Government premises,

hospitals, residential and non-residential healthcare facilities, child care facilities, schools, universities/vocational facilities, shops, and cultural facilities and stadiums/arenas.

There are tobacco related surveys in Malaysia, however, these surveys are conducted infrequently,³ and focus mainly on measure tobacco consumption, awareness of tobacco policies,⁴ or focus on youth smoking habits.⁵ The ITC Malaysia Survey is the only research effort that is designed to evaluate the impact of FCTC policies implemented in Malaysia.

FCTC Status

Malaysia ratified the FCTC in September 2005⁶ and is therefore expected to implement more stringent tobacco control policies. In January 2009, pictorial health warnings replaced text warnings. The Malaysian health warnings consist of six different pictorial and health messages and will be rotated every 2 years. Nicotine replacement therapy is available in Malaysia. In 2007, bupropion became available by prescription and in 2008, varenicline become available by prescription. In addition, both nicotine patch and gum are fully subsidized in all government hospitals that have a smoking cessation clinic. Smoking in Malaysia is banned in government offices, health facilities, air-conditioned venues and in 2010 extended to all private offices, public transport, and educational facilities. The Control of Tobacco Products (2005) Regulations ban direct and indirect tobacco advertising. However, point-of-sale advertising is not restricted. In 2010, further tobacco control initiatives were introduced, including smoke-free cities in several states, prohibition of the sale of tobacco products to minors, bans on cigarette packs with less than 14 sticks, and eliminating descriptors such as “light”, “mild” and “low tar” and replacing them with warnings of hazardous chemicals.

Type of policy	Description	Region	Policy Update	Effective Date
FCTC				
Country Wide		Country Wide	Ratification	September 2005
Health Warnings				
	Health Warnings	Country Wide	A set of 6 pictorial warning labels introduced in 1 January 2009 to be rotated on all packs by 1 June 2009. Bold 12pt Arial font. Front of pack is Malay, back is English. Packages also require an advisory against selling to minors, info line number, and a warning that cigarette smoke contains 400 types of chemicals.	June 1, 2009
	Light/Mild Descriptors	Country Wide	Misleading descriptors fully banned.	June 1, 2009
	% of Package	Country Wide	40% of front and 60% of back of package	June 1 st ,2009
	Minimum Pack Size	Country Wide	Ban on cigarette packs with fewer than 14 cigarettes ("kiddie packs").	2010
	Health Warnings	Country Wide	6 new pictorial warning labels replacing 6 initial warning labels.	January 2014
Advertising and Promotion				
	Broadcast	Country Wide	Radio and television advertisements banned since 1982	1982

Type of policy	Description	Region	Policy Update	Effective Date
	Print	Country Wide	Print advertising ban	1994
	Point of Sale	Country Wide	Ban on advertising in or on stores.	September 24, 2004
	Billboard	Country Wide	Ban on billboards	September 24, 2004
	Sponsorship	Country Wide	Ban on indirect advertising since September 2004 including sponsorship, with the exception of motor vehicle racing	September 24, 2004
	Distribution	Country Wide	Distribution of free tobacco sample is banned	September 24th, 2004
	Point of Sale	Country Wide	Ban on price promotion for tobacco products	January 1st, 2010
Cessation				
	Programs	Country Wide	Cessation services include Infoline, 300 Quit clinics run by the MOH, Quitline in the North, TAK Nak Media Campaign that runs for 5 years starting in 2004, and Clinical Practice Guidelines on Treatment of Tobacco Smoking & Dependence.	
	NRT Availability	Country Wide	Nicotine patch and gum are fully subsidized by the government and are available in all quit clinics	
	NRT Availability	Country Wide	Bupropion became available by prescription	2007
			Varenicline/Champix became available by prescription	2008
Smoke-free				

Type of policy	Description	Region	Policy Update	Effective Date
		Country Wide	Air conditioned eating places can designate one third of the area as a smoking zone. It needs to be partitioned and have a ventilation system.	2004
	Public Places Ban	Country Wide	Smoking banned in National Service Training Centres	2008
	Public Places Ban	Country Wide	Smoking banned in government buildings, schools, places of worship	2010
	Public Places Ban	Country Wide	Smoke-free in all air-conditioned workplaces	2011
	Public Places Ban	State Wide	Melaka Smoke Free Initiative	2011
	Public Palces Ban	State Wide	6 most popular recreational parks in Penang are Smoke-Free Park	2012
	Public Places Ban	Country Wide	2010 Smoke Free ban amended to include all territory up to the border of the location.	2013
	Public Places Ban	State Wide	Smoking are prohibited in all mosques in Penang	December 2013
	Outdoor Public Places Ban	Country Wide	Smoking banned at all Rest and Relax stations on the Malaysia North-South Highway	End of 2014
Price and Taxation				
	Taxes	Country Wide	Excise tax duty increased 25% was announced. Prices rose from 12 cent (US\$0.03) to 15 cent (US\$0.04) per stick	July 2007

Type of policy	Description	Region	Policy Update	Effective Date
	Price	Country Wide	Premium brands prices was increased from RM7.40 (US\$2.15) to RM8.20 (US\$2.38) per pack	July 2007
	Taxes	Country Wide	70% taxation	
	Taxation	Country Wide	Excise tax duty increased 25%	2007
	Other Issues	Country Wide	Minimum price of cigarettes set at RM6.40 that increases every tax year (48.8-63.3% tax of retail price)	January 1, 2010
	Other Issues	Country Wide	Minimum price of cigarettes set at RM7.00	September 1, 2013
	Taxation	Country Wide	Increases of excise duty on cigarettes by 14%	September 2013
	Price	Country Wide	Premium brands prices was increased from RM10.00 (US\$3.00) to RM12.00 (US\$3.70) per pack	September 2013
Product Regulation				
	Emissions/Contents	Country Wide	Emission standards are set - no more than 1.5 mg nicotine and 20 mg of tar	2004
	Other	Country Wide	Ban on distribution of free tobacco samples	2005
	Other	Country Wide	All packages require the manufacturer name, country of origin, and a stamp indicating domestic or imported product - to curb illicit trade.	2008

Type of policy	Description	Region	Policy Update	Effective Date
	Emission/Contents	Country Wide	In each cigarette, the maximum allowable level for nicotine, tar and carbon monoxide shall be 1.3mg, 15mg and 15mg, respectively.	January 1st, 2014
	Emission/Contents	Country Wide	In each cigarette, the maximum allowable level for nicotine, tar and carbon monoxide shall be 1.0mg, 10mg and 10mg, respectively.	June 1st, 2015

MALAYSIA

Timeline of Tobacco Control Policies and ITC Surveys



Sep 2004

- Ban on tobacco advertising, sponsorship and distribution of free tobacco, with the exception of motor vehicle racing.
- Ban on smoking in 19 public places, including hospitals, schools, and shopping complexes.
- Ban on free samples of tobacco products.
- Emission standards (≤ 1.5 mg nicotine, ≤ 20 mg tar).
- MOH runs 300 quit clinics, cessation services are available.

2004 - 2011
"Tak Nak" (Say No to Smoking) campaign.

Sep 2005
FCTC ratification.

2008

- Package requires manufacturer name and country of origin as well as a stamp indicated domestic or imported product.
- Varenicline/Champix became available by prescription.
- Smoking banned inside National Service Training Centers.

2007
Bupropion available by prescription.

Jul 2007
Excise tax duty increased 25%.

Jun 2009

- 6 rotating pictorial warning labels, covering 40% of front and 60% of back.
- Ban on misleading descriptors.
- Package requires advisory against selling to minors, and an info line number.

Jan 2010

- Retail selling price needs government approval.
- Ban on price promotions for tobacco products.
- Minimum price set for cigarette packs – RM 6.40 for a pack of 20.

