International Tobacco Control China Survey

ITC China Wave 5 Technical Report

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Preface

The International Tobacco Control (ITC) Survey is a longitudinal survey of smoking behaviour among adults in China.

This report documents the fifth wave of the International Tobacco Control Policy Evaluation Survey (household enumeration and survey fieldwork) carried out in China from November 1 2013 to July 24 2015, approximately 14 months after the fourth wave was conducted (September 2011 to November 2012).

In most parts, the format of this report is similar to the Wave 4 technical report. However, there were a few changes in content and methods in the Wave 5 Survey.

a) Changsha and Yinchuan did not participate in the Wave 5 Survey. Five cities (Beijing, Guangzhou, Kunming, Shanghai and Shenyang) remained in the Wave 5 Survey.
b) Five rural areas – Changzhi, Huzhou, Tongren, Yichun and Xining participated in the Wave 5 Survey for the first time.
c) Household enumeration was conducted in the 5 rural areas as well as Kunming to enable the random selection of households to be approached for the survey interviewing.
d) A pilot study of biomarkers was collected from 50 Guangzhou and 50 Tongren respondents, including 60 smokers and 40 non-smokers.
1. Introduction

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

To evaluate the effect of the FCTC, the ITC Project is conducting parallel prospective cohort surveys with adult smokers in 28 countries—Canada, United States, United Kingdom, Australia, Ireland, Thailand, Malaysia, China, South Korea, New Zealand, Mexico, Uruguay, France, Germany, The Netherlands, Brazil, Mauritius, Bangladesh, Bhutan, India, Kenya, Zambia, Spain, Romania, Greece, Hungary, Poland and Abu Dhabi – United Arab Emirates.

The International Tobacco Control (ITC) China Survey is a longitudinal survey of smoking behaviour, and knowledge, beliefs, opinions, and attitudes about smoking and tobacco use among adults in China. The ITC China Survey is a national survey conducted by the China CDC, in collaboration with the ITC Project team, based on the University of Waterloo, in Canada. Four waves of the survey had earlier been completed (completed in 2006, 2008, 2010, and 2012). The Wave 5 Survey, started in November 2013 and completed in July 2015, was conducted in 10 locations: five came from previous waves (Beijing, Shanghai, Guangzhou, Shenyang, and Kunming) and five were new to the ITC China Survey (Xining, Yichun, Tongren, Huzhou, and Changzhi).

1.2 Main Objectives
The broad objective of the ITC China Project is to evaluate and understand the impact of tobacco control policies of the Framework Convention on Tobacco Control (FCTC) as they are implemented in low- and middle-income countries (LMICs) participating in the International Tobacco Control Policy Evaluation Project (the ITC Project).

The objectives of the ITC China Project are:
● Effectiveness study aims:
  - To examine whether a policy introduced in China will affect self-reported smoking behavior (e.g., quit attempts, successful quitting, quit intentions) among smokers, as compared to smokers in countries where that policy is not being introduced;
  - To examine whether a policy introduced in China will enhance policy-relevant psychosocial variables (e.g., warning labels: measures of label salience) among tobacco users, as compared to tobacco users in countries where the relevant policy has not changed;
- To examine whether a policy introduced in China will impact levels of general psychosocial variables that have been identified in past research to be related to tobacco use and quitting (e.g., beliefs and attitudes, perceived risk, subjective norms, perceived behavioral control/self-efficacy, intentions to quit) among tobacco users, compared to countries with no policy change.

**Mediation and moderation study aims:**

- To examine whether the effects of FCTC policies that have been introduced in China are being offset by compensatory behaviors (e.g., whether price increases lead to brand switching rather than to quitting);
- To examine whether the effects of tobacco control policies are moderated by situational and individual-difference factors such as (a) demographic variables (age, gender, socio-economic status (SES); (b) personality variables (e.g., time perspective); (c) environmental context (e.g., number of peers/family members who smoke or use other forms of tobacco), and (d) tobacco use history of the individual (e.g., past quit attempts, tobacco use intensity).
- To examine whether the effects of each policy on tobacco use behavior are mediated by those psychosocial variables that have been identified by past research to be important in predicting and understanding tobacco use behavior.

**Contextual study aims:**

- To conduct analyses that will examine the natural history of tobacco use and cessation in China and also whether the factors that predict tobacco use and quitting are the same or different across the ITC countries;
- To compare the impact of FCTC policies in China, a LMIC, to their impact in high income countries (HICs) to test the hypothesis that for some policy domains, the impact of FCTC policies will be stronger in LMICs.

### 1.3 Survey Design

The ITC Survey is a longitudinal cohort study. Therefore, respondents who have participated in this survey will be recontacted in the future to answer follow-up surveys. The longitudinal design allows the research team to track any changes in smoking behaviour and to examine the predictors of smoking behaviour, including the impact of policies introduced between survey periods.

Waves 1 and 2 were conducted in seven cities in China – Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan, and Zhengzhou; however, reports were only compiled for six cities, leaving out Zhengzhou. In Wave 3, Kunming replaced Zhengzhou as the seventh city in the survey. In Wave 5, Yinchuan and Changsha did not participate and five rural areas, i.e., Changzhi, Huzhou, Tongren, Yichun and Xining joined the project.
This Wave 5 technical report includes the results of 10 locations, including the five cities and 5 rural areas. In the 5 cities, the Wave 5 Survey was conducted only in urban areas consisting of Jie Dao (JD) or street districts. In the 5 rural areas, the Wave 5 Survey was conducted in rural areas consisting of Xian Zheng or townships.

Figure 1: TCP China Project Timeline
Table 1: ITC China Survey Fieldwork Dates and Locations

<table>
<thead>
<tr>
<th>Wave</th>
<th>Start Date</th>
<th>End Date</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>April 1, 2006</td>
<td>August 1, 2006</td>
<td>Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan, and Zhengzhou*</td>
</tr>
<tr>
<td>2</td>
<td>October 22, 2007</td>
<td>January 21, 2008</td>
<td>Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan, and Zhengzhou*</td>
</tr>
<tr>
<td>3</td>
<td>May 11, 2009</td>
<td>October 15, 2009</td>
<td>Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan, and Kunming</td>
</tr>
<tr>
<td>4</td>
<td>September 1, 2011</td>
<td>November 9, 2012</td>
<td>Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan, and Kunming</td>
</tr>
</tbody>
</table>
| 5    | November 1, 2013 | July 24, 2015   | **Cities:** Beijing, Guangzhou, Kunming, Shanghai, and Shenyang<br>
**Rural Areas:** Changzhi, Huzhou, Tongren, Yichun, and Xining |

* data not included in analysis

1.4 The Survey Teams

The survey was conducted by team members from the China CDC and the local CDCs in Beijing, Guangzhou, Shanghai, Shenyang, Changzhi, Huzhou, Tongren, Yichun and Xining. The survey in Kunming was conducted by team members from the Yunnan Health Education Institute. The research team collaborated with an international team of researchers in Australia (Cancer Council of Victoria), Canada (University of Waterloo), and the United States (Roswell Park Cancer Institute).
2. The Sampling Design

The Wave 5 Survey was conducted in 10 survey locations. Two were municipalities directly under the central government: Beijing and Shanghai; and eight were from provinces: Heilongjiang, Qinghai, Zhejiang, Shaanxi, Hunan, Guangdong, Liaoning, and Yunnan (see Figure 2). The urban cohort sample came from the urban areas of Beijing, Guangzhou, Shanghai, Shenyang and Kunming. The rural cohort sample came from the rural areas of Changzhi, Huzhou, Tongren, Yichun, and Xining.

Figure 2: ITC China Wave 5 Survey Locations in China

2.1 Sampling Frame and Sample Selection
In Wave 1, the ITC China Survey used a multistage cluster sampling method to obtain a representative sample of adult smokers and adult non-smokers aged 18 and older who are permanent residents, within the initial 7 cities, Beijing, Guangzhou, Shanghai and...
Shenyang, Changsha, Yinchuan, and Zhengzhou (Zhengzhou participated in the first two waves, but the quality of the data from that city was not sufficiently high; thus, the data from that city were not included in the overall ITC China Survey dataset.) Smokers were defined as those who have smoked at least 100 cigarettes in their lifetime and are currently smoking at least once a week. Individuals in jail, those living in institutions (e.g., senior homes, hospitals, university residences, etc.), and private businesses (where the employees do not live there) and the mobile population were ineligible for the survey.

The 10 survey locations for Wave 5 were chosen based on geographical and economic considerations. As in previous waves, the areas did not constitute a random sample of the total population (a true random sample of the total population of China would be prohibitively expensive). At least 800 adult smokers and 200 adult non-smokers were sampled within each location, and thus there were at least 8,000 adult smokers and 2,000 non-smokers in the total sample.

**Sampling plan for Beijing, Guangzhou, Shanghai and Shenyang**

No household enumeration was conducted at Wave 5 for Beijing, Guangzhou, Shanghai and Shenyang. The cohort sample of these 4 cities came from the original Wave 1 sampling plan, with replenishment of sample loss taking place at each later wave. Some household enumeration was carried out in Wave 4 to supplement the original Wave 1 enumeration.

The Wave 1 sampling plan was as follows:

1. 10 Jie Dao (JD) or Street Districts were randomly selected with probability of selection proportional to population size of the JD in each of the four cities.
2. Within each of these 10 JD, two residential blocks or Ju Wei Hui (JWH) were randomly selected, again with probability of selection proportional to size.
3. Within each selected JWH, the addresses of the dwelling units (households) were listed first, and then a sample of 300 addresses were drawn by simple random sampling without replacement. Information on age, gender and smoking status for all adults living in these 300 households was collected.
4. The enumerated 300 households were then randomly ordered, and adult smokers and non-smokers were then approached following a randomized order to complete the designated number of interviews.
5. Because of low smoking prevalence among women, one male smoker and one female smoker from each selected household were interviewed whenever possible to increase the sample size for women smokers. At most, one non-smoker was interviewed per household.
6. Where there was more than one person in a sampling category to choose from in a household, the next birthday method was used to select the individual to be interviewed, and the selection was done prior to the household visit.

7. Sufficient numbers were selected so that the quotas in each JWH of 40 adult smokers and 10 adult non-smokers were met.

**Sampling Plan for Kunming**

Kunming conducted a second household enumeration at Wave 5. Among the 20 JWH selected in the Wave 3 household enumeration, 6 JWH (Jinshi JWH, Beizhan JWH, Sanheying JWH, Shuijinggong JWH, Yunda JWH, and Zongshuying JWH) were found to encounter difficulties in completing enumeration of 300 households due to relocation and adjustment made to the administrative areas. Therefore, these 6 JWH were replaced with new JWH in Wave 5. Another 14 JWH selected in Wave 3 were retained for household enumeration in Wave 5. The household enumeration, sampling and interview procedure was as follows:

1. Listing of all eligible JD other than the 10 JD where ITC Survey was currently conducted. Collected the most updated total population for each JD; selected 3 JD using PPS method, with the total population of JD as size variable.
2. For each of the 3 selected JD, listed all JWH; if the JD was previously selected in Wave 3, JWH which were previously enumerated are excluded from the list. Collected the most updated total population for each JWH; Selected 2 JWH using PPS method, with the total population of JWH as size variable. The Wave 5 enumeration was conducted in these 6 "new" JWH and the 14 "old" JWH that were not replaced.
3. For the 20 JWH, obtained the most updated information on the total number of households for each JWH. For JWH with more than 2,000 households, it was further divided into sub-JWHs so that each sub-JWH had about 1,000 households. One sub-JWH was selected from each JWH using simple random sampling.
4. For each of the 20 selected sub-JWH, a complete list of households was constructed, with a possible associated map of the location and distribution of all households on the list.
5. In each JWH, 300 households were selected from the list using simple random sampling. For the 14 "old" JWH, the households that were contacted in the last enumeration in 2009 were removed from the list before selecting 300 new households; information on age, gender and smoking status for all adults living in these 300 households was collected.

**Sampling Plan for Tongren**

Bijiang District in Tongren was selected for this project. The household enumeration, sampling and interviewing was conducted using the following procedure:
1. For each of all 9 Xiang Zhen (XZ) in the Bijiang District, listed all administrative villages or Cui Wei Hui (CWH). Collected the most updated total population for each village; 7 XZ selected 2 and 2 XZ selected 3 villages using PPS method, with the total population of village as size variable.

2. For the 20 villages selected from the 9 XZ, obtained the most updated information on the total number of households for each village. For villages with more than 1,500 households, they were divided into sub-villages so that each sub-village has about 1,000 households. One sub-village is selected from each village using simple random sampling. If households of the village were less than 750, it was merged with adjacent village to ensure the total number of households is approximately 1,000.

3. For each of the 20 selected sub-villages, a complete list of households was constructed, and a map was drawn which provided interviewers overview of the sub-village and showed the location of each household.

4. 350 households were selected from the list using simple random sampling. Information on age, gender and smoking status for all adults living in these 350 households was collected.

5. Because of low smoking prevalence among women, one male smoker and one female smoker from each selected household were interviewed whenever possible to increase the sample size for women smokers. At most, one non-smoker was interviewed per household.

6. Where there was more than one person in a sampling category to choose from in a household, the next birthday method was used to select the individual to be interviewed, and the selection was done prior to the household visit.

7. Sufficient numbers were selected so that the quotas in each village of the varying number of adult smokers and non-smokers were met (see Appendix A).

8. The detailed information on total population of XZ and administrative village and the number of households in each village or sub-village was documented. This information was crucial for weight construction after the household enumeration.

**Sampling plan for Changzhi, Huzhou, Xining, and Yichun**

The household enumeration, sampling and interviewing for Changzhi, Yichun, Xining and Huzhou was conducted using the following procedure:

1. Listing of all eligible XZ; collected the most updated total population for each XZ; 10 XZ were selected using PPS method, with the total population of XZ as size variable. For each of the 10 selected XZ, all administrative villages were listed and the most updated total population for each village was collected; 2 villages using PPS method were selected, with the total population of village as size variable.
2. For the 20 villages selected after the first two stages, the most updated information on the total number of households for each village was obtained. For villages with more than 1,500 households, it was further divided into sub-villages so that each sub-village had about 1,000 households. One sub-village was selected from each village using simple random sampling. If the number of households of the village was less than 750, it was combined with adjacent village to ensure a total of approximately 1,000 households were achieved.

3. For each of the 20 selected sub-villages, a complete list of households was constructed, and a map was drawn which provided interviewers overview of the Sub-village and shows the location of each household. Then, 300 households were selected from the list using simple random sampling.

4. The enumerated 300 households were then randomly ordered, and adult smokers and non-smokers were then approached following a randomized order to complete the designated number of interviews.

5. Because of low smoking prevalence among women, one male smoker and one female smoker from each selected household were interviewed whenever possible to increase the sample size for women smokers. At most, one non-smoker was interviewed per household.

6. Where there was more than one person in a sampling category to choose from in a household, the next birthday method was used to select the individual to be interviewed, and the selection was done prior to the household visit.