Jul 2010

- Ban on "kiddie packs", cigarette packages with fewer than 14 sticks

Apr 2011

- Minimum price for a pack of 20 cigarettes increases to RM 7.00.

2011

- Smoke-free in all air-conditioned workplaces.
- Melaka Smoke Free Initiative began.

Sep 2013

- Excise duty increased 14%.



Survey Mode: Face-to-Face (F2F), Telephone (CATI), Self-Administered
Respondent Types: Smoker, Non-Smoker (W1-3), Youth

Updated Sept 2014



Appendix B: FCTC Policies in Thailand

Background

Thailand has an estimated population of 65 million people,⁷ 44% of whom live in urban areas,⁸ and its GDP per capita was US \$9,500 in 2011.⁹ Smoking prevalence is 41.7% among males and 2.1% among females.¹⁰ Although the number of female smokers is unlikely to exceed the number of male smokers, the health risk from smoking is much higher for women and their children and is causing serious concern.¹¹ Smoking is the fourth leading cause of death in Thailand, after HIV-AIDS, accidents, and tuberculosis.¹² Lung cancer incidence is on the rise—it is the second most common form of cancer.

Thailand is one of the leading countries in the implementation of policy measures to prevent and reduce the public health impacts of tobacco consumption. Graphic warning labels were introduced in March 2005 covering 50% of the front and back of the pack. In March 2010, the number of graphic labels increased from 9 to 10 and the size of the label increased to 55% of the front and back of the pack. Thailand has a ban on point-of-sale cigarette displays, although this policy has not been enforced nor adopted by all retail establishments. There is a ban on misleading package descriptors, but the tobacco industry continues to promote the false impression that some brands are less harmful by using lighter colours in their package design. As of March 2010, complete smoking bans have been adopted in all indoor public places except Bangkok's Suvarnabhumi International Airport, which has designated smoking rooms. The Action on Smoking and Health Foundation (ASH), the most active tobacco control NGO in Thailand, is actively looking into initiatives to help curtail the rise in female smoking prevalence.¹³ In 2010, the government launched anti-smoking campaigns to reduce smoking among women and men, including special campaigns held on Mother's Day and Father's Day. To date, there have been relatively few surveys of tobacco use and its determinants in Thailand. The majority of the studies focus on youth smoking^{14,15,16,17,18} while a few others report on the role that socioeconomic status plays on risky behaviours^{19,20,21}. Overall, there are very few studies in Thailand that collect information beyond basic measures of smoking behaviour,²² and none focus on the impact of tobacco control policies. The ITC Thailand Survey is the only ongoing research effort to evaluate tobacco control policies at the population level in Thailand.

In 2012, roll-your-own package is required to include pictorial health warnings in 4 types of 4 coloured pictures: 1) Smoking RYO causes death from lung cancer, 2) Picture and health warning label – Smoking RYO causes death from larynx cancer, 3) Picture and health warning label – Smoking RYO causes death from mouth cancer, and 4) Picture and health warning label – smoke of RYO cigarette causes 10 types of cancer.

On April 5, 2013, The Ministry of Health introduced a new law requiring new graphic health warnings on all cigarettes manufactured in or imported into Thailand. These new labels are to cover 85% of the two principal display areas. The new labels in June 2014 where two different images and two different text messages are required for each cigarette pack, one for the front and one for the back of the pack.

FCTC Status

Thailand ratified the FCTC in June 2003. However, Thailand had already begun to enact some of the strictest tobacco control policies in the world by 1992. Thailand has banned tobacco advertising in all media and has prohibited cigarette “power wall” displays from stores. As of March 2010, smoking has

been banned in all public places except Bangkok's Suvarnabhumi Airport where a designated smoking room is allowed. Pictorial health warnings are currently 55% of both the front and back of the pack, and have increased from 9 to 10 different images.²³ However, new legislation calls for a new set of graphic health warnings covering 85% of both principal display areas. The tobacco control movement in both governmental and non-governmental sectors is strong, and both public knowledge of tobacco issues and support for tobacco control efforts are high.

Type of policy	Description	Region	Policy Update	Effective Date
FCTC				
Country Wide		Country Wide	Ratification	2004
Health Warnings				
	Health Warnings	Country Wide	Pictorial warning labels since March 2005. Initially 6 warning labels rotated, a new set of 9 labels introduced in 2006.	2005
	Light/Mild Descriptors	Country Wide	Descriptors prohibited	2007
	Pictorial Warnings	Country Wide	10 specific rotating pictorial health warnings	2010
	% of Package	Country Wide	From 50% to 55% of front and back of package	2010
	% of Package	Country Wide	From 55% to 60% of front and back of package	2011
	Health Warnings	Country Wide	Increase the number of messages from 3 to 10 rotating messages indicating more variety of toxic substances contained in cigarettes to appear on the packaging of cigarettes.	2012
			4 pictorial warnings on roll-your-own tobacco packs	
	% of Package	Country Wide	From 60% to 85% of front and back of package—2 images and 2 text messages	2014

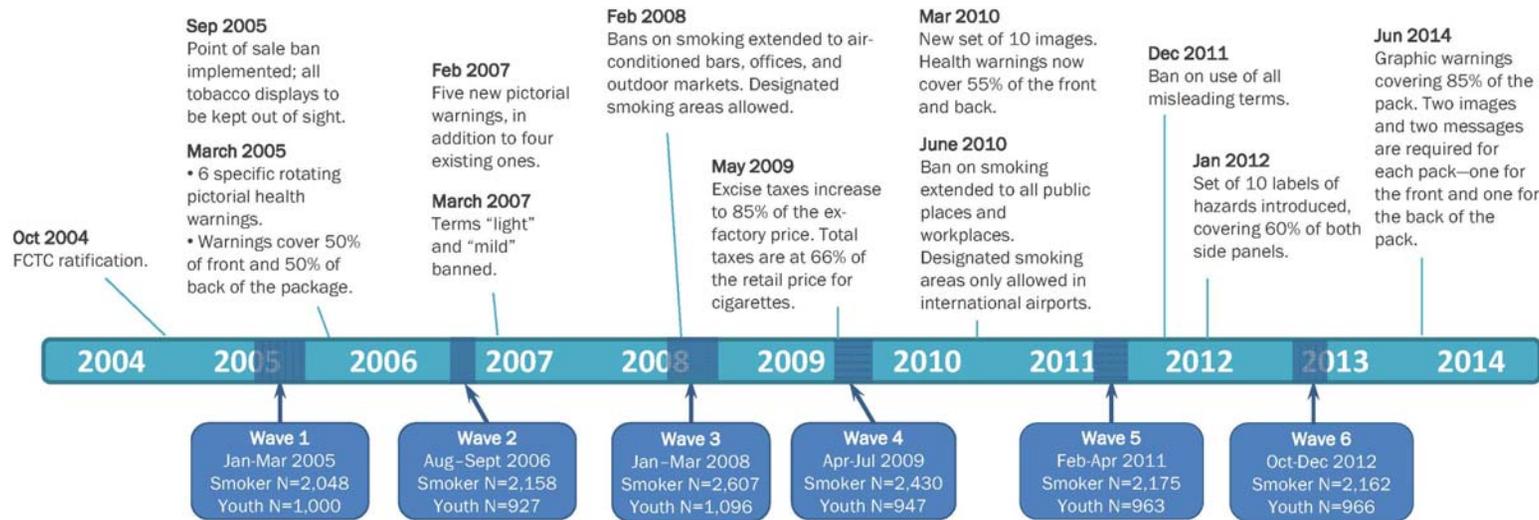
Type of policy	Description	Region	Policy Update	Effective Date
			each for the front and back of the pack	
Advertising and Promotion				
	Sponsorship	Country Wide	Sponsorship is banned	
	Broadcast	Country Wide	Full national ban, no ban on international broadcast since 1992	1992
	Print	Country Wide	Full national ban, no ban on international print	
	Point of Sale	Country Wide	Point of sale advertising is banned	2005
	Billboard	Country Wide	Full ban	
Cessation				
	Programs	Country Wide	No quitline. Counseling available in some health facilities.	
	NRT Availability	Country Wide	NRT and Bupropion is available	
Smoke-free				
	Public Places Ban	Country Wide	Smoking has been banned in all indoor air-conditioned establishments, except entertainment venues, since Nov 2002. Effective 10 Feb 2008 smoking is banned in open air markets.	2008

Type of policy	Description	Region	Policy Update	Effective Date
		Country Wide	Smoking has been banned in all indoor air-conditioned establishments, except entertainment venues, since Nov 2002. Effective 10 Feb 2008 smoking is banned in restaurants and bars.	2008
	Public Places Ban	Country Wide	Smoking banned in entertainment outlets	2008
	Public Places Ban		Smoking ban extended to include educational centres, banks, religious places, sports complexes, hospitals, and all public buildings (apart from open-air areas). The only exception is Bangkok's Suvarnabhumi Airport, where a designated smoking area will be allowed inside. Educational institutes, petrol stations, offices and state agencies will be allowed to have designated outdoor smoking areas. The fine for smoking in these areas will be approximately EUR 45 (2,000 TBH). Effective approximately 4 months after March 2 2010.	2010
	Public Places Ban	Country Wide	Smoking banned in all indoor public places except Bangkok International airport (with a designated smoking room)	2010
Price & Taxation				
	Taxation	Country Wide	Cigarette tax increased to 85% ad valorem rate	2009

Type of policy	Description	Region	Policy Update	Effective Date
Product Regulation	Other	Country Wide	Fire-safe cigarettes ("reduced ignition propensity" cigarettes) required	2012

THAILAND

Timeline of Tobacco Control Policies and ITC Surveys



Survey Mode: Face-to-Face (F2F)
Respondent Types: Smoker, Youth

Updated Sept 2014



Appendix C: ITC SEA Sampling Plan

Wave 1 Sampling Plan

The survey used face-to-face recruitment of participants from an area sample of households. The sample of households was selected using a stratified multistage sampling design. The primary strata consisted of Bangkok and four regions (North, Northeast, Central, South) in Thailand, and the six zones of Malaysia. In Thailand, respondents were selected from Bangkok and two provinces in each of Thailand's four regions (Chiang Mai, Phrae, Nakhon Ratchasima, Nong Khai, Nakhon Pathom, Samut Sakhon, Nakhon Si Thammarat, and Songkhla). In Malaysia, respondents were drawn from one state in each of the country's six zones: Kedah, Selangor, Johor, Terengganu, Sabah, and Sarawak.

In both countries, within each province or state, there was a secondary stratification into urban and rural. Ultimate sample allocations within the secondary strata were made proportional to their sizes.

In Malaysia, two urban districts and two rural districts were selected within each state with probability proportional to size, and each pair of districts was pooled. In Thailand, "districts" were taken to coincide with the urban and rural sections of the provinces. In each country, sub-districts and communities were selected within urban and rural districts, with probability proportional to population size. Each selected last-stage unit was divided conceptually into clusters of size about 300 dwellings, and sampling of these provided a total of about 125 sampled clusters in each country. Each cluster was given a quota of about 16 adult smokers, and a corresponding quota of non-smokers and youth. The basis of the frame was provided by the Ministry of Health, and where necessary the cluster quotas were divided among several sub-clusters or Enumeration Blocks (EBs) of about 80-120 dwellings each. A sample of about 30 addresses was taken from each EB. In Malaysia households were selected within each EB or cluster using systematic sampling methods and in Thailand they were selected using simple random sampling following enumeration. Sampling within a cluster proceeded until the respondent quota in each sampling category was filled. Once a potentially eligible household was identified and contacted, interviewers enumerated all household members.

In Thailand, a maximum of three respondents were selected from each household: one female adult smoker, one male adult smoker, and one youth respondent. In Malaysia, one adult non-smoker per household was also surveyed, for a maximum of four respondents per household. In households with more than one eligible respondent per quota cell, respondents were randomly selected by using a variant of the Kish Grid.²⁴

For further details on the planned design for Wave 1, please see the ITC South East Asia Wave 1 Technical Report.

Waves 2 and 3 Sampling Plan

The Waves 2 and 3 sampling plan consisted of recontacting as many respondents as possible from previous waves, and at the same time replenishing the dropouts within pseudo-PSUs (districts in Malaysia and urban-rural parts of provinces in Thailand), from newly sampled clusters or EBs near the units from the previous wave. That is, efforts were made to replenish the sample lost within each sampling category (adult smokers, youth, and adult non-smokers) within each pseudo-PSU where possible.

Wave 4 Sampling Plan in Thailand

The sampling design was the same as in previous waves, except that to cut some costs it was decided not to go back to every subdistrict, but to select one or two **rural** subdistricts to remove in each province. This meant deciding not to recontact 373 rural adult respondents and 157 rural youth respondents, effectively bringing the rural target numbers down.

In Bangkok, at Wave 3 there were 222 adult smokers/quitters and 108 youth. At Wave 4, 156 adults and 68 youth from Wave 3, or 70% and 63% respectively. Also 31 adults and 19 youth were recontacted from earlier waves. According to a plan developed before fieldwork, the sample was replenished by 112 adult smokers and 56 youth, bringing the totals to 299 adults and 143 youth. The team accomplished the replenishment by adding 7 Enumeration Areas, and recruiting and interviewing 16 adult smokers and 8 youth from each.

In urban areas outside Bangkok, at Wave 3 there were 605 adult smokers/quitters and 271 youth. At Wave 4, 519 adults and 217 youth were retained from Wave 3, or 86% and 80% respectively. Also, 46 adults and 31 youth were recontacted from earlier waves. The sample was replenished by 112 adult smokers and 56 youth, bringing the totals to 677 adults and 304 youth. This was done by adding 7 EDs in pre-planned urban subdistricts, and recruiting and interviewing 16 adults and 8 youth in each ED.

In rural areas, at Wave 3, there were 1639 adult smokers/quitters and 718 youth, but because of the removal of some sub-districts, attempts were made to recontact only 1265 adults and 560 youth at Wave 4. At Wave 4, 1148 adults and 407 youth were retained from Wave 3, or 91% and 73% respectively. Also, 88 adults and 61 youth were recontacted from earlier waves. The sample was replenished by 64 adult smokers and 32 youth, bringing the totals to 1300 adults and 500 youth. This was done by adding 4 villages in pre-planned rural sub-districts, and recruiting and interviewing 16 adults and 8 youths in each.

Wave 4 Sampling Plan in Malaysia

Because replenishment in Wave 4 was to be carried out by telephone, and the telephone directories were available only for the higher level sampling units known as ADs, targets for number of adult smokers/quitters and number of youth were established for each AD. There was to be no replenishment in rural Sarawak or Sabah because of the low telephone penetration. The targets in urban Johore were increased to be closer to Wave 1 levels, and the

targets for urban and rural Selangor were re-distributed toward Wave 1 levels (fewer in urban, more in rural). The targets in the ADs in other states remained the same as in Wave 3.