7. Sufficient numbers were selected so that the quotas in each XZ of 40 adult smokers and 10 adult non-smokers were met.

8. The detailed information on total population of XZ and administrative village, number of households in each village or sub-village, was documented. This information was crucial for weight construction after the enumeration.

2.2 Replenishment Sample and Procedure in 5 cities
There were the two general rules for the Wave 5 replenishment sampling for Beijing, Guangzhou, Shanghai, Shenyang and Kunming: (i) to maintain the basic features of the original sampling design used in Waves 1-4; and (ii) to maintain the total overall sample size at each city.

Each local team maintained a list of initial Wave 1 (Wave 3 for Kunming) enumerated households (300 for each JWH) without removing those respondents who were either unsuccessfully recontacted or had participated in previous waves but refused to participate again (referred to hereafter as dropouts). For Beijing, Shanghai, Guangzhou and Shenyang, the list included new households enumerated at Wave 4 if they were in the same JWH. The list in Kunming included new households enumerated at Wave 5 if they were in the same 14 JWH. See Section 2.1 for the Wave 5 household enumeration procedure.
If a JWH was needed to replace smokers or non-smokers lost in Wave 5, the new respondents were recruited from households enumerated in Wave 1 and Wave 4 (Wave 3 and Wave 5 for Kunming). In addition, some new respondents were also recruited from households that had been approached but had no members interviewed in previous waves. Households were randomly selected from those available, and adult smokers and non-smokers were then approached following a randomized order to complete the quota of interviews.

One male smoker and one female smoker from each selected household were surveyed whenever possible to increase the sample size for women smokers. At most, one non-smoker was interviewed per household. Where there was more than one person in a sampling category to choose from in a household, the next birthday method was used to select the individual to be interviewed, and the selection was done prior to the household visit.

A total of 49 dropouts (28 smokers and 21 non-smokers) who were lost in Waves 2, 3 or 4 were successfully recontacted in Wave 5.

2.3 Selection of the respondents in 5 rural areas
In Changzhi, Huzhou, Xining, Yichun and Tongren, the enumerated households were randomly selected, and adult smokers and non-smokers were then approached following a randomized order to complete the designated quota of interviews. One male smoker and one female smoker from each selected household were surveyed whenever possible to increase the sample size for women smokers. At most, one non-smoker was interviewed per household. Where there was more than one person in a sampling category to choose from in a household, the next birthday method was used to select the individual to be interviewed, and the selection was done prior to the household visit.

2.4 Sample Size
The sample for Wave 5 included continuing cohorts from Wave 4 (who may also have participated in Waves 1, 2 and/or 3) and the Waves 2, 3 and 4 dropouts who were successfully recontacted, and replenishment respondents recruited at Wave 5 of those lost due to attrition. The breakdown of adult smokers and non-smokers is given in Tables 1-3:
Table 2: ITC China Wave 1 to Wave 5 Sample Size

<table>
<thead>
<tr>
<th>Cities</th>
<th>Wave 1 (n)</th>
<th>Wave 2 (n)</th>
<th>Wave 3 (n)</th>
<th>Wave 4 (n)</th>
<th>Wave 5 (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Smokers</td>
<td>Non-Smokers</td>
<td>Smokers</td>
<td>Non-Smokers</td>
<td>Smokers</td>
</tr>
<tr>
<td>Beijing</td>
<td>785</td>
<td>219</td>
<td>801</td>
<td>218</td>
<td>802</td>
</tr>
<tr>
<td>Changsha</td>
<td>800</td>
<td>205</td>
<td>795</td>
<td>185</td>
<td>772</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>791</td>
<td>226</td>
<td>833</td>
<td>211</td>
<td>829</td>
</tr>
<tr>
<td>Kunming</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>801</td>
</tr>
<tr>
<td>Shanghai</td>
<td>784</td>
<td>204</td>
<td>803</td>
<td>204</td>
<td>784</td>
</tr>
<tr>
<td>Shenyang</td>
<td>781</td>
<td>200</td>
<td>799</td>
<td>198</td>
<td>788</td>
</tr>
<tr>
<td>Yinchuan</td>
<td>791</td>
<td>215</td>
<td>812</td>
<td>205</td>
<td>808</td>
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<tr>
<td>Rural Areas</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Changzhi</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Huzhou</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tongren</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Xining</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yichun</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4732</strong></td>
<td><strong>1269</strong></td>
<td><strong>4843</strong></td>
<td><strong>1221</strong></td>
<td><strong>5584</strong></td>
</tr>
</tbody>
</table>
### Table 3: ITC China Wave 1 and 5 Survey sample: Demographic characteristics of smokers

<table>
<thead>
<tr>
<th></th>
<th>Wave 1</th>
<th>Wave 2</th>
<th>Wave 3</th>
<th>Wave 4</th>
<th>Wave 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4501</td>
<td>95.1</td>
<td>4589</td>
<td>94.8</td>
<td>5287</td>
</tr>
<tr>
<td>Female</td>
<td>231</td>
<td>4.9</td>
<td>254</td>
<td>5.2</td>
<td>297</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>56</td>
<td>1.2</td>
<td>46</td>
<td>1.0</td>
<td>95</td>
</tr>
<tr>
<td>25-39</td>
<td>792</td>
<td>16.7</td>
<td>766</td>
<td>15.8</td>
<td>1038</td>
</tr>
<tr>
<td>40-54</td>
<td>2314</td>
<td>48.9</td>
<td>2352</td>
<td>48.6</td>
<td>2566</td>
</tr>
<tr>
<td>55+</td>
<td>1570</td>
<td>33.2</td>
<td>1679</td>
<td>34.7</td>
<td>1885</td>
</tr>
<tr>
<td>Gross Income (RMB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1000</td>
<td>925</td>
<td>19.6</td>
<td>794</td>
<td>16.4</td>
<td>549</td>
</tr>
<tr>
<td>1000-2999</td>
<td>2132</td>
<td>45.1</td>
<td>2199</td>
<td>45.4</td>
<td>2134</td>
</tr>
<tr>
<td>3000-4999</td>
<td>860</td>
<td>18.2</td>
<td>977</td>
<td>20.2</td>
<td>1584</td>
</tr>
<tr>
<td>5000-6999</td>
<td>299</td>
<td>6.3</td>
<td>357</td>
<td>7.4</td>
<td>617</td>
</tr>
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Table 4: ITC China Wave 1 and 5 Survey sample: Demographic characteristics of non-smokers

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Table 5: ITC China Wave 5 Survey sample. Number of smoker and non-smokers by gender at 10 survey locations

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<td>Male</td>
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Table 6. ITC China Wave 5 Survey sample: Demographic characteristics of smokers and non-smokers in cities vs rural areas

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<td>N</td>
<td>%</td>
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Two flowcharts below show the breakdown of the numbers of smokers and non-smokers who were successfully recontacted, lost, and replenished in Wave 5 respectively in the 5 old cites.
Figure 3: Number of smokers recontacted, lost, or replenished in Wave 5

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Notes:

Cohort 1: A probability sample of adult smokers and adult non-smokers recruited at Wave 1 in Beijing, Shanghai, Shenyang, Changsha, Guangzhou and Yinchuan

Cohort 2: A replenishment sample recruited at Wave 2 in Beijing, Shanghai, Shenyang, Changsha, Guangzhou and Yinchuan

Cohort 3: A replenishment sample recruited at Wave 3 in Beijing, Shanghai, Shenyang, Changsha, Guangzhou and Yinchuan, plus a probability sample of adult smokers and adult non-smokers recruited in Kunming

Cohort 4: A replenishment sample recruited at Wave 4 in Beijing, Shanghai, Shenyang, Changsha, Guangzhou, Yinchuan and Kunming

Cohort 5: A replenishment sample recruited at Wave 5 in Beijing, Shanghai, Shenyang, Guangzhou and Kunming
Figure 4: Number of non-smokers recontacted, lost, or replenished in Wave 5
Notes:

Cohort 1: A probability sample of adult smokers and adult non-smokers recruited at Wave 1 in Beijing, Shanghai, Shenyang, Changsha, Guangzhou and Yinchuan

Cohort 2: A replenishment sample recruited at Wave 2 in Beijing, Shanghai, Shenyang, Changsha, Guangzhou and Yinchuan

Cohort 3: A replenishment sample recruited at Wave 3 in Beijing, Shanghai, Shenyang, Changsha, Guangzhou and Yinchuan, plus a probability sample of adult smokers and adult non-smokers recruited in the 7th city, Kunming

Cohort 4: A replenishment sample recruited at Wave 4 in Beijing, Shanghai, Shenyang, Changsha, Guangzhou, Yinchuan and Kunming

Cohort 5: A replenishment sample recruited at Wave 5 in Beijing, Shanghai, Shenyang, Guangzhou and Kunming
3. Survey Fieldwork: Enumeration, Recontact, and Replenishment

The Wave 5 fieldwork included a new round of enumeration in 5 new rural cities as well as Kunming, and survey interviews for both recontact (earlier wave respondents) and replenishment (newly recruited) respondents in the 5 cities and new respondents recruited in 5 rural areas.

3.1 Household Enumeration and Procedure

Prior to the main survey interviewing, of 5 cities participating in the Wave 5 Survey, only Kunming conducted the full scale household enumeration. The full scale enumeration was also conducted in the 5 rural areas.

3.1.1 Definition of a Household

A household is any person or group of persons living in a dwelling. For this project, only people living in a private residence were considered. A household may consist of:

- One person living alone
- A family sharing the same dwelling
- A group of people who are not related but share the same dwelling

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

Eligible Types of Dwellings

Private Home: 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 term “usual place of residence” means that a person lives in the dwelling for at least one month before the interview and has no plan to move in the next year. Specifically, 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 are not conducted in dwellings that are businesses only
Surveys are not conducted in institutions, such as hospitals, nursing homes, university dorms or jails.

3.1.2 Selection of Households
The addresses of all households for each JWH or administrative village were provided to the research team in each location. The China CDC randomly selected 300 households from lists of addresses. The interviewers then collected basic household information using the household enumeration form on every person aged 18 and older in every one of these selected households. Household information collected included a roster of all household members (with age, gender, and (for adults) smoking status). This information was obtained from any adult member of the household. The ethnicity of the household informant was also coded.

3.1.3 Household Enumeration Procedure
The Wave 5 household enumeration followed the procedure below:

- Each interviewer was given a randomly ordered list of households to visit in order.
- Before a household was approached for enumeration, the unique household 12-digit ID code, household address and the name of interviewer were pre-filled in the Household Enumeration Form (CN-ITC-2013-S-15, see Appendix E).
- Upon reaching a household, the interviewers identified themselves and indicated that the National Health and Family Planning Commission and the China CDC were conducting an important national health survey in China and that this JWH/village was selected to participate in the survey.
- The interviewer also indicated that if the respondent agreed to participate and complete the survey, he/she would receive a thank-you gift. The respondent was told that he/she would receive the same payment every time he/she participated.
- Upon having the consent to proceed with enumeration, the interviewer collected the basic information of every person aged 18 and older in the household specified in the second page of the household enumeration form.
- Upon finished collecting the household information, the interviewer completed the household recontact form and gave the respondent a small gift (i.e., soaps), equivalent to 10-30 Yuan.
- A maximum of four attempts were made to enumerate each household.

3.2 Recontact and Replenishment Surveys
There are two types of respondents to complete the study:
- **Recontact respondents** = Respondents from previous waves
- **Replenishment respondents** = New respondents recruited at Wave 5 to replace respondents lost due to attrition
Whenever possible, the respondents who participated in Wave 4 were recontacted in Wave 5 to answer the follow-up survey. Those that could not be contacted were replaced in replenishment to retain the approximate numbers of smokers and non-smokers.

Interviewers contacted each selected respondent and explained that he/she was re-invited (recontact respondent) or invited (replenishment respondent) to participate and that he/she would be contacted again in the future to complete a follow-up survey.

If the respondent agreed to participate, the interviewer reiterated the confidential nature of their responses and indicated that the questions asked would not be of an overly personal nature. The respondent was given an information letter and asked to provide a written consent.

Eligible adult recontact respondents included smokers, non-smokers, and quitters who are permanent residents and aged 18 and older in the 5 cities, and have previously participated in the survey. Eligible adult replenishment respondents included smokers and non-smokers who are permanent residents and aged 18 and older in the 5 rural areas, or in the 5 cities but not living in a household with interviews in a previous wave.

There were 5 different surveys in this study.

**Table 7: Surveys according to smoking status**

<table>
<thead>
<tr>
<th>Survey</th>
<th>Respondent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey 1 – CN5CS</td>
<td>Recontact Smoker</td>
</tr>
<tr>
<td>Survey 2 – CN5CN</td>
<td>Recontact Non-Smoker</td>
</tr>
<tr>
<td>Survey 3 – CN5CQ</td>
<td>Recontact Quitter</td>
</tr>
<tr>
<td>Survey 4 – CN5PS</td>
<td>Replenishment Smoker</td>
</tr>
<tr>
<td>Survey 5 – CN5PN</td>
<td>Replenishment Non-Smoker</td>
</tr>
</tbody>
</table>

The surveys contained many common features and questions, but some different questions were to be asked of smokers versus non-smokers versus quitters, and as a result, the length taken to complete each survey differs slightly. Tokens of appreciation (or remuneration for participation) were based on the time that it was expected to take to complete each survey.

The following is a summary of the questions asked in the surveys:

- Demographic questions (e.g., age, gender, indicators of socio-economic status)
- Questions relevant to the policies of interest (policy-relevant or “proximal” measures) of each of the main policy areas (e.g., warning labels, “light/mild”, advertising/promotion, price/taxation, smoke-free, cessation)
- Moderator variables (e.g., time perspective, collectivist vs. individual orientation)
- Other well-established questions assessing smoking behaviour
- Other important psychosocial predictors of smoking behaviour (e.g., normative beliefs, self-efficacy, intentions to quit) (distal variables)

The English surveys were translated into Chinese.

3.2.1 Survey Procedure
Depending if the respondent was a recontact respondent (from a previous wave) or a replenishment respondent, the interviewer followed the steps below to complete the fieldwork.

**Step 1a: Completing Household Recontact Form**
For recontact respondents, the Household Recontact Form (CN-ITC-2013-S-15A, see Appendix D) was completed before administering the survey (after obtaining consent). This form was used for three reasons:
1) To update information about the smoking behavior of each member of the household
2) To keep track of the visits to the household and to schedule appointments for selected respondents to complete the survey
3) To collect basic information about the selected respondents before completing the screener survey

**Step 1b: Completing Household Replenishment Form**
For replenishment respondents, the household selected was administered the Household Replenishment Form (CN-ITC-2013-S-15B, see Appendix D) before choosing respondents and administering the survey (after obtaining consent). This form was used for two reasons:
1) To keep track of the visits to the household and schedule appointments for eligible and selected respondents to complete the survey
2) To collect basic information about the selected respondents before completing the screener survey

**Step 2: Completing the Screener**
In order to choose the appropriate one of the 5 surveys to administer to the respondent, the survey interviewer was to first screen the respondent using the screener form (see Appendix E).
Step 3: Providing Consent
After completing the screener, the respondent was to read the information letter and sign two copies of the consent form (see Appendix F). One completed consent form was given to the respondent for their record, and the other was kept by the interviewer.