Wave 5 Sampling Plan in Thailand

In Thailand, the proposal for Wave 5 was to replenish the adults to numbers achieved at Wave 1, and the youth to somewhat smaller numbers. This meant that relatively little replenishment would be needed for adults, but fairly substantial replenishment would be needed for youth. It was decided to try to replenish youth from the same EDs and villages that were visited in Wave 4, from households that had not been enumerated in previous waves, where this would not yield too many more than 8 youths in total from a village/ED. If it appeared that this would suffice for replenishment of youth, the adults would also be replenished from the same EDs and villages. If it appeared that one or more ED or village needed to be added to the sample, they would be selected as usual with probability proportional to size, and up to 8 youth and some adults would be taken from each until the target sample sizes for the province crossed with urban-rural were reached. In the end, some villages not in Wave 4 but in earlier waves were revisited. Compared to the list of EDs and VIs in Waves 1 through 4, 1 new ED was added in Bangkok; no new EDs were added in urban areas outside Bangkok; 1 new village (VI) was added in a rural area outside Bangkok: from Nokhonratsema province, Kamsakaekang district, Muangkasert subdistrict. Compared to the list of EDs and VIs in Wave 4 only, 19 additional EDs from Waves 1 to 3 and the one new ED were used in Bangkok; 34 additional EDs from Waves 1 to 3 were used in urban areas outside Bangkok; and 57 additional VIs from Waves 1 to 3 and the one new VI were added in rural areas.

In Thailand, efforts were made to recontact respondents from earlier waves, even if they had missed Wave 4. Altogether, 99 youth respondents were in this category: 61 from those recruited at Wave 1, 20 from those recruited at Wave 2, and 18 from those recruited at Wave 3. There were also 117 adults re-contacted in Wave 5 who were not present in Wave 4: 70 were recruited in Wave 1, 23 in Wave 2 and 24 in Wave 3.

Wave 5 Sampling Plan in Malaysia

In Malaysia, targets were set for adult smokers and youth at the AD level, totaling 2000 adult smokers and 1000 youth. The targets were set to be equal to the Wave 4 targets, except that no replenishment was planned in rural Sabah and rural Sarawak, and the targets in rural Penang, rural Terengganu, and urban Sabah were increased to compensate. Enumeration/recruitment, and adult recontact and replenishment interviews were carried out by telephone; youth interviews were completed on paper and mailed in, except in the case of some recontact youth who used email. While one adult male smoker and one youth were randomly selected in each enumerated household where they existed, attempts were made to interview all adult female smokers who were enumerated.

In Malaysia, efforts were made to recontact respondents from earlier waves, even if they had missed Wave 4. There were no adult respondents, but there were 43 youth, in this category.

Wave 6 Sampling Plan in Thailand

The assumed Wave 5-Wave 6 retention rates are based roughly on Wave 4-Wave 5 rates.

In Wave 4, the decision was made to drop one or two rural subdistricts from each of the sample provinces; to carry out recontact and replenishment to Wave 3 levels in the rural subdistricts that were retained; and to bring up the adult smoker and youth sample sizes to previous levels overall by increasing the sample sizes in Bangkok and the other urban areas.

In addition, efforts were made to recontact respondents from earlier waves who had not been present in Wave 3. Altogether 165 adults and 136 youths in the Wave 4 sample were recontacted from earlier waves.

In the end, in Wave 4 the overall adult sample size was larger than expected, at 2276 adults. There were 947 youth surveyed.

Thus the proposal for Wave 5 was to replenish the adults to numbers achieved at Wave 1, and the youth to somewhat smaller numbers.

In Wave 5, the overall adult sample size was 2132 adults and 953 youth.

The Wave 4 to Wave 5 retention rates for adults were about 70% for Bangkok and 83% to 87% outside Bangkok, while the retention rates for youth were about 70% in Bangkok and 71% to 75% outside Bangkok. We estimate needing a replenishment of 224 adults and 211 youth. If we were to replenish by adding new EDs or villages and then taking 16 adults and 8 youth from each according to our usual protocol, we would reach the desired adult sample size sooner than we reach the desired youth sample size.

Thus we might consider using the same plan for replenishment in Wave 6 as in Wave 5:

- try to reach the targets within each province crossed with urban/rural classification
- try to replenish youth from the same EDs and villages visited in Wave 5, FROM HOUSEHOLDS NOT ALREADY ENUMERATED IN PREVIOUS WAVES; that is, within each province crossed with urban-rural, try to replace dropout youth members from the villages/EDs already being visited, where there are dwellings where enumeration has not taken place in previous waves, and where this will not yield too many more than 8 youths in total from a village/ED
- if it looks as though all youth dropouts can be replaced this way, replenish dropout adult members also from the villages/EDs already being visited
- if it looks as though one or more ED or village needs to be added to the sample, select them as usual with probability proportional to size, and take up to 8 youth and some adults from each until the target sample sizes for the province crossed with urban-rural are reached.

The accompanying spreadsheets suggest where new EAs in Bangkok or new EDs and villages could come from where needed.

The following numbers are also in one of the spreadsheets.

Bangkok

At Wave 5 there were 313 adults and 161 youth. At Wave 5, we might expect to retain about 70% of adults, or 219, and 70% of youth, or 113. With a target of 280 adults and 145 youth in Wave 5, we would have to replenish by 61 adults and 32 youth.

Urban outside Bangkok

At Wave 5 there were 619 adults and 310 youth. At Wave 5, we might expect to retain about 83% of adults, or 516, and 75% of youth, or 234. With a target of 600 adults and 305 youth, we would have to replenish by 84 adults and 71 youth.

Rural outside Bangkok

At Wave 5 there were 1200 adults and 482 youth. At Wave 5, we might expect to retain about 87% of adults, or 1041, and 71% of youth, or 342. With a target of 1120 adults, and 450 youth, we would have to replenish by 79 adults and 108 youth.

Wave 6 Sampling Design

In Thailand, the proposal for Wave 6 was to try to recontact everyone from Wave 5, and to replenish the sample up to 2000 adult smokers/quitters and 900 youth members. An effort would be made to reach specified targets within each province crossed with urban/rural classification. As in Wave 5, it was decided to try in Wave 6 to replenish youth from the same EDs and villages that were visited in Wave 5, from households that had not been enumerated in previous waves, where this would not yield too many more than 8 youths in total from a village/ED. If it appeared that this would suffice for replenishment of youth, the adults would also be replenished from the same EDs and villages. If it appeared that one or more ED or village needed to be added to the sample, they would be selected as usual with probability proportional to size, and up to 8 youth and some adults would be taken from each until the target sample sizes for the province crossed with urban-rural were reached. In the end, some villages not in Wave 5 but in earlier waves were revisited. Compared to the list of EDs and VIs in Waves 1 through 5, no new ED or village was added. Compared to the list of EDs and VIs in Wave 5 only, 2 additional EDs from Waves 1 to 4 were added in Bangkok.

In Thailand, efforts were made to recontact youth respondents from earlier waves, even if they had missed Wave 5. Altogether, 126 youth respondents were obtained in this category: 85 from those recruited at Wave 1, 11 from those recruited at Wave 2, 15 from those recruited at Wave 3, and 15 from those recruited at Wave 4. There were also 196 adults recontacted in Wave 6 who were not present in Wave 5: 111 were recruited in Wave 1, 23 in Wave 2, 36 in Wave 3 and 26 in Wave 4.

In Malaysia, targets were set for adult smokers/quitters and youth at the AD level, totaling 2000 adult smokers/quitters and 1000 youth. The targets were set to be equal to the Wave 5 targets, except that target numbers for both youth and adults were shifted from Kuala Langat to Hulu Selangor. This shift was made to try to make the weights less variable in rural Selangor from new recruits. Enumeration/recruitment, and adult recontact and replenishment interviews were carried out by telephone; youth interviews were completed on paper and mailed in, except in the case of some recontact youth who used email. While one adult male smoker and one youth were randomly selected in each enumerated household where they existed, attempts were made to interview all adult female smokers who were enumerated.

In Malaysia, it was considered to excuse all youth respondents from Wave 5 who would be of age 18 or over at the time of commencing the youth survey in February 2013. It was estimated that this would mean excluding 509 Wave 5 youth respondents. Thus this was not done. As well, replenishment fieldwork for the youth was very slow and had to be stopped prematurely. In the end, there were 749 recontact youth respondents (4 of them were excluded due to lack of weighting information at earlier waves), and 59 replenishment youth respondents.

The results of sampling in Waves 1, 2, 3, 4, 5, and 6 are given in the following table.

		<u>Malaysia</u>			<u>Thailand</u>		
		Male	Female	Total	Male	Female	Total
Wave 1							
	Smokers/Quitters	1917	87	2004	1846	154	2000
	Non-smokers	469	1086	1555	Not applicable		
	Youth	494	515	1009	516	484	1000
Wave 1 Total		2880	1688	4568	2362	638	3000
Wave 2							
Re-contact	Smokers/Quitters	836	32	868	1436	122	1558
	Non-smokers	249	620	869	Not applicable		
	Youth	211	234	445	332	340	672
	<i>Total</i>	<i>1296</i>	<i>886</i>	<i>2182</i>	<i>1768</i>	<i>462</i>	<i>2230</i>
Replenishment	Smokers	752	20	772	460	48	508
	Non-smokers	205	498	703	Not applicable		
	Youth	152	180	332	154	101	255
	<i>Total</i>	<i>1109</i>	<i>698</i>	<i>1807</i>	<i>614</i>	<i>149</i>	<i>763</i>
Wave 2 Total		2405	1584	3989	2382	611	2993
Wave 3							
Re-contact	Smokers/Quitters	1182	26	1208	1723	150	1873
	Non-smokers	296	799	1095	Not applicable		
	Youth	237	291	528	420	380	800
	<i>Total</i>	<i>1715</i>	<i>1116</i>	<i>2831</i>	<i>2143</i>	<i>530</i>	<i>2673</i>
Replenishment	Smokers	747	2	749	539	53	592
	Non-smokers	179	209	388	Not applicable		
	Youth	92	77	169	162	134	296
	<i>Total</i>	<i>1018</i>	<i>288</i>	<i>1306</i>	<i>701</i>	<i>187</i>	<i>888</i>
Wave 3 Total		2733	1404	4137	2844	717	3561

		<u>Malaysia</u>			<u>Thailand</u>		
		Male	Female	Total	Male	Female	Total
Wave 4							
Re-contact	Smokers/Quitters	1273	15	1288	1815	173	1988
	Non-smokers	Not applicable					
	Youth	263	311	574	443	360	803
	<i>Total</i>	1536	326	1862	2258	533	2791
Replenishment	Smokers/Quitters	748	9	757	249	39	288
	Non-smokers	Not applicable					
	Youth	162	141	303	74	70	144
	<i>Total</i>	910	150	1060	323	109	432
Wave 4 Total		2446	476	2922	2581	642	3223
Wave 5							
Re-contact	Smokers/Quitters	1502	10	1512	1759	181	1940
	Non-smokers	Not applicable					
	Youth	237	248	485	369	316	685
	<i>Total</i>	1739	258	1997	2128	497	2625
Replenishment	Smokers/Quitters	483	12	495	170	22	192
	Non-smokers	Not applicable					
	Youth	207	236	443	146	123	269
	<i>Total</i>	690	248	938	316	145	461
Wave 5 Total		2429	506	2935	2444	642	3086
Wave 6							
Re-contact	Smokers/Quitters	1477	9	1486	1743	183	1926
	Non-smokers	Not applicable					
	Youth	352	393	745	390	312	702
	<i>Total</i>	1829	402	2231	2133	495	2628
Replenishment	Smokers/Quitters	503	11	514	200	33	233
	Non-smokers	Not applicable					
	Youth	22	37	59	142	121	263
	<i>Total</i>	525	48	573	342	154	496
Wave 6 Total		2354	450	2804	2475	649	3124

Appendix D: Household Replenishment Form and Kish Grid Instructions (TH)

SELECTION OF PARTICIPANTS FROM A HOUSEHOLD USING THE KISH GRID (These instructions and the example are for Malaysia; the Thailand document is similar.)

Once you have enumerated the members of the household, you will select the participants to be interviewed. There are 4 categories: male adult smoker, female adult smoker, and adolescent. You will have quotas for adult smoker and adolescent. If the adult smoker quota is not yet filled, you will be selecting one male adult smoker if the household contains at least one, and one female adult smoker if the household contains at least one. (This might cause you to exceed the quota by one, if both male and female adult smokers exist in the household.) If the adolescent quota is not yet filled, you will be selecting one adolescent.

The Kish grid is used every time you have to make a selection within a category because there are two or more eligible household members.

The *row* of the grid to be used is the row corresponding to the number of household members in the category, e.g. if there are 3 male adult smokers, use row 3 of the Kish grid to select a male adult non-smoker.

The *column* of the grid to be used is the column corresponding to the last digit of the age of an adult household member. Each time you use the grid for a household, use the first listed age which you have not already used for that household. (You should put an “X” beside the listed age when you have finished using it.) See the example below.

The *entry* in the selected row and column tells you which household member to select. For example, if the entry is 2, select the individual who is the *second* listed person in the category.

HHR : _____

RPE : _____

โครงการติดตามผลกระทบจากนโยบายการควบคุมการบริโภคยาสูบในประเทศไทย						MODULE A	
แบบสำรวจครัวเรือนกลุ่มตัวอย่างใหม่ในรอบที่ 6						Form Completed	
(Household Enumeration Form)						Interviewer	
[] []	[] []	[] []	[] []	[] [] [] []	[] [] [] []	[] []	[] [] [] []
ภาค	จังหวัด	อำเภอ	ตำบล	หมู่บ้าน	ลำดับครัวเรือน	ลำดับบุคคล	
ชื่อหัวหน้าครัวเรือน :						จำนวนสมาชิกในครัวเรือน	
ที่อยู่ :						รหัสไปรษณีย์ :	
โทรศัพท์ (บ้าน) :				โทรศัพท์ (มือถือ) :			
ชื่อผู้ให้ข้อมูลครัวเรือน :				E-mail:			
บันทึกการติดตาม (บันทึกหลังการเยี่ยมครัวเรือนแต่ละครั้ง)							
ครั้งที่	วัน/เดือน/ปี	เวลา	หมายเหตุ	นัดครั้งต่อไป			
				วัน/เดือน/ปี	เวลา		
1							
2							
3							
4							
ข้อสรุปสำหรับการปฏิเสธการสัมภาษณ์ (ในวงกลม)							
1. หาบ้านไม่พบ		8. การปฏิเสธของครัวเรือน		9. มีปัญหาเรื่องภาษา			
2. บ้านไม่มีคนอยู่		3. ไม่ใช่ครัวเรือน เช่น สถานที่ทำงาน		10. ไม่มีใครสามารถตอบได้			
4. ไม่ปลอดภัย		5. ติดต่อไม่ได้เนื่องจากสภาพอากาศ		11. ไม่สามารถสำรวจได้เนื่องจากเหตุผลอื่นๆ			
6. ไม่มีคำตอบ - หลังจากพยายาม 4 ครั้ง		7. ไม่มีคำตอบ - ช่วงเวลาสำรวจเสร็จสิ้น		ระบุ.....			
				12. การติดต่อสำเร็จ - ทำการสำรวจ			
ถ้าครัวเรือนปฏิเสธการให้สัมภาษณ์ :						เชื้อชาติ	
1. จำนวนคนที่อาศัยอยู่ในครัวเรือนอายุ 18 ปี ขึ้นไป = _____						1. ไทย	
2. จำนวนคนที่สูบบุหรี่เป็นประจำที่อาศัยอยู่ในครัวเรือนอายุ 18 ปี ขึ้นไป = _____						2. อื่น ๆ	