Step 4: Providing Remuneration
Upon completion of the survey questionnaire, the respondent was provided with the token of appreciation for the time taken to participate in the study.
4. Monitoring and Quality Control

4.1 Survey Fieldwork Team
Each participating survey location formed a project team, which consisted of 1 City Coordinator, 20 Survey Interviewers, 1 Data Manager and 1 Quality Controller:

**Coordinators:**
Coordinators were responsible for:

a) Setting up the local fieldwork team (selecting survey interviewers and JWH/Village staff members). The forms CN-ITC-2013-S-5 and CN-ITC-2013-S-115 (see Appendix E) were used to allocate respondents for each of the interviewer teams.

b) Generating awareness activities about the survey in selected JWH at least 2 weeks prior to initial visit by the JWH staff.

c) Filling out the CN-ITC-2013-S-8 Form (see Appendix E) for a list of participants and sending the form using Excel files to the central team before the training session. In the training, survey Interviewers were to form at least 10 groups, with one male and one female for each group.

d) Filling in the CN-ITC-2013-S-10 Form (see Appendix E) for a list of qualified fieldwork interviewers and other staff members, and reporting to the central team through Excel files after the training session.

e) Supervising the fieldwork.

f) Preparing the supplies required for training, fieldwork, quality control and other purposes.

g) Overseeing the fieldwork plan and reporting to national CDC coordinators for any problems.

**Survey Interviewers:**
The Survey Interviewers were responsible for:

a) Handling the travel arrangements and other logistics.

b) Meeting survey respondents at appointment times scheduled by the JWH/village.

c) Getting lists from local CDC of respondents (whether they were recontacts from previous waves or replenishment) and their assigned ID numbers.

d) Meeting survey respondents at appointment times as scheduled by the Field Supervisors – with a survey partner at all times for reasons of safety and efficiency.

e) Acting in a patient, attentive, and friendly manner at all times.

f) Ensuring all survey materials were ready at hand.

f) Ensuring that the team had sufficient remuneration for the number of respondent households that were being interviewed on that day.

g) Ensuring that the ID numbers were clearly written and easy to read.

h) Ensuring that the Household Replenishment forms were correctly filled out.
j) Ensuring the correct survey to administer to each participant was selected.

k) Obtaining respondent consent.

l) Ensuring respondent is comfortable before starting the survey.

m) Conducting interview and recording the responses accurately, clearly, and systematically.

n) Conducting the primary check of the completed survey (checking for completeness).

o) Checking that all the survey materials were fully completed before handing over to field supervisors.

p) Providing daily reports to the field supervisors regarding problems encountered.

**Data Manager:**
The Data Manager was responsible for:

a) Collecting the initial demographic information needed for replenishment sample selection (where an additional replenishment sample was needed).

b) Providing JWH/village staff with the list of recontact respondents, and both types of replenishment respondents.

c) Collecting finished questionnaires from interviewers along with the MP3 recordings, and transferring data to central CDC.

**Quality Controller:**
The Quality Controller was responsible for:

a) Checking to make sure the fieldwork procedures were strictly followed.

b) Checking surveys for completeness, monitoring MP3 recordings, and writing quality control reports.

c) Signing the Household Recontact/Replenishment Form once the interview was complete to indicate approval.

d) Ensuring all information on the household enumeration forms was properly filled out.

e) Doing primary quality checks on the reporting of information by the respondents and entry of the information by the interviewers.

**4.2 Survey Training**
An English manual on how to enumerate a household and conduct a survey interview was written to train survey interviewers before survey fieldwork began. The English language manual was translated into Chinese. In each survey location, the interviewers were trained in interview skills and understanding Wave 5 survey questions.

**4.3 Survey Monitoring and Quality Assurance**
To ensure the accuracy and quality of the ITC China Survey, the fieldwork was monitored in several ways. The China CDC and the research team in the survey location applied quality control to the JWH/village data collection. They checked the forms submitted and re-collected the information if the forms were incorrectly filled out.
During the survey interviewing stage, at the end of each day, interviewers were to carry out a self-check on the survey questionnaires they completed. The data manager collected all the completed surveys from all interviewer teams. Each day the data manager also copied all the MP3 recordings into a designated computer and used a unified file name system. Each recording file was named using the same coding on the cover page of the survey in the order of city (4 digits), JD/XZ (4 digits), JWH/village (4 digits), household (4 digits), individual (2 digits), and interviewer (2 digits), each separated by a hyphen “-”. The total number of digits is 20, for example “2101-0085-0001-2418-58-02.wav”. No other characters and symbols are allowed for these recording files. Each Monday the data manager sent all recording files using a CD to the central team through courier service. The central team randomly selected 50% of the MP3 recordings and did the actual checking.

After the surveys were completed were collected, organized, and bound together before they were sent to the central team at China CDC.
5. Disposition Codes and Response Rates

Household Outcome Codes: Household Enumeration Form

01  Not a current dwelling unit: DO NOT RETURN
02  No contact made, not sure whether a dwelling unit: MUST RETURN
03  No contact made, known to be a dwelling unit: MUST RETURN
04  Contact made, cannot answer at this time, but could in the future: MUST RETURN (and write appointment information in outcome)
05  Contact made, no one at all able to answer: DO NOT RETURN
06  Contact made, refusal: DO NOT RETURN
07  Contact made, Household Information Form completed: DO NOT RETURN
09  All other cases

If a household could not be contacted after four visits – weekday, weekday evening, weekend, weekend evening – the household was not contacted further.

Household Outcome Codes: Household Recontact Form and Household Replenish Form

01  No one at home (after 4 attempts)
02  Language barrier
03  No one capable of answering
04  Proxy refusal
05  Household refusal
06  Incomplete (start, break-off)
07  Complete
08  No answer – survey period ends

Individual Outcome Codes: Household Recontact Form and Household Replenish Form

01  Not at home (after 4 attempts)
02  Language barrier
03  Health/mentally incapable
04  Proxy refusal
05  Household refusal
06  Incomplete (start, break-off)
07  Complete
08  Away for the entire survey period
Respondent ID
The respondent ID is a combination of the long ID written on page 1 of the survey in the order of city (4 digits), JD/Xian Zheng (4 digits), JWH/Village (4 digits), household (4 digits), interviewer (2 digits), individual (2 digits) each separated by a hyphen “-“. The total number of digits is 20, e.g., “2101-0085-0001-2418-58-02”.

Retention Rates
Table 8: Wave 1 – 2 – 3 – 4 –5 retention rate for all respondents (smoker + non-smoker)

<table>
<thead>
<tr>
<th>City</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Beijing</td>
<td>1004</td>
<td>921</td>
<td>91.7%</td>
<td>835</td>
<td>83.2%</td>
</tr>
<tr>
<td>Shenyang</td>
<td>981</td>
<td>759</td>
<td>77.4%</td>
<td>516</td>
<td>52.6%</td>
</tr>
<tr>
<td>Shanghai</td>
<td>988</td>
<td>890</td>
<td>90.1%</td>
<td>786</td>
<td>79.6%</td>
</tr>
<tr>
<td>Changsha</td>
<td>1005</td>
<td>808</td>
<td>80.4%</td>
<td>700</td>
<td>69.7%</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>1017</td>
<td>711</td>
<td>69.9%</td>
<td>600</td>
<td>59.0%</td>
</tr>
<tr>
<td>Yinchuan</td>
<td>1006</td>
<td>840</td>
<td>83.5%</td>
<td>642</td>
<td>63.8%</td>
</tr>
<tr>
<td>Kunming*</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Total</td>
<td>6001</td>
<td>4929</td>
<td>82.1%</td>
<td>5075</td>
<td>68.0%</td>
</tr>
</tbody>
</table>

Note: the numbers include only people who participated in wave 1 and continuously participated in later waves until dropped off. People who dropped off and went back in did not included.
* Kunming joined the Project at Wave 3.

a) Smokers

Table 9: Wave 1 – 2 – 3 – 4 –5 retention rate for male smokers

<table>
<thead>
<tr>
<th>City</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Beijing</td>
<td>746</td>
<td>674</td>
<td>90.3%</td>
<td>600</td>
<td>80.4%</td>
</tr>
<tr>
<td>Shenyang</td>
<td>740</td>
<td>553</td>
<td>74.7%</td>
<td>352</td>
<td>47.6%</td>
</tr>
<tr>
<td>Shanghai</td>
<td>765</td>
<td>686</td>
<td>89.7%</td>
<td>596</td>
<td>77.9%</td>
</tr>
<tr>
<td>Changsha</td>
<td>732</td>
<td>591</td>
<td>80.7%</td>
<td>511</td>
<td>69.8%</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>746</td>
<td>525</td>
<td>70.4%</td>
<td>438</td>
<td>58.7%</td>
</tr>
<tr>
<td>Yinchuan</td>
<td>772</td>
<td>642</td>
<td>83.2%</td>
<td>482</td>
<td>62.4%</td>
</tr>
<tr>
<td>Kunming</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>781</td>
<td>n/a</td>
</tr>
<tr>
<td>Total</td>
<td>4501</td>
<td>3671</td>
<td>81.6%</td>
<td>3760</td>
<td>66.2%</td>
</tr>
</tbody>
</table>

Note: n/a –not available because either the survey location did not participate in the survey wave or the wave before; Table 5 shows the retention rates for the Wave 1 cohort in survey locations except Kunming which joined the Project at Wave 3.
### Table 10: Wave 1 – 2 – 3 – 4 – 5 retention rate for female smokers

<table>
<thead>
<tr>
<th>City</th>
<th>W1 N</th>
<th>W2 %</th>
<th>W3 N</th>
<th>W4 %</th>
<th>W5 N</th>
<th>W5 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beijing</td>
<td>39</td>
<td>36</td>
<td>92.3%</td>
<td>32</td>
<td>82.1%</td>
<td>23</td>
</tr>
<tr>
<td>Shenyang</td>
<td>41</td>
<td>30</td>
<td>73.2%</td>
<td>17</td>
<td>41.5%</td>
<td>10</td>
</tr>
<tr>
<td>Shanghai</td>
<td>19</td>
<td>17</td>
<td>89.5%</td>
<td>17</td>
<td>89.5%</td>
<td>10</td>
</tr>
<tr>
<td>Changsha</td>
<td>68</td>
<td>57</td>
<td>83.8%</td>
<td>51</td>
<td>75.0%</td>
<td>35</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>45</td>
<td>35</td>
<td>77.8%</td>
<td>32</td>
<td>71.1%</td>
<td>24</td>
</tr>
<tr>
<td>Yinchuan</td>
<td>19</td>
<td>17</td>
<td>89.5%</td>
<td>14</td>
<td>73.7%</td>
<td>8</td>
</tr>
<tr>
<td>Kunming</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>20</td>
<td>n/a</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>231</td>
<td>192</td>
<td>83.1%</td>
<td>183</td>
<td>70.6%</td>
<td>121</td>
</tr>
</tbody>
</table>

Note: n/a – not available because either the survey location did not participate in the survey wave or the wave before; Table 6 shows the retention rates for the Wave 1 cohort in survey locations except Kunming which joined the Project at Wave 3.

### Table 11: Wave 4–5 retention rate for male smokers

<table>
<thead>
<tr>
<th>City</th>
<th>Wave 4 N</th>
<th>Wave 5 N</th>
<th>Wave 5 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beijing</td>
<td>751</td>
<td>485</td>
<td>64.6%</td>
</tr>
<tr>
<td>Shenyang</td>
<td>722</td>
<td>522</td>
<td>72.3%</td>
</tr>
<tr>
<td>Shanghai</td>
<td>789</td>
<td>605</td>
<td>76.7%</td>
</tr>
<tr>
<td>Changsha</td>
<td>728</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>744</td>
<td>550</td>
<td>73.9%</td>
</tr>
<tr>
<td>Yinchuan</td>
<td>753</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Kunming</td>
<td>773</td>
<td>533</td>
<td>69.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5260</td>
<td>2695</td>
<td>71.3%</td>
</tr>
</tbody>
</table>

Note: Kunming joined the Project at Wave 3; n/a – not available; Table 7 shows the retention rates for the Wave 4 cohort in survey location except Changsha and Yinchuan which did not participated at Wave 5.
### Table 12: Wave 4 – 5 retention rate for female smokers

<table>
<thead>
<tr>
<th>City</th>
<th>Wave 4</th>
<th>Wave 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Beijing</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td>Shenyang</td>
<td>68</td>
<td>46</td>
</tr>
<tr>
<td>Shanghai</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>Changsha</td>
<td>70</td>
<td>n/a</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>54</td>
<td>44</td>
</tr>
<tr>
<td>Yinchuan</td>
<td>23</td>
<td>n/a</td>
</tr>
<tr>
<td>Kunming</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>299</td>
<td>152</td>
</tr>
</tbody>
</table>

Note: Kunming joined the Project at Wave 3, n/a – not available; Table 8 shows the retention rates for the Wave 4 cohort in cities except Changsha and Yinchuan which did not participated at Wave 5.
b) Non-smokers

Table 12: Wave 1 – 2 – 3 – 4 – 5 retention rate for male non-smokers

<table>
<thead>
<tr>
<th>City</th>
<th>W1</th>
<th>W2</th>
<th>%</th>
<th>W3</th>
<th>W4</th>
<th>%</th>
<th>W5</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beijing</td>
<td>99</td>
<td>97</td>
<td>98.0%</td>
<td>93</td>
<td>93.9%</td>
<td>85</td>
<td>85.9%</td>
<td>71</td>
</tr>
<tr>
<td>Shenyang</td>
<td>64</td>
<td>56</td>
<td>87.5%</td>
<td>45</td>
<td>70.3%</td>
<td>24</td>
<td>37.5%</td>
<td>19</td>
</tr>
<tr>
<td>Shanghai</td>
<td>91</td>
<td>82</td>
<td>90.1%</td>
<td>78</td>
<td>85.7%</td>
<td>59</td>
<td>64.8%</td>
<td>46</td>
</tr>
<tr>
<td>Changsha</td>
<td>86</td>
<td>64</td>
<td>74.4%</td>
<td>47</td>
<td>54.7%</td>
<td>38</td>
<td>44.2%</td>
<td>n/a</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>92</td>
<td>51</td>
<td>55.4%</td>
<td>41</td>
<td>44.6%</td>
<td>37</td>
<td>40.2%</td>
<td>30</td>
</tr>
<tr>
<td>Yinchuan</td>
<td>83</td>
<td>63</td>
<td>75.9%</td>
<td>46</td>
<td>55.4%</td>
<td>26</td>
<td>31.3%</td>
<td>n/a</td>
</tr>
<tr>
<td>Kunming</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>89</td>
<td>n/a</td>
<td>52</td>
<td>58.4%</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>515</td>
<td>413</td>
<td>80.2%</td>
<td>439</td>
<td>68.0%</td>
<td>321</td>
<td>53.1%</td>
<td>199</td>
</tr>
</tbody>
</table>

Note: n/a – not available because either the survey location did not participate in the survey wave or the wave before; Table 9 shows the retention rates for the Wave 1 cohort in survey locations except Kunming which joined the Project at Wave 3.