แบบสำรวจครัวเรือนกลุ่มตัวอย่างใหม่ในรอบที่ 6 (Household Enumeration Form)							MODULE B	
							LQ: <input type="text"/>	
ลำดับที่	ชื่อสมาชิกในครัวเรือน (กลุ่มผู้ใหญ่อายุตั้งแต่ 18 ปี ขึ้นไป)	เพศ		การสูบบุหรี่		อายุ (เต็มปี)	ผู้ตอบ แบบสอบถาม 1=ใช่, 2=ไม่ใช่	หมายเลข
		1=ชาย 2=หญิง	1 = สูบ 2 = ไม่สูบ					
1		1	2	1	2		1	2
2		1	2	1	2		1	2
3		1	2	1	2		1	2
4		1	2	1	2		1	2
5		1	2	1	2		1	2
6		1	2	1	2		1	2
7		1	2	1	2		1	2
8		1	2	1	2		1	2
9		1	2	1	2		1	2
10		1	2	1	2		1	2
ชื่อสมาชิกในครัวเรือน (กลุ่มเด็กอายุ 13-17 ปี)								
1		1	2	1	2		1	2
2		1	2	1	2		1	2
3		1	2	1	2		1	2
4		1	2	1	2		1	2
5		1	2	1	2		1	2

KISH GRID

จำนวน ผู้เข้าข่าย	ตัวเลขตัวสุดท้ายของอายุ									
	1	2	3	4	5	6	7	8	9	0
1	1	1	1	1	1	1	1	1	1	1
2	1	2	2	1	1	2	2	1	1	2
3	3	1	2	3	2	3	1	1	2	3
4	1	2	3	4	2	3	4	1	2	3
5	3	4	5	1	2	3	4	5	1	2

จำนวนเด็กที่อายุไม่เกิน 5 ปี ในครัวเรือน = _____

จำนวนเด็กที่อายุระหว่าง 6-12 ปี ในครัวเรือน = _____

จำนวนเด็กที่อายุระหว่าง 13-17 ปี ในครัวเรือน = _____

จำนวนผู้ชายที่สูบบุหรี่ที่มีอายุ 18 ปีขึ้นไปในครัวเรือน = _____

จำนวนผู้หญิงที่สูบบุหรี่ที่มีอายุ 18 ปีขึ้นไปในครัวเรือน = _____

จำนวนผู้ชายที่ไม่สูบบุหรี่ที่มีอายุ 18 ปีขึ้นไปในครัวเรือน = _____

จำนวนผู้หญิงที่ไม่สูบบุหรี่ที่มีอายุ 18 ปีขึ้นไปในครัวเรือน = _____

ID	ประเภทของ ผู้ให้ข้อมูล	ชื่อผู้เข้าข่ายที่ถูกเลือก	รหัสผล ส่วน บุคคลของ ผู้ให้ข้อมูล*	รหัส พนักงาน สัมภาษณ์
1	ผู้ชายที่สูบบุหรี่			
2	ผู้หญิงที่สูบบุหรี่			
3	วัยรุ่น			

พนักงานสัมภาษณ์ : 2 แถวสุดท้าย
จะใช้ในกรณีที่มีการทดแทนจากบ้าน
เดียวกัน ในกรณีที่ผู้ถูกเลือกมีรหัสผล 2
(มีปัญหาเรื่องภาษา) หรือ 3 (ทุพพลภาพ
ทางกาย หรือใจ) หรือไม่อยู่ตลอดเวลา
ของการสำรวจ

* รหัสผลส่วนบุคคลของผู้ให้ข้อมูล

1.ไม่พบ (หลังจากพยายาม 4 ครั้ง) 2.มีปัญหาเรื่องภาษา 3.ทุพพลภาพทางกายหรือใจ 4.การปฏิเสธของตัวแทน 5. การปฏิเสธ 7. สำเร็จ
6.ไม่สำเร็จ(การเริ่มต้นผู้ให้สัมภาษณ์หรือสิ้นสุดการให้ข้อมูลก่อนสิ้นสุดการสัมภาษณ์) 8.ไม่ได้เป็นส่วนหนึ่งของครัวเรือนและติดต่อไม่ได้หรือค้นหาไม่พบ

กรอกชื่อและที่อยู่ของผู้ที่สามารถติดต่อผู้ให้ข้อมูลได้ (ในกรณีที่คาดว่าอีก 1 ปีข้างหน้าผู้ให้สัมภาษณ์จะย้ายที่อยู่)

ชื่อ-สกุล ความสัมพันธ์กับผู้ตอบแบบสอบถาม

ที่อยู่

เบอร์โทรศัพท์บ้าน เบอร์มือถือ



In the example above, consider each of the 3 categories in turn. (Suppose the non-smoker quota is filled).

1. You must choose between “R” and “Y” for the male adult smoker. Since there are two, you take row #2 of the grid. Since the first adult age, namely the age of “R”, ends in 3, you take column #3 of the grid. The entry in row #2, column #3 is 2. Thus you select “Y”, who is listed second among adult non-smokers. You now put an “X” beside the age of “R”.
2. There are no female adult smokers.
3. You must choose between “B” and “I” for the adolescent. Again you look at row #2, since there are two adolescents to choose from. The next adult is that of “O”, and the last digit is 5. Thus you take column #5 of the grid. The entry in row #2, column #5 is 1. This you select “B”, who is listed first among the adolescents.

You have now selected “Y” and “B”.

INTERNATIONAL TOBACCO CONTROL POLICY SURVEY – THAILAND Form completed:

MODULE A HOUSEHOLD ENUMERATION FORM Interviewer ID: -

Region Province District SD ED/V1 LQ

Contact details:

Name of Head of Household: _____ Total Household Members:

Address: _____ Postcode: _____

Phone House: H/P:

Name of Informant: _____ Email: _____

VISITING RECORD – HOUSEHOLD LEVEL (FILL IN AFTER END OF EACH VISIT)

No. of visit	Date	Time	Notes	Next Appointment	
				Date	Time
1					
2					
3					
4					

Ethnicity (Circle):

1 Thai

2 Other

Final Household Outcome Code (circle one below):

1 Could not find	8 Household Refusal
2 Vacant Dwelling / Lot	9 Language Barrier
3 Not a Household (e.g. Business)	10 No one capable of answering
4 Threat to safety	11 Enumeration prevented for other reasons
5 No Contact-Weather Condition	Specify:
6 No Answer- 4 attempts	
7 No Answer –Survey Period Ends	12 Enumerated

IF HOUSEHOLD REFUSAL:

i) How many people aged 18 years and above live in this household?

ii) How many of them smoke regularly?

MODULE B HOUSEHOLD ENUMERATION FORM LO:

No	ADULT NAME	Sex M/F	Smoking Status S/N	Age (DOB)	Selected Y/N	Notes
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
YOUTH NAME						
1						
2						
3						
4						
5						

KISH GRID

No	Last digit of age									
	1	2	3	4	5	6	7	8	9	0
1	1	1	1	1	1	1	1	1	1	1
2	1	2	1	1	2	2	1	1	2	
3	3	1	2	3	2	3	1	1	2	3
4	1	2	3	4	2	3	4	1	2	3
5	3	4	5	1	2	3	4	5	1	2

Number of children between 0-5 years old in HH	Number of male smokers aged 18+ years in HH
Number of children between 6-12 years old in HH	Number of female smokers aged 18+ years in HH
Number of youth between 13-17 years old in HH	Number of male non-smokers aged 18+ years in HH
	Number of female non-smokers aged 18+ years in HH

Respondent ID	Type	Selected Respondent Name	Outcome Code	Interviewer ID
1	MS			
2	FS			
3	AD			

NB. MS – male smoker; FS – female smoker; AD – a adolescent
 The additional two rows are for use in the case of substitution. A substitution from the same household is allowed only if a selected respondent has outcome code 2 (language barrier) or 3 (health/mentally incapable), or will be away for the entire survey period.

Before reaching the household, put an "X" in the third column for each Type for which the quota is already filled.