Table 13: Wave 1 – 2 – 3 – 4 – 5 retention rate for female non-smokers

<table>
<thead>
<tr>
<th>City</th>
<th>W1</th>
<th>W2</th>
<th>%</th>
<th>W3</th>
<th>W4</th>
<th>%</th>
<th>W5</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beijing</td>
<td>120</td>
<td>114</td>
<td>95.0%</td>
<td>110</td>
<td>91.7%</td>
<td>101</td>
<td>84.2%</td>
<td>88</td>
</tr>
<tr>
<td>Shenyang</td>
<td>136</td>
<td>120</td>
<td>88.2%</td>
<td>102</td>
<td>75.0%</td>
<td>75</td>
<td>55.1%</td>
<td>56</td>
</tr>
<tr>
<td>Shanghai</td>
<td>113</td>
<td>105</td>
<td>92.9%</td>
<td>95</td>
<td>84.1%</td>
<td>86</td>
<td>76.1%</td>
<td>74</td>
</tr>
<tr>
<td>Changsha</td>
<td>119</td>
<td>96</td>
<td>80.7%</td>
<td>91</td>
<td>76.5%</td>
<td>73</td>
<td>61.3%</td>
<td>n/a</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>134</td>
<td>118</td>
<td>89.4%</td>
<td>89</td>
<td>66.4%</td>
<td>84</td>
<td>62.7%</td>
<td>67</td>
</tr>
<tr>
<td>Yinchuan</td>
<td>132</td>
<td>118</td>
<td>89.4%</td>
<td>100</td>
<td>75.8%</td>
<td>66</td>
<td>50.0%</td>
<td>n/a</td>
</tr>
<tr>
<td>Kunming</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>106</td>
<td>n/a</td>
<td>70</td>
<td>66.0%</td>
<td>48</td>
</tr>
<tr>
<td>Total</td>
<td>754</td>
<td>653</td>
<td>86.6%</td>
<td>693</td>
<td>77.9%</td>
<td>555</td>
<td>64.5%</td>
<td>333</td>
</tr>
</tbody>
</table>

Note: n/a – not available because either the survey location did not participate in the survey wave or the wave before; Table 10 shows the retention rates for the Wave 1 cohort in cities except Kunming which joined the Project at Wave 3.
### Table 14: Wave 4 – 5 retention rate for male non-smokers

<table>
<thead>
<tr>
<th>City</th>
<th>Wave 4</th>
<th>Wave 5</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Beijing</td>
<td>96</td>
<td>80</td>
<td>83.3%</td>
</tr>
<tr>
<td>Shenyang</td>
<td>54</td>
<td>44</td>
<td>81.5%</td>
</tr>
<tr>
<td>Shanghai</td>
<td>81</td>
<td>59</td>
<td>72.8%</td>
</tr>
<tr>
<td>Changsha</td>
<td>69</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>77</td>
<td>59</td>
<td>76.6%</td>
</tr>
<tr>
<td>Kunming*</td>
<td>79</td>
<td>48</td>
<td>61.5%</td>
</tr>
<tr>
<td>Yinchuan</td>
<td>78</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>534</strong></td>
<td><strong>290</strong></td>
<td><strong>74.9%</strong></td>
</tr>
</tbody>
</table>

Note: Kunming joined the Project at Wave 3; n/a – not available; Table 11 shows the retention rates for the Wave 4 cohort in survey locations except Changsha and Yinchuan which did not participated at Wave 5.

### Table 15: Wave 4 – 5 retention rate for female non-smokers

<table>
<thead>
<tr>
<th>City</th>
<th>Wave 4</th>
<th>Wave 5</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Beijing</td>
<td>122</td>
<td>107</td>
<td>87.7%</td>
</tr>
<tr>
<td>Shenyang</td>
<td>141</td>
<td>112</td>
<td>79.4%</td>
</tr>
<tr>
<td>Shanghai</td>
<td>122</td>
<td>99</td>
<td>81.1%</td>
</tr>
<tr>
<td>Changsha</td>
<td>124</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>139</td>
<td>117</td>
<td>84.2%</td>
</tr>
<tr>
<td>Kunming*</td>
<td>122</td>
<td>83</td>
<td>68.0%</td>
</tr>
<tr>
<td>Yinchuan</td>
<td>118</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>888</strong></td>
<td><strong>518</strong></td>
<td><strong>80.2%</strong></td>
</tr>
</tbody>
</table>

Note: Kunming joined the Project at Wave 3; n/a – not available; Table 12 shows the retention rates for the Wave 4 cohort in survey locations except Changsha and Yinchuan which did not participated at Wave 5.
1 Wave 5 Weights for Smokers: Changzhi, Yichun, Xining and Huzhou

The four small cities Changzhi, Yichun, Xining and Huzhou joined the ITC for the first time: It is practically Wave 1 (indicated by the superscript [1] in the notation) for the new cities. The fifth small city Tongren has a slightly different sampling design, which is handled separately in the next section.

(1) Household level weights

Each surveyed individual has a household (HH) level weight $W_1^{[1]}$. This is the number of people in the same household and the same sampling category represented by the surveyed individual:

- For adult male smokers, $W_1^{[1]}$ is the number of adult male smokers in the household
- For adult female smokers, $W_1^{[1]}$ is the number of adult female smokers in the household

(2) Village level weights

Each surveyed individual has a village level weight $W_2^{[1]}$. This is the number of people in the same village and the same sampling category represented by that person:

$$W_2^{[1]} = \frac{N_1}{N_2} \times \frac{M_1}{M_a} \times W_1^{[1]}$$

where $N_1$ is the total number of HHs in the village; $N_2$ is the number of HHs enumerated (by design we should have $N_2 = 300$ for most villages; the actual number for $N_2$ is between 234 and 300 for those four cities, most villages have $N_2$ around 290); $M_1$ is the number of smoking households (SMHH, household with at least one adult smoker) among the $N_2$ enumerated HHs; and $M_a$ is the number of SMHHs surveyed to reach the quota of 40 smokers (by design we should have $M_a \leq 40$ but it is not always the case since the quota 40 has to be adjusted sometimes).
(3) Xiang-Zhen level weights

Each surveyed individual has a Xiang-Zhen (XZ) level weight $W_3^{[1]}$. This is the number of people in the same XZ and the same sampling category represented by that person:

$$W_3^{[1]} = \frac{P_b}{2P_c} \times W_2^{[1]}$$

where $P_b$ is the population size of the XZ, and $P_c$ is the population size of the village from which the individual is surveyed. The factor 2 in the denominator represents the number of villages selected within the XZ.

(4) City level weights

Each surveyed individual has a city level weight $W_4^{[1]}$ at the city level. This is the number of people in the city and the sampling category represented by that person:

$$W_4^{[1]} = \frac{P_a}{10P_b} \times W_3^{[1]}$$

where $P_a$ is the population size of the city, and $P_b$ is the population size of the XZ from which the individual is surveyed. The factor 10 in the denominator represents the number of XZs selected within the city.

(5) Final wave 5 weights

The final wave 5 (or practically wave 1) weights are denoted as $W^{[1]}$, which are the same as $W_4^{[1]}$.

2 Wave 5 Weights for Smokers: Tongren

Tongren has a total of 9 Xiang-Zhen which are all included in the sample. There are no sample selections at this level. Among the 9 Xiang-Zhen, two are quite small and each selected 3 villages. The other seven Xiang-Zhen each selected 2 villages.

(1) Household level weights

Each surveyed individual has a household (HH) level weight $W_1^{[1]}$. This is the number of people in the same household and the same sampling category represented by the surveyed individual:

- For adult male smokers, $W_1^{[1]}$ is the number of adult male smokers in the household
- For adult female smokers, $W_1^{[1]}$ is the number of adult female smokers in the household
(2) Village level weights

Each surveyed individual has a village level weight \( W_2^{[1]} \). This is the number of people in the same village and the same sampling category represented by that person:

\[
W_2^{[1]} = \frac{N_1}{N_2} \times \frac{M_1}{M_a} \times W_1^{[1]}
\]

where \( N_1 \) is the total number of HHs in the village; \( N_2 \) is the number of HHs enumerated (for the six villages in the two smaller Xiang-Zhen, \( N_2 \) is between 104 and 312; for other 14 villages in the seven larger Xiang-Zhen, the value of \( N_2 \) is between 250 and 476); \( M_1 \) is the number of smoking households (SMHH, household with at least one adult smoker) among the \( N_2 \) enumerated HHs; and \( M_a \) is the number of SMHHs surveyed to reach the quota of 40 smokers (by design we should have \( M_a \leq 40 \) but it is not always the case since the quota 40 has to be adjusted sometimes).

(3) Xiang-Zhen level weights

Each surveyed individual has a Xiang-Zhen (XZ) level weight \( W_3^{[1]} \). This is the number of people in the same XZ and the same sampling category represented by that person:

\[
W_3^{[1]} = \frac{P_b}{K \times P_c} \times W_2^{[1]}
\]

where \( P_b \) is the population size of the XZ, and \( P_c \) is the population size of the village from which the individual is surveyed. The factor \( K \) in the denominator represents the number of villages selected within the XZ: \( K = 2 \) for the seven larger XZ and \( K = 3 \) for the two smaller XZ.

(4) City level weights

The city level weights are the same as the Xiang-Zhen level weights:

\[
W_4^{[1]} = W_3^{[1]}
\]

(5) Final wave 5 weights

The final wave 5 (or practically wave 1) weights for Tongren are denoted as \( W_5^{[1]} \), which are the same as \( W_4^{[1]} \).
3 Wave 1-to-5 Longitudinal Weights for Smokers: Beijing, Shanghai, Guangzhou, Shenyang

3.1 Data files

For each city, we need the wave 1 weight file which contains city code, JD code, JWH code, HH code, individual code, gender (G), the four level wave 1 weights $W_1^1$, $W_2^1$, $W_3^1$ and $W_4^1$ (see Section 1 for definitions) for all individuals who responded at wave 1.

We also need respondent status variables at waves 2, 3, 4 and 5, indicating whether the respondent was successfully followed at waves 2, 3, 4 or 5.

3.2 Weight calculation

Wave 1-to-5 Longitudinal Weights $LW_{1-5}$ are obtained from the wave 1 final weights $W_1^1$ but are adjusted for attrition. We need to define the indicator variable $R$:

- $R_i = 1$ if the $i$th individual responded at all five waves
- $R_i = 0$ if the $i$th individual failed to respond at any of the waves 2, 3, 4 or 5

The weights $W_1^1$ and $W_4^1$ are from the wave 1 data file for the city, computed similarly as in Section 1 for the new small cities.

(1) HH level longitudinal weights

For every successful re-contact at all waves 2, 3, 4 and 5, the related HH receives a wave 1 Weight for the Household (WH) computed as

$$WH = W_4^1 / W_1^1.$$ 

This is interpreted as the number of HH in the city represented by the sampled HH at wave 1. This weight is re-scaled so that the total wave 5 HH weight (after attrition) matches the total wave 1 HH weight. Let $s_1$ denote the set of all respondents at wave 1. The re-scaled Longitudinal Weights for the Household (LWH) are computed as follows:

$$LWH_i = WH_i \times \frac{\sum_{j \in s_1} WH_j}{\sum_{j \in s_1} WH_j \times R_j}, \quad i \in s_5,$$

where $s_5$ is the set of respondents who were surveyed at all five waves. If an HH has two respondents $i$ and $j$, one male and one female, then we will have two (possibly) different HH weights $LWH_i$ and $LWH_j$ for that same HH, listed separately for two different individuals in the household. The HH level longitudinal weights satisfy

$$\sum_{i \in s_5} LWH_i = \sum_{j \in s_1} WH_j.$$
Let $LWH_i = 0$ if $i \in s_1$ but $i \notin s_5$ (i.e., $i$ was surveyed at wave 1 but failed to be re-contacted at one of the later waves).

(2) Individual level longitudinal weights

Each individual at wave 5 (who was also surveyed at waves 1 through 4) receives a preliminary Weight for the Individual (WI) as

$$WI = LWH \times W_i^{[1]}.$$ 

This weight is further re-scaled to obtain the Longitudinal Weight for the Individual (LWI). The total longitudinal weights for all $i \in s_5$ matches the total individual weights of all wave 1 respondents.

The re-scaling is done separately for male smokers and female smokers.

Let’s re-code the gender variable as $G_i = 1$ if the $i$th respondent is male and $G_i = 0$ if the $i$th respondent is female. For male smoker $i$ who responded to all five waves, the re-scaled weight is computed as

$$LWI_i = WI_i \times \frac{\sum_{j \in s_1} W_{4j}^{[1]} \times G_j}{\sum_{j \in s_1} WI_j \times R_j \times G_j}.$$ 

This re-scaling leads to

$$\sum_{j \in s_1} LWI_j \times R_j \times G_j = \sum_{j \in s_1} W_{4j}^{[1]} \times G_j.$$ 

For female smoker $k$ who responded to all five waves, the re-scaled weight is computed as

$$LWI_k = WI_k \times \frac{\sum_{j \in s_1} W_{4j}^{[1]} \times (1 - G_j)}{\sum_{j \in s_1} WI_j \times R_j \times (1 - G_j)}.$$ 

This leads to

$$\sum_{j \in s_1} LWI_j \times R_j \times (1 - G_j) = \sum_{j \in s_1} W_{4j}^{[1]} \times (1 - G_j).$$ 

(3) Weights for non-respondents

We let $LWI_i = 0$ if $i \in s_1$ but $i \notin s_5$.

(4) Final longitudinal weights

The individual level longitudinal weights $LWI_i$ are the final wave 1-to-5 longitudinal weights $LW^{[1-5]}$. 
4 Wave 3-to-5 Longitudinal Weights for Smokers: Kunming

Kunming joined ITC at wave 3. Longitudinal weights for wave 3-to-5, $LW^{[3-5]}$, can be computed similarly as $LW^{[1-5]}$ described in Section 3, with the four level wave 1 weights $W_1^{[1]}, W_2^{[1]}, W_3^{[1]}$ and $W_4^{[1]}$ replaced by the weights at wave 3: $W_1^{[3]}, W_2^{[3]}, W_3^{[3]}$ and $W_4^{[3]}$, which are the initial weights for Kunming.

At wave 5, six JWH were replaced in Kunming due to massive relocations. The re-contacts were only from 14 JWH from wave 4. This results in a smaller sample size for $s_5$ (respondents surveyed at all three waves 3, 4 and 5).

5 Wave 5 Cross-sectional Weights for Smokers: Five Old Cities

The sampling frames for the wave 5 survey in the five old cities (Beijing, Shanghai, Guangzhou, Shenyang and Kunming) are based on two enumerations: Wave 1 enumeration and wave 4 enumeration. There were ten (10) Jie Dao for wave 1 enumeration in each city, and up to ten (10) additional Jie Dao for wave 4 enumeration. For each city, we need to know:

- $J$: the total number of Jie Dao involved for both the re-contact sample and the replenishment sample (we should have $10 \leq J \leq 20$)
- $K$: the number of Ju Wei Hui used for the combined sample (re-contact and replenishment) for the given Jie Dao (we should have $K = 1, 2$ or 3)

5.1 Data files

Wave 5 adult smoker survey data consists of two parts: (i) all successful re-contacts from previous waves; and (ii) the wave 5 replenishment sample. Wave 5 cross-sectional weights are calculated for the combined data set.

It is preferable that a combined data set is created for each city. This data set may contain, for instance, 670 successful re-contact smokers from waves 1 to 4 (or waves 3 and 4 for Kunming) and 130 newly surveyed smokers at wave 5. An indicator variable should be created to indicate whether a respondent is a re-contact or newly recruited.
5.2 Weights calculation

Wave 5 cross-sectional weights are calculated in the same way as wave 1 weights (see Section 1 for the five small cities), which are also cross-sectional. The sampling design for wave 5 is an “induced one” which reflects how the combined sample is taken. Certain approximations are used in the calculation, due to the difficulty in finding the exact inclusion probabilities from the “induced survey design”.

The most important aspect in calculating wave 5 cross-sectional weights is that all design variables used in the calculation should be **those used for the induced wave 5 survey design**.

(1) HH level weights

Each surveyed individual, new or old, has a household level weight $W^{[5]}_1$. This is the number of people in the same household and the same sampling category represented by the surveyed individual:

- For adult male smokers, $W^{[5]}_1$ is the number of adult male smokers in the household
- For adult female smokers, $W^{[5]}_1$ is the number of adult female smokers in the household

(2) JWH level weights

Each surveyed individual, new or old, has a JWH level weight $W^{[5]}_2$. This is the number of people in the same JWH and the same sampling category represented by that person:

$$W^{[5]}_2 = \frac{N_1}{N_2} \times \frac{M_1}{M_a} \times W^{[5]}_1$$

where

1. $N_1$ is the total number of HHs in that JWH;
2. $N_2$ is the number of HHs enumerated before wave 5. For most JWHs, $N_2$ is 300 from wave 1 plus the newly enumerated ones from later waves (if any);
3. $M_1$ is the number of smoking households (SMHH) among the $N_2$ enumerated HHs;
4. $M_a$ is the number of SMHHs **surveyed at wave 5**, including re-contacts and replenishment.

(3) JD level weights
Each surveyed individual, new or old, has a JD level weight $W_{3}^{[5]}$. This is the number of people in the same JD and the same sampling category represented by that person:

$$W_{3}^{[5]} = \frac{P_{b}}{K \times P_{c}} \times W_{2}^{[5]}$$

where $P_{b}$ is the population size of the JD, and $P_{c}$ is the population size of the JWH from which the individual is surveyed, $K = 1, 2$ or $3$ is the number of JWH surveyed in the Jie Dao.

**Important Note:** If one JWH is lost at wave 5 for a particular JD, and the replacement JWH is not in the same JD, then the factor $K$ in front of $P_{c}$ is 1, to reflect the fact that only one JWH is selected in that JD. Similarly, if a JD added another JWH at wave 5, plus two original JWHs selected from wave 1, then the factor $K$ should be 3.

(4) **City level weights**

Each surveyed individual has a city level weight $W_{4}^{[5]}$ at the city level. This is the number of people in the city and the sampling category represented by that person:

$$W_{4}^{[5]} = \frac{P_{a}}{J \times P_{b}} \times W_{3}^{[5]}$$

where $P_{a}$ is the population size of the city, and $P_{b}$ is the population size of the JD from which the individual is surveyed. The factor $J$ in the denominator represents the total number of JDs in the city used for the combined wave 5 sample (re-contact and replenishment).

**Important Note:** If a city added three new JD at wave 5 for the replenishment sample, but lost two of the 10 original JD from the wave 1 re-contact sample, we should have $J = 10 - 2 + 3 = 11$.

(5) **Final wave 5 cross-sectional weights**

The final wave 5 cross-sectional weights are denoted as $W^{[5]}$, which are the same as $W_{4}^{[5]}$.

6 **Wave 5 Weights for Non-smokers: All Cities**

This section contains details on the calculation of wave 5 weights for non-smokers in the five new small cities and wave 5 cross-sectional weights for the five old cities (re-contact and replenishment samples for non-smokers).
6.1 Data files

For each of the five new small cities, there is a single data set for non-smokers. For each of the five old cities, wave 5 cross-sectional data set for non-smokers consists of two parts: (i) all successful re-contacts of non-smokers from previous waves; and (ii) the wave 5 replenishment sample for non-smokers. It is preferable that a combined data set is created for each old city. This data set may contain, for instance, 160 successful re-contact non-smokers from waves 1-4, plus 40 newly surveyed non-smokers at wave 5. An indicator variable should be created to indicate whether a respondent is a re-contact or newly recruited.

6.2 Weights calculation

(1) HH level weights

Each surveyed individual has a household level weight \( W_1 \). This is the number of people in the same household and the same sampling category represented by the surveyed individual. For adult non-smokers, \( W_1 \) is the total number of adult non-smokers in the household, including both male and female non-smokers.

(2) JWH (or Village) level weights

Each surveyed individual has a JWH (or Village) level weight \( W_2 \). This is the number of non-smokers in the same JWH (or Village) represented by that person.

Due to practical constraints, the selection of households from which non-smokers are surveyed were modified at various occasions. Some households were not selected from the list of enumerated households. To simplify the calculation, we will treat the set of households from which non-smokers were surveyed as a simple random sample from all households in the JWH (or Village) with at least one non-smoker in the household. The total number of such households in the JWH (or Village), however, is unknown. We estimate this by \( \alpha N_1 \), where \( N_1 \) is the total number of HH in the JWH (or Village), \( \alpha \) is the estimated percentage of HH with at least one non-smoker. The JWH level weights are then calculated as

\[
W_2 = \frac{\alpha N_1}{M_d} \times W_1
\]

where \( M_d \) is the total number of households surveyed in the JWH (or Village) for non-smokers. Since each HH can only have one non-smoker to be surveyed, \( M_d \) is the same as the number of non-smokers surveyed in the JWH (or Village) (in many cases \( M_d \) would be 10).
(3) JD (or Xiang-Zhen) level weights

Each surveyed individual has a JD (or Xiang-Zhen) level weight $W_3$. This is the number of non-smokers in the same JD (or Xiang-Zhen) represented by that person:

$$W_3 = \frac{P_b}{K \times P_c} \times W_2$$

where $P_b$ is the population size of the JD or Xiang-Zhen, and $P_c$ is the population size of the JWH or Village from which the individual is surveyed. The factor $K$ in the denominator represents the number of JWH (or Village) used within the JD (or Xiang-Zhen).

(4) Final weights

Each surveyed individual has a final weight $W_4$ at the city level. This is the number of non-smokers in the city represented by that person:

$$W_4 = \frac{P_a}{J \times P_b} \times W_3$$

where $P_a$ is the population size of the city, and $P_b$ is the population size of the JD or Xiang-Zhen from which the individual is surveyed. The factor $J$ in the denominator represents the number of JD (or Xiang-Zhen) used within the city.

7 Variables used for wave 1 weight calculation

$C_1$ – City code

$C_2$ – Jie Dao code

$C_3$ – Ju Wei Hui code

$C_4$ – Household code

$C_5$ – Individual code

$P_a$ – City population size

$P_b$ – Jie Dao population size

$P_c$ – Ju Wei Hui population size

$N_1$ – Total number of households in the Ju Wei Hui

$N_2$ – Number of households enumerated ($N_2 = 300$ for most cases)

$M_1$ – Number of smoking households among the $N_2$ enumerated households
$M_2$ – Number of non-smoking households among the $N_2$ enumerated HHs ($M_2 = N_2 - M_1$)

$M_a$ – Number of smoking households surveyed to reach the quota of 40 (or so) smokers

$M_b$ – Number of smoking households surveyed to reach the quota of 4 (or 3) non-smokers
   (In most cases $M_b = 4$ or 3)

$M_c$ – Number of non-smoking households surveyed to reach the quota of 6 (or 7) non-smokers
   (In most cases $M_c = 6$ or 7)

$I_1$ – Household classifier: $I_1 = 1$ for smoking households; $I_1 = 0$ for non-smoking households

$I_2$ – Smoking status indicator: $I_2 = 1$ for smokers; $I_2 = 0$ for non-smokers

$G$ – Gender: $G = 1$ for male and $G = 2$ for female (This is Question P1 on the questionnaire)

$L_1$ – Number of male adults in the household (This is Question P8A in the questionnaire)

$L_2$ – Number of male adult smokers in the household (This is Question P8B in the Questionnaire)

$L_3$ – Number of female adults in the household (This is Question P9A in the questionnaire)

$L_4$ – Number of female adult smokers in the household (This is Question P9B in the Questionnaire)
7. Cigarette Purchasing Sub-Study

7.1 Background
The tobacco market in China is shifting and consolidating. Each year, new brands which have emerged disappear from the market with little warning. This sub-study to the main ITC Project was conducted in China to better understand the trends in changing design and emission characteristics as well as the trends in brand shifting and consolidation of Chinese cigarettes. The Cigarette Purchasing Sub-study had been conducted since Wave 1.

7.2 Main Objectives
The objectives of Wave 5 of the Cigarette Purchasing Sub-study are:
- To characterize and compare tobacco products obtained directly from large retail stores for design and emission characteristics of Chinese cigarettes with established international brands.
- To examine trends in changing design and emission characteristics of Chinese cigarettes.
- To examine trends in brand shifting and consolidation of Chinese cigarettes.

7.3 Main Component of the Survey
The Cigarette Purchasing Sub-study protocol consisted of four main steps:
1. Retail Store Selection and Consent
2. Collection of Cigarette List
3. Purchasing of Cigarettes
4. Exit.

7.4 Collection Method and Procedure
All brand families and brand varieties were purchased in person. In each city, the ITC China Team visited 3 big retail stores in 3 different JWHs or Villages that sell cigarettes. The instructions for purchasing were as follows:

Store 1:
1. Buy packs for **ALL** brand families AND brand varieties available in the store. Examples of brand families would be Baisha, Honghe, Zhongnanhai, Marlboro. Examples of brand varieties would be “Low-tar”, “8mg”, or “Special Filter”.
2. Record the price information for each brand and variety that you have bought in the store. (Whether you get a receipt or not—we need the price of every variety).
3. Ask the proprietor to identify the 10 packs they sell most commonly.
**Store 2:**
1. Second store: Buy packs for **ALL** brand families AND brand varieties that are not sold in Store 1. If there are no new brands in this store, then do not purchase anything.
2. Record the price information for each brand and variety that you have bought in both stores.
3. Ask proprietor to identify the 10 packs they sell most commonly.

**Store 3:**
1. Buy packs for **ALL** brand families AND brand varieties that are not sold in Stores 1 OR 2.
2. Record the price information for each brand and variety that you have bought in any of the stores.
3. Ask proprietor to identify the 10 packs they sell most commonly.
8. Biomarkers Pilot Study

8.1 General Background
This pilot study to the main ITC Project was conducted in six countries that currently conduct annual (or bi-annual) ITC Surveys, including: China, Mexico, Thailand, United States, United Kingdom, and Mauritius. The pilot study was led by the ITC Project investigators at Roswell Park Cancer Institute in the United States. The overall goal of the pilot study was 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.

8.2 Main Objectives
The main objectives of Wave 5 of the ITC China Biomarkers Pilot Study were:
1. To characterize smokers’ and non-smokers’ exposures to heavy metals (lead, cadmium, arsenic) from cigarette smoke and the environment.
2. To assess variability in nicotine intake and rate of nicotine metabolism.

8.3 Target Respondents
In order to be eligible for the Biomarkers Pilot Study, respondents must have been:
- 18 years of age or older
- A participant in the Wave 5 ITC China Survey
- A permanent resident in the city where the pilot study was conducted

8.4 Survey Design
This study took place in two different locations: Guangzhou and Tongren. In each location, 50 respondents were selected to provide one urine sample – 30 male smokers and 20 male non-smokers). In these two cities, each Wave 5 Survey (Recontact or Replenishment) had a table on the cover page (see Appendix G) of the questionnaire which contains a “Data Collection Pilot Study Eligibility Checklist and a Pilot Study Identification Number” linkage field. The checklist was used to determine if the respondent was eligible for the sub-study.

Once the respondents were determined that they were eligible, they were invited to participate in the Pilot Study to collect biomarker specimens, which were collected at the time of interview.
8.5 Survey Process
Interviewers followed the three main steps of the ITC Biomarkers Pilot Study protocol (for eligible respondents only) to collect urine samples:

1. Documentation of written consent by the interviewer using the Confirmation of Written Consent Form – Biomarkers Pilot Study
2. Collection of one urine sample
3. Provision of remuneration in cash per respondent

8.6 Data Collection Procedures
After an eligible pilot study participant provided his/her informed consent to participate, then the interviewers:

1. Immediately collected one urine sample from the participant using specimen collection kits
2. Provided the participant with the Pilot Study Sample Collection Instructions and all specimen collection materials
3. Delivered the samples to the field supervisor

After the interviewer provided the completed pilot study specimen collection kit to your supervisor, the field supervisor deposited the samples in a -20°C Celsius freezer until they were sent to iPhase Pharma Services - the contractor to test the biomarker specimen which is located at Beijing.

8.6.1 Biomarker Specimen Collection Kit
Each biomarker specimen collection kit for this pilot study included instructions for providing samples, and one of each of the following materials:

- Antimicrobial wipe, gloves, paper towel, and absorbent pads
- Plastic container in which the urine was sealed
- A bubble pouch and amber storage bag (e.g. zip lock type)
- Additional pilot study ID number labels for linkage with the respondent’s survey ID number

8.6.2 Urine Collection
Respondents were asked to provide a urine sample immediately after they provided written consent to participate in the pilot study. All respondents were given a sterile urine collection kit and urine collection instructions. Washing their hands with soap and water, the respondent proceeded to take the paper towel out of the kit and placed it on a flat surface. After removing the lid from the container inside the kit, the respondent placed it face down on the paper towel. They urinated directly into the container, collecting all of their urine, or until the container was full. They then sealed the container with the lid immediately so that the urine sample made only brief contact with the air.
While the respondent is in the bathroom collecting the urine specimen, the interviewer put on their lab coat (if not already on), cleaned their hands and put on gloves. The interviewer then laid out a Safety Drape on a flat surface, then took out and placed all other items from the kit on the drape. When the respondent returned with the urine specimen, the interviewer thanked the respondent for providing it and asked them to place it on the Safety Drape. The respondents were required to place it down rather than handing it to the interviewer, to avoid the chance of dropping and spilling the specimen. Once the interviewer confirmed that the urine collection container was securely closed, the container was placed in the bubble pouch, and then the amber transport bag before being placed in the shipping container. The interviewer 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 collects it from him/her.

8.6.3 Remuneration
After the pilot study specimen was collected, the respondents were provided with 80 Yuan as a token of appreciation for their participation in the biomarker pilot study: Then the interviewers thanked the respondent for participating, and reminded him/her that he will be asked to participate again in the future, subject to funding.