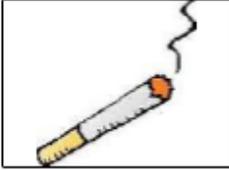
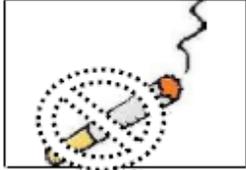
Individual Outcome Codes:

1. Missed (after 4 attempts)
2. Language Barrier
3. Health/Mentally Incapable
4. Proxy Refusal
5. Refusal
6. Incomplete (start, breakoff)
7. Complete

Name and address of someone who would be able to provide contact information at next survey if respondents move: _____

Appendix E: Sample of Response Card (Thailand)

บัตรคำตอบที่ 6

			
1. ไม่เลย	2. เล็กน้อย	3. มีบ้าง	4. มีมาก

บัตรคำตอบที่ 7

				
1. ตื่นตกใจมาก	2. ค่อนข้างตื่นตกใจ	3. ไม่ทำให้รู้สึกอะไร	4. รู้สึกสบายใจบ้าง	5. รู้สึกสบายใจมาก

บัตรคำตอบที่ 10

				
1. รู้สึกกังวลมากที่สุด	2. รู้สึกกังวลมาก	3. รู้สึกกังวลบ้าง	4. รู้สึกกังวลเล็กน้อย	5. รู้สึกไม่กังวลเลย

บัตรคำตอบที่ 11

			
1. ไม่เคยคิดถึงเลย	2. คิดถึงนาน ๆ ครั้ง	3. คิดถึงบ่อย	4. คิดถึงบ่อยมาก

Appendix Fa: Sample of Consent Form Adult (Thailand)

ใบแสดงความยินยอมการเข้าร่วมโครงการ

เรียน **ผู้ให้สัมภาษณ์**

ด้วย สถาบันวิจัยประชากรและสังคม มหาวิทยาลัยมหิดล กำลังดำเนินการสำรวจเพื่อติดตามผลกระทบของนโยบายควบคุมการบริโภคยาสูบในประเทศไทย รอบที่ 6 ปี พ.ศ. 2555 โดยมีวัตถุประสงค์เพื่อศึกษาพฤติกรรมและการสูบบุหรี่เชิงลึกของประชากรกลุ่มต่าง ๆ ตลอดจนภาวะสุขภาพของผู้สูบบุหรี่ เพื่อนำผลการศึกษาไปเสนอแนะเชิงนโยบายในการป้องกันและลดการสูบบุหรี่

สถาบันฯ จึงขอเวลาและขออนุญาตสัมภาษณ์ท่านด้วยแบบสัมภาษณ์ ข้อมูลที่ท่านให้ไม่ว่าจะเป็นข้อมูลที่เกี่ยวข้องกับตัวท่านหรือบุคคลอื่นที่ท่านเกี่ยวข้อง สถาบันฯ จะเก็บรักษาไว้เป็นความลับ และใช้เพื่อการวิจัยเท่านั้น ข้อมูลจะถูกนำไปวิเคราะห์ในภาพรวมและนำเสนอเป็นรายงานการวิจัยที่ไม่ปรากฏชื่อผู้ให้ข้อมูล ในการสำรวจครั้งนี้ท่านมีสิทธิ์ที่จะให้หรือไม่ให้ข้อมูลก็ได้แล้วแต่ความสมัครใจของท่าน หรือระหว่างที่ท่านให้สัมภาษณ์แล้วบางส่วน ท่านมีสิทธิ์ที่จะไม่ตอบคำถามข้อใดข้อหนึ่ง หรือหยุดให้การสัมภาษณ์เมื่อไรก็ได้

สถาบันฯ หวังว่าท่านจะกรุณาให้ความร่วมมือในครั้งนี้ ถ้าท่านมีคำถามใด ที่เกี่ยวกับการสัมภาษณ์หรือมีข้อสงสัยประการใด โปรดติดต่อ รองศาสตราจารย์ ดร. นุสรา ศิริวิรัมย์ หัวหน้าโครงการฯ ที่สถาบันวิจัยประชากรและสังคม มหาวิทยาลัยมหิดล หมายเลขโทรศัพท์ 02-441-0201 ต่อ 606

ขอได้รับความขอบคุณอย่างสูงจากสถาบันฯ

ขอแสดงความนับถือ



(รองศาสตราจารย์ ดร. นุสรา ศิริวิรัมย์)

ผู้อำนวยการสถาบันวิจัยประชากรและสังคม มหาวิทยาลัยมหิดล

ตำบลศาลาษา อำเภอบางพลี จังหวัดนครปฐม 73170 โทรศัพท์ 0 2441 0201 - 4

ข้าพเจ้าได้รับทราบวัตถุประสงค์ของการตอบแบบสอบถามครั้งนี้ จากการอ่านด้วยตนเอง หรือให้พนักงานสัมภาษณ์ของโครงการอ่านให้ฟังแล้ว ข้าพเจ้ายินดีให้ความร่วมมือในการตอบแบบสอบถาม และได้ลงลายมือชื่อ หรือให้พนักงานสัมภาษณ์ผู้ที่อ่านให้ข้าพเจ้าฟัง ลงลายมือชื่อในใบแสดงความยินยอมให้ข้อมูลแทนข้าพเจ้า

ลงชื่อ

พนักงานสัมภาษณ์ (ลงนามแทน)

วันที่.....เดือน.....พ.ศ.

ลงชื่อ

ผู้ให้สัมภาษณ์

วันที่.....เดือน.....พ.ศ.

Replenishment Adult Smoker Wave6

Page 2

Appendix Fb: Sample of Consent Form Adolescent (Thailand)

ใบแสดงความยินยอมการเข้าร่วมโครงการ

เรียน ผู้ให้ข้อมูล

ด้วย สถาบันวิจัยประชากรและสังคม มหาวิทยาลัยมหิดล กำลังดำเนินการสำรวจเพื่อติดตามผลกระทบของนโยบายควบคุมการบริโภคยาสูบในประเทศไทย รอบที่ 6 ปี พ.ศ. 2555 โดยมีวัตถุประสงค์เพื่อศึกษาพฤติกรรมการสูบบุหรี่เชิงลึกของประชากรกลุ่มต่าง ๆ ตลอดจนภาวะสุขภาพของผู้สูบบุหรี่ เพื่อนำผลการศึกษาไปเสนอแนะเชิงนโยบายในการป้องกันและลดการสูบบุหรี่

สถาบันฯ จึงขอเวลาและอนุญาตสัมภาษณ์ท่านด้วยแบบสัมภาษณ์ ข้อมูลที่ท่านให้ไม่ว่าจะเป็นข้อมูลที่เกี่ยวข้องกับตัวท่านหรือบุคคลอื่นที่ท่านเอ่ยถึง สถาบันฯ จะเก็บรักษาไว้เป็นความลับ และจะใช้เพื่อการวิจัยเท่านั้น ข้อมูลจะถูกนำไปวิเคราะห์ในภาพรวมและนำเสนอเป็นรายงานการวิจัยที่ไม่ปรากฏชื่อผู้ให้ข้อมูล ในการสำรวจครั้งนี้ท่านมีสิทธิ์ที่จะให้หรือไม่ให้ข้อมูลก็ได้แล้วแต่ความสมัครใจของท่าน หรือระหว่างที่ท่านให้สัมภาษณ์แล้วบางส่วน ท่านมีสิทธิ์ที่จะไม่ตอบคำถามข้อใดข้อหนึ่ง หรือหยุดให้การสัมภาษณ์เมื่อไรก็ได้

สถาบันฯ หวังว่าท่านจะกรุณาให้ความร่วมมือในครั้งนี้ ถ้าท่านมีคำถามใด ที่เกี่ยวกับการสัมภาษณ์หรือมีข้อสงสัยประการใด โปรดติดต่อ รองศาสตราจารย์ ดร. นุสรา ศิริวิรัมย์ หัวหน้าโครงการฯ สถาบันวิจัยประชากรและสังคม มหาวิทยาลัยมหิดล หมายเลขโทรศัพท์ 0 2441 0201 ต่อ 606