8.7 Scripts for Recruiting Eligible Adult Smokers and Obtaining Consent
All interviewers must recruit eligible adult respondents for the Biomarkers Pilot Study using the script and protocol in Appendix I.

All interviewers must obtain and document written consent from each respondent using the script and protocol in Appendix J.
### Appendix A: Tongren Sample by Township

<table>
<thead>
<tr>
<th>Township No.</th>
<th>Village No.</th>
<th>Number of Smoker</th>
<th>Number of Non-smoker</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>44</td>
<td>13</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>46</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>62</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>27</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>47</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>45</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>23</td>
<td>53</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>24</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>27</td>
<td>44</td>
<td>13</td>
</tr>
<tr>
<td>5</td>
<td>28</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>33</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>35</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>7</td>
<td>48</td>
<td>67</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>50</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>51</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>52</td>
<td>44</td>
<td>15</td>
</tr>
<tr>
<td>8</td>
<td>53</td>
<td>43</td>
<td>11</td>
</tr>
<tr>
<td>9</td>
<td>56</td>
<td>45</td>
<td>15</td>
</tr>
<tr>
<td>9</td>
<td>59</td>
<td>45</td>
<td>9</td>
</tr>
</tbody>
</table>
Appendix B: Country Profile

Background
China has a population of 1.36 billion people, making it the world’s most populous country and 53% of the population resided in urban areas in 2013. Its GDP per capita was 41,908 Yuan in 2013. China is the largest producer and consumer of tobacco in the world. The 2015 TQS reported that 52.1% of males and 2.7% of females are current smokers. With more than 300 million smokers, China accounts for one-third of the world’s smokers. The country’s smoking culture imposes strong social pressure on men to smoke, and it is expected that female smoking will become more socially acceptable as the tobacco industry has begun to target female smokers. Tobacco-related deaths contribute to four of the five leading causes of mortality in China, and lung cancer rates in China are also on the rise. It is anticipated that if current smoking patterns continue, tobacco will account for more than 2 million deaths in China annually.

China lags far behind other countries in efforts to reduce exposure to second-hand smoke, however in recent years, the Chinese government has demonstrated a commitment towards tackling the tobacco epidemic.

Pricing and Taxation
In May 2009, ad valorem taxes were increased on cigarettes in China for the purpose of raising government revenue and improving the cigarette tax structure. The result was an increase in tax rates by 11.7 percentage points at the producer level; however, the increase was not passed on to consumers (i.e., there was no change to retail prices of cigarettes).

In May 2015, the Chinese government again raised its excise tax at the wholesale level from 5% to 11%. In addition, specific excise taxes on cigarettes were raised by 0.005 Yuan per stick or 0.1 Yuan per pack of 20 cigarettes, resulting in an increase in cigarette retail prices by 7-10%. This increase led to a slight decrease in cigarette consumption, but the impact was reduced by the range of prices of brands available in China and increasing affordability due to higher incomes.

Smoke-Free Policies
China does not currently have a national smoke-free law, but at least 18 cities have enacted smoke-free legislation at the local level. None of the city-level laws adopted prior to 2015 meet the Article 8 Guidelines, as they were not comprehensive and lacked strong enforcement, and evidence from evaluations of these partial smoking bans have shown that they are not as effective as comprehensive bans in reducing SHS. On June 1, 2015, however, a new smoke-free law came into effect in the country’s capital city, Beijing. The Beijing law is the first smoke-free law to be fully compliant with FCTC Article 8 and is the strongest tobacco control law to date in China. Smoking in all indoor public places and workplaces as well as many outdoor places was banned, and smoking rooms at airports were eliminated. A rapid assessment report by the CDC released one month after the ban also found strong initial compliance – among 176
restaurants visited, smoking decreased from 40.3% before the ban to 14.8% after the ban came into effect. Posting of smoke-free signs went up from 52.6% to 82.4%.9

Health Warnings
Prior to January 2009, China’s health warning labels were small and positioned on the side of the pack with only one message: “Smoking is harmful to your health”. In October 2008, it was announced that larger text warnings would be introduced on 30% of the front and 30% of the back of the pack, starting in January 2009. The 2009 warnings were positioned at the bottom of the package and consisted of two general messages, which were essentially the same message but framed in slightly different ways: “Smoking is harmful to your health” and “Quit smoking reduces health risk”. The message on the back of the packages was printed entirely in English. These revised labels did not meet the FCTC Article 11 Guidelines.

In April 2012, cigarette packs produced and sold in China were required to bear new text warning labels with lettering that was twice the size (no less than 4 millimeters in height) of the previous text warnings. In addition, the English language warning on the back of the pack was changed to Chinese to meet the FCTC requirement that warnings be written in the country’s principal language. However, the overall label size remained unchanged at 30% of both sides of the package and without the requirement for graphic warnings that are clear, visible, and rotating, China’s warning labels still do not meet the minimum FCTC standards.

In October 2016, cigarette packs produced and sold in China are required to include three general warning messages: “smoking is harmful to health and please do not smoke in smoke-free areas”; “quit smoking early is good for health; quit smoking reduce health risk”; “Dissuade youth from smoking and forbid elementary and middle school students from smoking”. The overall warning label size increases to 35% on both front and back of the pack. The warning text size increases slightly to no less than 4.5 millimeters in height. 10

Tobacco Advertising, Promotion, and Sponsorship
Prior to 2015, there was no national legislation banning TAPS in China and only one city (Shenzhen) had a complete ban.11 The advertisement of tobacco products in China is regulated by the 1991 Tobacco Products Monopoly Law and the 1994 Advertisement Law, which ban direct tobacco advertisements in television, radio, newspapers, and periodicals. However, outdoor, point of sale, and internet advertising are not banned, allowing tobacco companies to maintain a visible marketing presence through sponsorships and promotions using outdoor displays and internet advertisements.12 Tobacco companies also use branding and marketing strategies that incorporate famous Chinese landmarks and icons, including images on packages, as a way of exploiting Chinese culture.13

As a result, the public is still exposed to high levels of both direct and indirect forms of tobacco advertising. The 2010 GATS found that about 20% of adults in China noticed some form of TAPS in the last 30 days, and exposure was higher among youth.14
In 2011, strict regulations on the portrayal of smoking in movies and television were introduced, and the 2012 National Tobacco Control Plan included a strong commitment to strengthening existing TAPS bans in China. In April 2015, an amended Advertising Law was passed, which came into effect in September 2015. The new law prohibits any form of tobacco advertisement targeting youth, and bans tobacco advertisements in the mass media, in public places and public transport, as well as tobacco brand sharing or stretching activities. The law also comes with higher penalties for non-compliance. However, “public places” was not clearly defined in the legislation, allowing a possible loophole for the tobacco industry.

Light/Mild Product Descriptors
These may include terms’. China banned deceptive tobacco product labelling such as ‘low tar’, ‘light’, ‘ultra-light’, or ‘mild in 2006; however, lower tar cigarettes are still marketed and promoted in other ways as being less dangerous, such as by lowering the maximum tar thresholds for Chinese cigarettes.

Studies have shown that the perception that 'light' or 'low tar' cigarettes are less harmful is still common in China. The 2010 GATS found that the majority of the Chinese people have misperceptions about ‘low tar’ and ‘low harm’, as only 14% of respondents overall were aware that low tar cigarettes are just as harmful as regular cigarettes. Findings from the 2009 ITC China Survey have also shown the importance of smokers’ own sensory beliefs in their perceptions of harmfulness, as smokers who think their brand of cigarettes is smoother are more likely to believe their brand is also less harmful. This perception that a brand is smoother mainly comes from the increased filter ventilation in some cigarettes in China, a technique that is used to lower tar yields.

There are institutional and political barriers to the implementation of more comprehensive tobacco control measures. At the very heart of the difficulty is the presence of the government-owned tobacco monopoly, the China National Tobacco Company (CNTC) which controls 90-97% of the cigarette market. China produces over 31% of the world’s cigarettes. The tobacco industry accounts for a significant proportion of the Chinese economy, and tobacco taxes represent the largest source of tax revenue to the Chinese provincial and local governments. CNTC is undergoing consolidation within China (from over 3,000 brands to the goal of a few hundred) in preparation for entry into the export market. The tobacco industry is likely to continue its steady value growth. As the pillar industry for quite a few regions such as western and central Chinese provinces, the income from the tobacco industry accounts for a significant proportion of the country’s fiscal revenue. As a result, the government is not expected to look forward to an immediate decline of its revenue in certain regions. Additionally, Chinese smokers have increasing disposable income and will likely pursue higher-quality tobacco products, thereby driving the overall value growth.

Many of the research reports on smoking in China are from school-based surveys. Although other household surveys of adult smokers have been conducted, including the seminal prevalence surveys of 1996 and 2002, virtually all are cross-sectional and focus on only basic questions about smoking behaviour. Other important surveys in China
with international comparisons focus on smoking among youth.\textsuperscript{40, 41} There are currently no surveys or other research efforts in China for rigorous evaluation of tobacco control policies that approach the comprehensiveness of the ITC China Survey.

There are other surveys that generate national level prevalence rate.

**Current smoking rates among adults in China from different surveys between 1984 and 2010.**

<table>
<thead>
<tr>
<th>Survey</th>
<th>Year</th>
<th>Overall (%)</th>
<th>Male (%)</th>
<th>Female (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Tobacco Use Survey</td>
<td>1984</td>
<td>34.5</td>
<td>61.0</td>
<td>7.0</td>
</tr>
<tr>
<td>National Prevalence Survey of Smoking Pattern</td>
<td>1996</td>
<td>35.3</td>
<td>63.0</td>
<td>3.7</td>
</tr>
<tr>
<td>Behavior Risk Factor Survey I</td>
<td>2002</td>
<td>31.4</td>
<td>57.4</td>
<td>2.6</td>
</tr>
<tr>
<td>National Nutrition and Health Survey</td>
<td>2002</td>
<td>23.6</td>
<td>49.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Behavior Risk Factor Survey II</td>
<td>2004</td>
<td>31.5</td>
<td>58.7</td>
<td>2.6</td>
</tr>
<tr>
<td>Behavior Risk Factor Survey III</td>
<td>2007</td>
<td>29.0</td>
<td>54.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Global Adult Tobacco Survey</td>
<td>2010</td>
<td>28.1</td>
<td>52.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Behavior Risk Factor Survey IV</td>
<td>2010</td>
<td>28.3</td>
<td>53.3</td>
<td>2.5</td>
</tr>
<tr>
<td>China Adult Tobacco Survey (TQS)</td>
<td>2015</td>
<td>27.7</td>
<td>52.1</td>
<td>2.7</td>
</tr>
</tbody>
</table>

**FCTC Status**

China ratified the FCTC in October 2005 and established a governmental office for FCTC implementation. China has had several “Quit and Win” campaigns since 1996, and quit lines have also been established. \textsuperscript{42} Cessation clinics are available in several cities, and nicotine replacement therapy has recently become available, although it is not subsidized.
## Appendix C: Policy Table

<table>
<thead>
<tr>
<th>Date/Year</th>
<th>Location</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983 (ena)</td>
<td>China</td>
<td>Civil Aviation Administration of China enacts a ban on smoking on domestic flights</td>
</tr>
<tr>
<td>Date Unknown (imp)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 1(^{st}), 1987 (imp)</td>
<td>Beijing</td>
<td>Beijing Railway Station declares a non-smoking waiting area</td>
</tr>
<tr>
<td>1987 (ena)</td>
<td>China</td>
<td>Ministry of Health’s Detailed Implementation Rules for the Public Place Hygiene Management Regulation 1987</td>
</tr>
<tr>
<td>1991 (imp)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>June 1991 (ena)</td>
<td>China</td>
<td>Tobacco Monopoly Law of the People’s Republic of China</td>
</tr>
<tr>
<td>July 1997 (imp)</td>
<td></td>
<td>“...the State and society shall strengthen the publicity and education of the health hazards of smoking, and prohibit or restrict smoking in public transport and public places.”</td>
</tr>
<tr>
<td>September 4(^{th}), 1991 (ena)</td>
<td>China</td>
<td>Law on the Protection of Minors of the People’s Republic of China</td>
</tr>
<tr>
<td>Date Unknown (imp)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 29(^{th}), 2006 (rev)</td>
<td>China</td>
<td>Smoking banned in classrooms, sleeping and activity rooms of primary and middle schools, kindergartens, and childcare centers as well as other rooms where minors convene.</td>
</tr>
<tr>
<td>June 1(^{st}), 2007 (imp)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1993-2006 (ena)</td>
<td>China</td>
<td>154 towns, cities, districts across China enact local laws banning smoking in public places</td>
</tr>
<tr>
<td>Date Unknown (imp)</td>
<td></td>
<td>Not very much enforcement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Only 45.7% of cities and larger administrative regions have tobacco control regulations in China</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Limited number of places where smoking is banned - medical entities, cinemas and theatres, music halls, video halls, childcare centers and kindergartens, schools, conference rooms, libraries, exhibition halls, public transport, postal offices, telecomm offices, banking offices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Only Guangzhou and Shenzhen have bans on smoking in air-conditioned restaurants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Workplaces such as offices are not included in any local regulations</td>
</tr>
<tr>
<td>1995 (?)</td>
<td>Guangzhou</td>
<td>Smoking banned in public places</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low penalty, not enforced at all</td>
</tr>
<tr>
<td>Date</td>
<td>Location</td>
<td>Event Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>December 25&lt;sup&gt;th&lt;/sup&gt;, 1995 (ena)</td>
<td>Beijing</td>
<td>Provisions on No Smoking in Public Places of Beijing 56-58</td>
</tr>
<tr>
<td>May, 1996 (imp)</td>
<td></td>
<td>8 types of places with banned smoking</td>
</tr>
<tr>
<td>1997 (?)</td>
<td>Hunan</td>
<td>Smoking banned in public places 59</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low penalty, not enforced at all</td>
</tr>
<tr>
<td>May 1, 1997 (ena) Date Unknown (imp)</td>
<td>China</td>
<td>Ban on Smoking in Public Transport and Waiting Rooms 60-62</td>
</tr>
<tr>
<td>2003 (ena) Date Unknown (imp)</td>
<td>China</td>
<td>Civil Aviation Administration of China enacts a complete smoking ban on all domestic and international flights [63]</td>
</tr>
<tr>
<td>2005 (imp)</td>
<td>China</td>
<td>China CDC surveys fourteen provincial CDCs and only four have partial or complete bans on smoking - 28% [64]</td>
</tr>
<tr>
<td>August, 28&lt;sup&gt;th&lt;/sup&gt; 2005</td>
<td>China</td>
<td>FCTC Ratification 65</td>
</tr>
<tr>
<td>January 9&lt;sup&gt;th&lt;/sup&gt;, 2006</td>
<td>China</td>
<td>FCTC Effective Date 66</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See Table 1 below 67</td>
</tr>
<tr>
<td>March – December 2006</td>
<td>China</td>
<td>Wave 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Smoker N=4800; Non-Smoker N= 1200</td>
</tr>
<tr>
<td>April 2007 (?)</td>
<td>Guangzhou, Jiangmen</td>
<td>Complete smoking ban in following areas: 68</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Restaurants, entertainment outlets, schools, supermarkets, government offices</td>
</tr>
<tr>
<td>April 2007 (imp)</td>
<td>China</td>
<td>Express trains begin enforcing comprehensive smoking bans 69</td>
</tr>
<tr>
<td>April 25&lt;sup&gt;th&lt;/sup&gt;, 2007 (ena) June 2008 (imp)</td>
<td>Beijing, Hong Kong, Qinhuangdao, Qingdao, Shanghai, Shenyang, Tianjin</td>
<td>Action on Smoke Free Restaurants 70, 71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contracted hotels for the Olympics, Olympic premises, and restaurants in the Olympic Village must completely ban smoking before June 2008; food service outlets of medium and large size should advocate a complete smoking ban(or at minimum 75% of the area should be smoke-free )</td>
</tr>
<tr>
<td>October 1&lt;sup&gt;st&lt;/sup&gt;, 2007 (imp)</td>
<td>Beijing</td>
<td>Smoking banned in taxis 72, 73</td>
</tr>
<tr>
<td>November 2007 - March 2008</td>
<td>China</td>
<td>Wave 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Smoker N=4627; Non-Smoker N= 1221</td>
</tr>
<tr>
<td>Date</td>
<td>City/Region</td>
<td>Event Description</td>
</tr>
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<td>-----------------------</td>
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<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| March 31st, 2008 (ena) | Beijing     | Regulations on Areas of Public Place for Banning Smoking
1) Indoor areas of medical institutions;
2) Childcare centers and kindergartens;
3) Secondary and primary schools and intermediate vocational schools;
4) Teaching areas in universities and other educational and training institutions;
5) Cinemas and theatres, concert halls, exhibition halls, museums, fine arts museums, libraries, science and technology halls, archives, children’s palaces, commemorative halls, and other science and education, culture and art places;
6) Service halls in the commercial, financial, postal and telecommunication sectors;
7) Inside means of public transportation such as public buses, taxis, and rail transportation, and in their ticketing halls and on their indoor platforms;
8) Protected historical and cultural sites open to the public;
9) [Indoor] stadiums and gymnasiums;
10) Competition and seating areas in open-air gymnasiums and stadiums. |
| May 1st, 2008 (imp)    |             |                                                                                                                                                                                                                  |
| May – October 2009;   | China       | Wave 3                                                                                                                                                                                                            |
| February – March      |             |                                                                                                                                                                                                                  |
| 2010                  |             |                                                                                                                                                                                                                  |
| June 1st, 2009        | Yinchuan    | Smoking banned in 10 types of public locations including workplaces, hospitals, schools, etc.                                                                                                                                 |
| March 1st, 2010 (imp) | Shanghai    | Shanghai People’s Congress issues law banning smoking in 12 types of public places
Including indoor smoking at schools, hospitals, sport stadiums, public transport vehicles and Internet cafes |
| March 1st, 2010 (imp) | Hangzhou    | Smoking banned in 10 types of locations                                                                                                                                                                           |
| September 1st, 2010   | Guangzhou   | Smoking banned in city’s 12 categories of public locations
Including offices, conference rooms, halls and elevators; designated areas for airports, shopping centers, restaurants with over 75 seats |
| (imp)                 |             |                                                                                                                                                                                                                  |
| May 2009 (ena)        | China       | Anticipated national smoking ban in public places
In May 2009 civilian and military authorities ordered the health bureaucracy and half of medical facilities nationwide to go completely smoke-free by the end of 2010 |
| End of 2010 (imp*)    |             |                                                                                                                                                                                                                  |
| May 2011-November 2012 | China | Wave 4  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoker N=5,549; Non-Smoker N= 1,422</td>
<td></td>
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</tr>
</tbody>
</table>