ขอได้รับความขอบคุณอย่างสูงจากสถาบันฯ

ขอแสดงความนับถือ



(รองศาสตราจารย์ ดร. นุสรา ศิริวิรัมย์)

ผู้อำนวยการสถาบันวิจัยประชากรและสังคม มหาวิทยาลัยมหิดล

ตำบลศาลายา อำเภอพุทธมณฑล จังหวัดนครปฐม 73170 โทรศัพท์ 0 2441 0201 - 4

ข้าพเจ้าได้รับทราบวัตถุประสงค์ของการตอบแบบสอบถามครั้งนี้ จากการอ่านด้วยตนเอง หรือให้พนักงานสนามของโครงการอ่านให้ฟังแล้ว ข้าพเจ้ายินดีให้ความร่วมมือในการตอบแบบสอบถาม และได้ลงลายมือชื่อ หรือให้พนักงานสนามผู้ที่อ่านให้ข้าพเจ้าฟัง ลงลายมือชื่อในใบแสดงความยินยอมให้ข้อมูลแทนข้าพเจ้า

ลงชื่อ _____

พนักงานสนาม (ลงนามแทน)

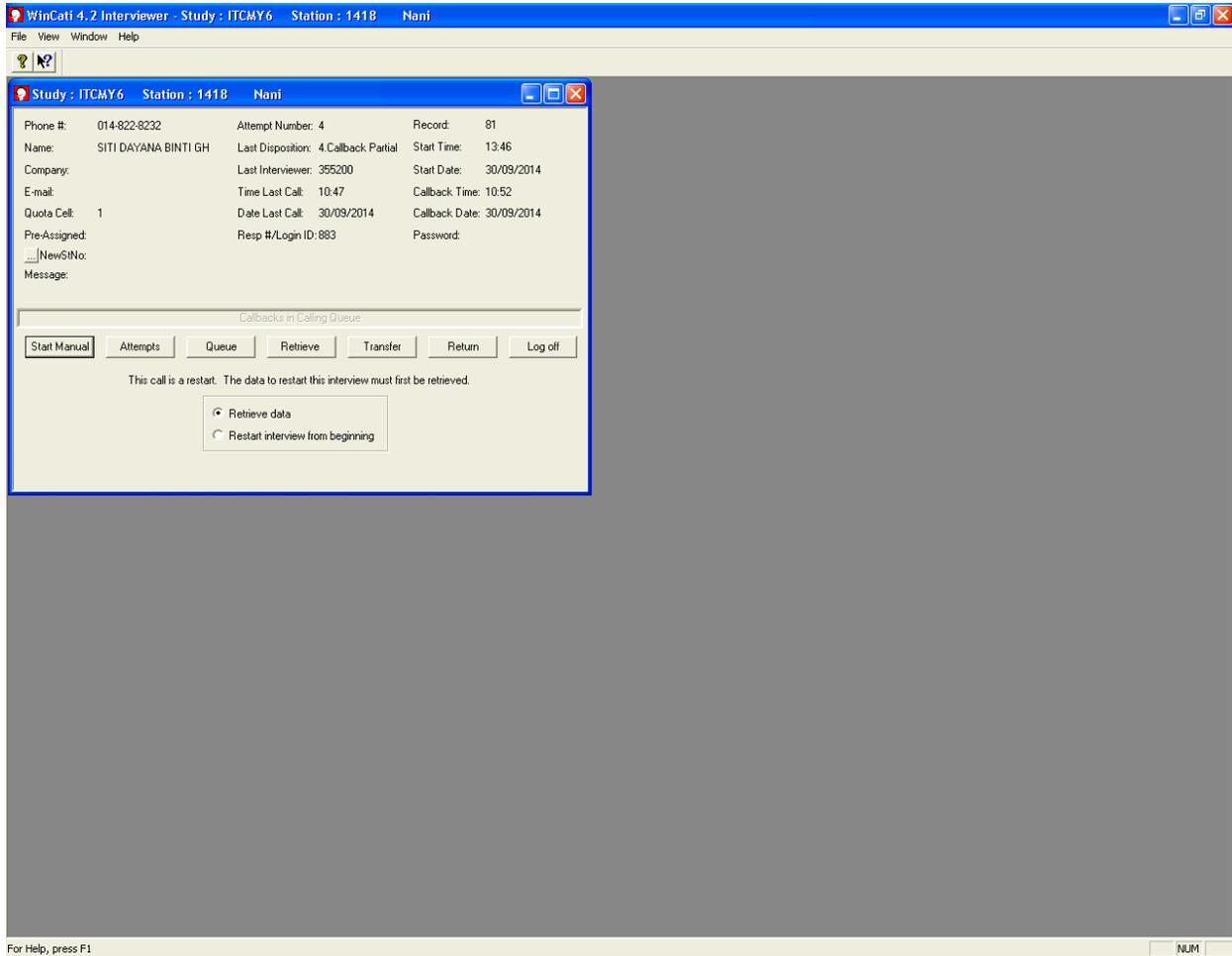
วันที่ _____ เดือน _____ พ.ศ. _____

ลงชื่อ _____

ผู้ตอบแบบสอบถาม

วันที่ _____ เดือน _____ พ.ศ. _____

Appendix G: Sample CATI Training and Fieldwork Images



Question: B1201

B1201 Record No: 81
SITI DAYANA BINTI GHAZALI Unique ID: 4151137104

Assalamualaikum,
Nama saya [nama penemubual] daripada Universiti Sains Malaysia.
Boleh saya bercakap dengan SITI DAYANA BINTI GHAZALI

1 - Ya
 2 - Tiada jawapan (Deringan sahaja)
 3 - Talian sedang digunakan
 4 - Mesin menjawab panggilan / Faks / Modem
 5 - Tiada dalam perkhidmatan / Talian bermasalah
 6 - Nombor berfungsi tetapi bukan kediaman

Next Help

Question: QA330

QA330

Sejak anda kembali merokok, adakah anda pernah membuat sebarang percubaan untuk berhenti merokok?

1 - Pernah
 2 - Tidak pernah
 8 - Enggan jawab
 9 - Tidak tahu

Prev Next Help

Question: QA561

QA561 Record No: 81
SITI DAYANA BINTI GHAZALI Unique ID: 4151137104

Berapa kali percubaan berhenti merokok yang telah anda lakukan sejak tinjauan yang lepas?

01 - Masukkan bilangan percubaan
 88 - Enggan jawab
 99 - Tidak tahu

Prev Next Help

Question: FR216

FR216 Record No: 81
SITI DAYANA BINTI GHAZALI Unique ID: 4151137104

Secara purata, berapa batang rokokkah yang anda hisap dalam sehari, termasuk rokok buatan kilang dan rokok gulung dengan tangan?

01 - Masukkan nombor

88 - Enggan jawab

99 - Tidak tahu

[Nota penemubual: Sekiranya responden berikan jawapan dalam julat (Contoh: 15-20 batang rokok), kira puratanya dan bulatkan angka itu jika perlu. (Contoh: Purata 17.5; angka bulatnya 18.0)].

Prev Next Help

Question: KN231

KN231 Record No: 81
SITI DAYANA BINTI GHAZALI Unique ID: 4151137104

Saya akan membacakan senarai gangguan kesihatan dan penyakit yang mungkin atau tidak mungkin disebabkan oleh tabiat merokok. Berdasarkan kepada pengetahuan dan anggapan anda, adakah merokok mengakibatkan penyakit-penyakit di bawah.

Mati pucuk dalam kalangan perokok lelaki?

1 - Ya

2 - Tidak

8 - Enggan jawab

9 - Tidak tahu

Prev Next Help

Appendix H: Pictures of Survey Fieldwork (Thailand)



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Data are available at the state level for men and women (and overall) and nationally for urban/rural areas.