| May 2009 (ena) End of 2011 (imp*) | China | National smoking ban enactment complete[^79]  
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Remaining medical facilities smoke-free</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| November 1, 2013 to July 24, 2015 | China | Wave 5  
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Smoker N=7,817; Non-Smoker N= 2,063</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>May 2015 (imp*)</th>
<th>China</th>
<th>Wholesale cigarette excise tax increased from 5% to 11%. Wholesalers must pay additional 0.005 yuan per stick.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>June 2015 (imp*)</th>
<th>Beijing</th>
<th>Smoking is banned in all indoor public places, workplaces, and public transport</th>
</tr>
</thead>
</table>

| September 2015 (imp*) | China | Tobacco brand stretching is prohibited  
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>• Tobacco advertising is forbid in mass media, public places, outdoor and public transport. All forms of tobacco advertising targeting at youth is prohibited.</td>
<td></td>
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</tbody>
</table>

**Legend:**  
ena – Enacted  
imp – Implemented  
rev – Revised  
? – Unclear
Appendix D: Issues Reported by the China and Local CDC Fieldwork Teams

The issues reported by both China CDC and local fieldwork teams include the following:

- The survey quality of the rural areas was lower than that of the cities.
- Three rural areas (Tongren, Xining and Changzhi) heavily relied on village doctors to conduct the interviews; most of them were old and had difficulty in understanding the survey questions.
- The survey training session offered by China CDC lasted one and a half days in Shanghai, Yichun, Changzhi and Xining. Other locations only conducted a 1-day training workshop. Some survey locations were reluctant to have a 2- or 3-day training. A 1-day training left little time for trainees to fully comprehend the complex ITC survey protocol and procedures.
- The stability of the fieldwork team was an issue because not all trainees ended up becoming interviewers.
- Cities of previous waves indicated that the cohort respondents were getting older and raised the question whether to retire them from future waves.
- Guangzhou CDC and China CDC expressed an interest to conduct the survey electronically (using tablets—CAPI) for subsequent waves.
- There were not enough households in both Wave 1 and 4 enumeration sample for the replenishment in the cities.
- Rural areas asked whether it was possible to shorten the survey length and simplify the survey questions.
- Two cities used a survey firm to conduct the survey. The survey firm in Beijing completed the survey but did not cooperate well with the Ju Wei Hui staff and the respondents during the fieldwork, while the survey firm at Kunming did not complete the fieldwork due to lack of skills and experience; thus Yunnan HEI had to recruit students to become interviewers.
Appendix E: Forms

Form 1
Wave 5 FCTC Surveillance/ITC China Survey
Phase 1 Sample Selection Form（CN-ITC-2013-S-1）

<table>
<thead>
<tr>
<th>City code</th>
<th>City/District names</th>
<th>Street/Township Code</th>
<th>Street/Township Name</th>
<th>Population</th>
<th>Street/Township Description</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

Note: Data manager is in charge of collecting street information, filling out the phase form and sending the form to China CDC using Excel spreadsheet.
Form 2
Wave 5 FCTC Surveillance/ITC China Survey
Phase 2 Sample Selection Form（CN-ITC-2013-S-2）

<table>
<thead>
<tr>
<th>Street/Township Code</th>
<th>Street/Township Name</th>
<th>JWH/CWH Code</th>
<th>JWH/CWH Name</th>
<th>JWH/CWH Population</th>
<th>JWH/CWH Description</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

Note: Data manager is in charge of collecting JWH information of phase 2 sample selection and sending the form to China CDC using Excel spreadsheet.

JWH: Juweihui
CWH: Cunweihui
Form 3
Wave 5 FCTC Surveillance/ITC China Survey
Phase 3 Sample Selection Form （CN-ITC-2013-S-3）

<table>
<thead>
<tr>
<th>JWH/CWH Code</th>
<th>JWH/CWH Name</th>
<th>Household Code</th>
<th>Household Address</th>
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</tbody>
</table>

Note: Data manager is in charge of collecting household information of phase 3 sample selection and will send the form to China CDC using Excel spreadsheet.
Form 4  
Wave 5 FCTC Surveillance/ITC China Survey  
Phase 4 Sample Selection Form （CN-ITC-2013-S-4）

<table>
<thead>
<tr>
<th>JuWeiHui/Cunw</th>
<th>JuWeiHui/Cunw</th>
<th>Household Code</th>
<th>Household</th>
<th>Individual Code</th>
<th>Name</th>
<th>Sex</th>
<th>Date of Birth</th>
<th>Permanent Resident or not</th>
<th>Smoker over 100</th>
<th>Currently Smoking or not</th>
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</thead>
<tbody>
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</tbody>
</table>

Note: Before the fieldwork, everyone should be aware of activities in each selected JWH. Inform JWH staff the importance of ITC China Project. JWH staff only participate in collecting household basic information, informing the households might be selected, and entering household with interviewers. Project manager in each city is in charge of collecting information, filling out the form and sending it to China CDC in Excel spreadsheet.
Form 5
Wave 5 FCTC Surveillance/ITC China Survey
Respondent Information Form (CN-ITC-2013-S-5)

<table>
<thead>
<tr>
<th>City code CODE1</th>
<th>Street/township code CODE2</th>
<th>JWH/CWH code CODE3</th>
<th>Household code CODE4</th>
<th>Individual code CODE5</th>
<th>Name</th>
<th>Household address</th>
<th>Note</th>
</tr>
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<tbody>
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</tbody>
</table>

Note: This form is the results of phase 4 sample selection, which is filled out by CDC and sent to data manager. When interviewers enter into household, they should take this form with them and fill out the survey number in term of the respondents’ codes.
Form 6  
Wave 5 FCTC Surveillance/ITC China Survey  
Fieldwork supplies list（CN-ITC-2013-S-6）

Survey Location: __________________

<table>
<thead>
<tr>
<th>Supplies</th>
<th>Quantity</th>
<th>Received Quantity</th>
<th>Good quality or not</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Survey Material</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent Information Form</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consent Form</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult Smoker Survey</td>
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<tr>
<td>Adult Non-Smoker Survey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training Manual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Control Manual</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Telephone Double Check</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>EpiData Database</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>MP3</td>
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<tr>
<td><strong>Survey Instrument</strong></td>
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<tr>
<td>Name Card</td>
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<tr>
<td>Battery</td>
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<tr>
<td>Marker</td>
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<tr>
<td>Electric Torch</td>
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<tr>
<td>Shoe Cover</td>
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<tr>
<td>Backpack</td>
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<tr>
<td>Gift</td>
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</tbody>
</table>

Note: Writing materials will be provided by China CDC, and survey instruments will be purchased by city CDC. Survey location coordinator is in charge of preparing all supplies and sending the form back to China CDC. If supplies are enough and in good condition, mark “√” in the form. Otherwise fill out the insufficient quantity and the numbers having poor quality.

Survey location coordinator:

Date: yy mm dd
## Form 7
Wave 5 FCTC Surveillance/ITC China Survey
Training Location and Equipment List (CN-ITC-2013-S-7)

<table>
<thead>
<tr>
<th>Supplies</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Training Location</strong></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td></td>
</tr>
<tr>
<td>Table and Chair</td>
<td></td>
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<tr>
<td>Good for Practicing</td>
<td></td>
</tr>
<tr>
<td><strong>Training Equipment</strong></td>
<td></td>
</tr>
<tr>
<td>1. Notebook Computer</td>
<td></td>
</tr>
<tr>
<td>2. Multi-Media Projector</td>
<td></td>
</tr>
<tr>
<td>3. Audio Equipment</td>
<td></td>
</tr>
<tr>
<td><strong>Training Material</strong></td>
<td></td>
</tr>
<tr>
<td>4. Questionnaire</td>
<td></td>
</tr>
<tr>
<td>5. Fieldwork Registration Form (CN-ITC-2013-S-16)</td>
<td></td>
</tr>
<tr>
<td>6. Respondent Information Form (CN-ITC-2013-S-5)</td>
<td></td>
</tr>
<tr>
<td>7. Telephone Double-Check Form (EpiData Database)</td>
<td></td>
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<tr>
<td>8. MP3</td>
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<tr>
<td>10. Quality Control Manual</td>
<td></td>
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<tr>
<td>11. Interviewer Registration Form (CN-ITC-2013-S-8)</td>
<td></td>
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<tr>
<td>12. Interviewer Attendance Form (CN-ITC-2013-S-9)</td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
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<tr>
<td>13. Document Envelope</td>
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<tr>
<td>14. Marker</td>
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</tbody>
</table>
Form 8
Wave 5 FCTC Surveillance/ITC China Survey
Interviewer Registration Form (CN-ITC-2013-S-8)

Survey location: ________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Sex</th>
<th>Age</th>
<th>Profession</th>
<th>Education</th>
<th>Fieldwork Experience</th>
<th>Telephone</th>
<th>Note</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

Note: This form should be filled out by interviewers.
Form 9  
Wave 5 FCTC Surveillance/ITC China Survey  
Interviewer Attendance Form (CN-ITC-2013-S-9)

Survey location: ________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Attendance</th>
</tr>
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<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Note: Each interviewer’s attendance to each training is marked by CDC staff. Attendance = “√”, Late arrival = “△”, absence = “×”

Date: yy mm dd
Form 10  
Wave 5 FCTC Surveillance/ITC China Survey  
Fieldwork Staff Registration Form （CN-ITC-2013-S-10）

Survey location: ________________

<table>
<thead>
<tr>
<th>Project Team</th>
<th>Name</th>
<th>Code</th>
<th>Telephone</th>
<th>Cell Phone</th>
<th>E-mail</th>
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</thead>
<tbody>
<tr>
<td>Project Manager</td>
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<td>Data Manager</td>
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<tr>
<td>Quality Controller</td>
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</table>

Interviewer

<table>
<thead>
<tr>
<th></th>
<th>Code</th>
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</tr>
</tbody>
</table>

Note: This form provides information about fieldwork, which is filled out by city coordinators. The information may change depending on situation on the field. This form should be sent to China CDC before the fieldwork. The codes are only for interviewers, each interviewer has one code, and there are total 20 codes for all interviewers.
Form 11 (Page 1)

ITC China Survey of the FCTC Surveillance: Wave 5 HH Recontact Form (CN-ITC 2013-S-15A)

<table>
<thead>
<tr>
<th>Form Serial Number 表格序列号</th>
<th></th>
<th></th>
<th>ID Code 身份代码</th>
<th>Street Code 街道代码</th>
<th>JWH Code 居委会代码</th>
<th>HH Code 家庭代码</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Code 城市代码</td>
<td>Serial Number 序列号</td>
<td></td>
<td></td>
<td>Code2 代码2</td>
<td>Code3 代码3</td>
<td>Code4 代码4</td>
</tr>
</tbody>
</table>

**HOUSEHOLD (HH) ADDRESS AND PHONE NUMBER 家庭住址和电话号码**

Address 地址: __________________________________________________________

______________________________________________________________________

HH Phone Number 家庭电话: ____________

Mobile phone number of a HH member 家庭成员的手机号码: ____________________________

Name 姓名: ____________________________

Mobile Number 手机号码: ____________________________

**INTERVIEWERS AND QUALITY CONTROL PERSONS 调查员和质控员**

<table>
<thead>
<tr>
<th>Role 身份</th>
<th>Name 姓名</th>
<th>Signature 签字</th>
<th>Date of Completion/Review 完成/质控日期</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewer 1  1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewer 2/JWH  2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Control person 质控员</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ID=**

**VISITING RECORD – HOUSEHOLD LEVEL**

<table>
<thead>
<tr>
<th>No. of visit</th>
<th>Date (yyyy/mm/dd)</th>
<th>Time</th>
<th>Notes</th>
<th>Household Outcome Code</th>
<th>Next Appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**HOUSEHOLD OUTCOME CODES**

1 = No one at home/Missed (after 4 attempts)  
2 = Household moved/Could not find  
3 = No one capable of answering/Language barrier  
4 = Proxy/Household Refusal  
5 = Incomplete (start, break-off)  
6 = No answer – survey period ends  
7 = Complete
Form 11 (Page 2)

Complete the outcome code for each individual who was selected to participate in the survey:

<table>
<thead>
<tr>
<th>ID</th>
<th>VISITING RECORD – INDIVIDUAL LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of visit</td>
<td>Date (yyyy/mm/dd)</td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**INDIVIDUAL OUTCOME CODES**

1 = Not at home/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

Complete the following sections for ALL households who either agreed to participate or refused. 下表对同意或拒绝接受调查的家庭均要使用：

**Key Informant’s Name** 主要调查者姓名：

**Total Household Members (including children)** 家庭成员总数（包括儿童）：

*Household Member = Has lived in the HH for the last month and has no plan to move out for the next year. 家庭成员 = 在该家庭至少居住一个月且无计划在未来一年内搬出.*

**Adults (18 or older) in Household by Smoking Status and Gender** 家中成年（18岁以上）吸烟和性别信息

<table>
<thead>
<tr>
<th>Number of Male Smokers</th>
<th>Number of Female Smokers</th>
</tr>
</thead>
</table>

**Number of Households Members with Unknown Smoking Status** 家庭成员人数情况未知

**Total Number of Adults** 成年人总人数

<table>
<thead>
<tr>
<th>Number of Children in the Household</th>
<th>Aged 0-5</th>
<th>0-5岁</th>
</tr>
</thead>
<tbody>
<tr>
<td>-------------------------------------</td>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>Aged 6-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-12岁</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aged 13-17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13-17岁</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Number of Children** 儿童总人数
### Form 11 (Page 3)

<table>
<thead>
<tr>
<th>Individual code at W4</th>
<th>Adult Name/姓名</th>
<th>Sex (M/F)性别</th>
<th>Date of birth/出生日期</th>
<th>Smoking Status at W4</th>
<th>Is this person planning to move from this address within the next year? (Check either 'YES' or 'NO')</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name 姓名</td>
<td>M/F 性别</td>
<td>YYYY年 MM月 DD日</td>
<td>smoker C</td>
<td>non-smoker N</td>
<td>Q - Quitter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notes</th>
</tr>
</thead>
</table>

### CONTACT PERSON 联系人:

(Someone not living in the household who is able to provide contact information at next survey if respondents move in; in case of a move, telephone number should be filled in here)

Name of contact person 联系人信息:  
Address 地址:  
Relationship to key informant 与主要调查对象的关系:  
Telephone number 电话号码:  

Complete the following section only if address will change:

### CHANGE OF ADDRESS INFORMATION (If Applicable)

<table>
<thead>
<tr>
<th>Name:</th>
<th>Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone:</td>
<td>Phone:</td>
</tr>
<tr>
<td>Mobile:</td>
<td>Mobile:</td>
</tr>
<tr>
<td>Address:</td>
<td>Address:</td>
</tr>
</tbody>
</table>
## Form 12 (Page 1)


### HOUSEHOLD (HH) ADDRESS AND PHONE NUMBER

<table>
<thead>
<tr>
<th>Address</th>
<th>Mobile phone number of a HH member</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HH Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

### INTERVIEWERS AND QUALITY CONTROL PERSONS

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Signature</th>
<th>Date of Completion/Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewer 1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Interviewer 2/JWH</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### VISITING RECORD – HOUSEHOLD LEVEL

<table>
<thead>
<tr>
<th>No. of visit</th>
<th>Date (YYYY/mm/dd)</th>
<th>Time</th>
<th>Notes</th>
<th>Household Outcome Code</th>
<th>Next Appointment Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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</tr>
</tbody>
</table>

### HOUSEHOLD OUTCOME CODES

- 1 = No one at home Missed (after 4 attempts)
- 2 = Household moved Could not find
- 3 = No one capable of answering Language barrier
- 4 = Proxy Household Refusal
- 5 = Incomplete (start, break-off)
- 6 = No answer survey period ends
- 7 = Complete
Form 12 (Page 2)

Complete the outcome code for each individual who was selected to participate in the survey:

<table>
<thead>
<tr>
<th>ID</th>
<th>VISITING RECORD – INDIVIDUAL LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of visit</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**INDIVIDUAL OUTCOME CODES**

1 = Not at home/Missed (after 4 attempts)  
3 = Health/mentally Incapable  
5 = Refusal  
7 = Complete  
2 = Language Barrier  
4 = Proxy Refusal  
6 = Incomplete (start, break-off)  
8 = Away for the entire survey period

---

**Adults (18 or older) in Household by Smoking Status and Gender**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Male Smokers</td>
<td></td>
</tr>
<tr>
<td>Number of Female Smokers</td>
<td></td>
</tr>
<tr>
<td>Number of Male Non-Smokers</td>
<td></td>
</tr>
<tr>
<td>Number of Female Non-Smokers</td>
<td></td>
</tr>
<tr>
<td>Number of Household Members with Unknown Smoking Status</td>
<td></td>
</tr>
<tr>
<td>Total Number of Adults</td>
<td></td>
</tr>
</tbody>
</table>

---

**Number of Children in the Household**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aged 0-5</td>
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<td>0-5</td>
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<tr>
<td>Aged 5-12</td>
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<tr>
<td>5-12</td>
<td></td>
</tr>
<tr>
<td>Aged 13-17</td>
<td></td>
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<tr>
<td>13-17</td>
<td></td>
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</tbody>
</table>

**Total Number of Children**

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>
## Form 12 (Page 3)

<table>
<thead>
<tr>
<th>Individual code</th>
<th>Adult Name姓成人姓名</th>
<th>Sex (M/F)性别</th>
<th>Date of birth出生日期</th>
<th>Is this person planning to move from this address within the next year? 是否计划在未来1年内搬到新住址？(Y for “yes”, X for “no” “是” 划√, “不是” 划×)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
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<td>MOVE修改</td>
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</tbody>
</table>

### CONTACT PERSON联系人:
(Someone not living in the household who is able to provide contact information at next survey if respondents move在调查对象搬家的情况下，可以在下次调查时提供其联系方式的人)

<table>
<thead>
<tr>
<th>Name of contact person联系人信息:</th>
<th>Address地址:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationship to key informant与主要调查对象的关系:</th>
<th>Telephone number电话号码:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Complete the following section only if address will change:**

### CHANGE OF ADDRESS INFORMATION (If Applicable)

<table>
<thead>
<tr>
<th>Name:</th>
<th>Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phone:</th>
<th>Mobile:</th>
<th>Phone:</th>
<th>Mobile:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address:</th>
<th>Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix F: Screener Survey Beijing, Shanghai, Guangzhou, Kunming, and Shenyang (Urban Sample)

**Instructions:**

1) This screener has four parts. Use the following table to determine which part of the screener you should use for each respondent:

<table>
<thead>
<tr>
<th>If the respondent is:</th>
<th>Use the following screener section:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A smoker from Wave 4</td>
<td>Part 1 – Recontact Smoker from Wave 4</td>
</tr>
<tr>
<td>A non-smoker from Wave 4</td>
<td>Part 2 – Recontact Non-Smoker from Wave 4</td>
</tr>
<tr>
<td>A quitter from Wave 4</td>
<td>Part 3 – Recontact Quitter from Wave 4</td>
</tr>
<tr>
<td>New to Wave 5</td>
<td>Part 4 – Replenishment</td>
</tr>
</tbody>
</table>

2) After the respondent responds to the question(s) in the relevant section, follow the routing instructions to determine which survey number they should then complete.

3) Ensure that the respondent reads and completes the consent form before beginning the survey.

4) Transfer the respondent’s ID # to the appropriate survey - correctly, clearly and double check.
Part I – Recontact Smoker from Wave 4

1) Carefully fill in the following identifying information:

   - Interviewer code: CODE0
   - City code: CODE1
   - Street code: CODE2
   - Ju Wei Hui code: CODE3
   - Household code: CODE4
   - Individual code: CODE5
   - Respondent name: CODE_NAME
   - Telephone number: CODE_TEL

2) Ask the respondent the following questions then proceed to the appropriate survey

   **VarName**

   QA31336  
   Do you currently smoke or have you quit? (Including factory-made cigarettes, hand-rolled cigarettes)

   1. I smoke → Go to Recontact Smoker Survey 1 (Use consent form)
   2. I have quit → Go to Quitter Survey 3 (Use consent form)
Part 2 – Recontact Non-Smoker from Wave 4

1) Carefully fill in the following identifying information:

<table>
<thead>
<tr>
<th>Interviewer code</th>
<th>CODE0</th>
</tr>
</thead>
<tbody>
<tr>
<td>City code</td>
<td>CODE1</td>
</tr>
<tr>
<td>Street code</td>
<td>CODE2</td>
</tr>
<tr>
<td>Ju Wei Hui code</td>
<td>CODE3</td>
</tr>
<tr>
<td>Household code</td>
<td>CODE4</td>
</tr>
<tr>
<td>Individual code</td>
<td>CODE5</td>
</tr>
<tr>
<td>Respondent name:</td>
<td>CODE_NAME</td>
</tr>
<tr>
<td>Telephone number:</td>
<td>CODE_TEL</td>
</tr>
</tbody>
</table>

2) Ask the respondent the following questions then proceed to the appropriate survey

<table>
<thead>
<tr>
<th>VarName</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI31345</td>
<td>Have you smoked 100 cigarettes or more in your lifetime?</td>
</tr>
<tr>
<td>1</td>
<td>Yes → Go to next question</td>
</tr>
<tr>
<td>2</td>
<td>No → Go to Recontact Non-Smoker Survey 2 (Use consent form)</td>
</tr>
<tr>
<td>BI31340</td>
<td>Do you currently smoke? (Including factory-made cigarettes, hand-rolled cigarettes)</td>
</tr>
<tr>
<td>1</td>
<td>Yes → Go to Replenishment Smoker Survey 4 (Use consent form)</td>
</tr>
<tr>
<td>2</td>
<td>No → Go to Recontact Non-Smoker Survey 2 (Use consent form)</td>
</tr>
</tbody>
</table>
Part 3 – Recontact Quitter from Wave 4

1) Carefully fill in the following identifying information:

<table>
<thead>
<tr>
<th>Interviewer code</th>
<th>CODE0</th>
</tr>
</thead>
<tbody>
<tr>
<td>City code</td>
<td>CODE1</td>
</tr>
<tr>
<td>Street code</td>
<td>CODE2</td>
</tr>
<tr>
<td>Residential code</td>
<td>CODE3</td>
</tr>
<tr>
<td>Household code</td>
<td>CODE4</td>
</tr>
<tr>
<td>Individual code</td>
<td>CODE5</td>
</tr>
<tr>
<td>Respondent name:</td>
<td>CODE_NAME</td>
</tr>
<tr>
<td>Telephone number:</td>
<td>CODE_TEL</td>
</tr>
</tbody>
</table>

2) Ask the respondent the following questions then proceed to the appropriate survey

<table>
<thead>
<tr>
<th>VarName</th>
<th>Question</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>QA31337</td>
<td>Have you been quit the entire time since the last time we talked to you?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Yes → Go to Quitter Survey 3 (Use consent form)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 No → Go to next question</td>
<td></td>
</tr>
<tr>
<td>QA31706</td>
<td>Was this a slip-up or are you still allowing yourself the occasional cigarette?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Slip-up → Go to Quitter Survey 3 (Use consent form)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 Allowing myself the occasional cigarette → Go to Recontact Smoker Survey 1 (Use consent form)</td>
<td></td>
</tr>
</tbody>
</table>
Part 4 – Replenishment (New Respondents)

1) Carefully fill in the following identifying information:

   Interviewer code
   CODE0

   City code
   CODE1

   Street code
   CODE2

   Ju Wei Hui code
   CODE3

   Household code
   CODE4

   Individual code
   CODE5

   Respondent name:
   CODE_NAME

   Telephone number:
   CODE_TEL

2) Ask the respondent the following questions then proceed to the appropriate survey

   **VarName**

   **BI31346** Have you smoked 100 cigarettes or more in your lifetime?
   
   1. Yes → Go to next question
   2. No → Go to Replenishment Non-Smoker Survey 5 (Use consent form)

   **BI31341** Do you currently smoke (Including factory-made cigarettes, hand-rolled cigarettes)
   
   1. Yes → Go to Replenishment Smoker Survey 4 (Use consent form)
   2. No → Go to Replenishment Non-Smoker Survey 5 (Use consent form)
ITC China Wave 5 Screener Survey for Xining, Changzhi, Tongren, Huzhou, and Yichun

**Instructions:**

<table>
<thead>
<tr>
<th>If the respondent is:</th>
<th>Use the following screener section:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New</strong> to Wave 5</td>
<td>Part 4 – Replenishment</td>
</tr>
</tbody>
</table>

1) Ask the respondent the questions in the Screener form. After the respondent responds to the question(s), follow the routing instructions to determine which survey number they should then complete.

2) Ensure that the respondent reads and completes the consent form before beginning the survey.

3) Transfer the respondent’s ID # to the appropriate survey - correctly, clearly and double check.
Replenishment (New Respondents)

3) Carefully fill in the following identifying information:

<table>
<thead>
<tr>
<th>Interviewer code</th>
<th>CODE0</th>
</tr>
</thead>
<tbody>
<tr>
<td>City code</td>
<td>CODE1</td>
</tr>
<tr>
<td>Xiang Zhen code</td>
<td>CODE2</td>
</tr>
<tr>
<td>Village code</td>
<td>CODE3</td>
</tr>
<tr>
<td>Household code</td>
<td>CODE4</td>
</tr>
<tr>
<td>Individual code</td>
<td>CODE5</td>
</tr>
<tr>
<td>Respondent name</td>
<td>CODE_NAME</td>
</tr>
<tr>
<td>Telephone number</td>
<td>CODE_TEL</td>
</tr>
</tbody>
</table>

4) Ask the respondent the following questions then proceed to the appropriate survey

<table>
<thead>
<tr>
<th>VarName</th>
<th>Question</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI31346</td>
<td>Have you smoked 100 cigarettes or more in your lifetime?</td>
<td>1  Yes → Go to next question</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2  No → Go to Replenishment Non-Smoker Survey 5 (Use consent form)</td>
</tr>
<tr>
<td>BI31341</td>
<td>Do you currently smoke (Including factory-made cigarettes, hand-rolled cigarettes)</td>
<td>3  Yes → Go to Replenishment Smoker Survey 4 (Use consent form)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4  No → Go to Replenishment Non-Smoker Survey 5 (Use consent form)</td>
</tr>
</tbody>
</table>
Appendix G: Information Letter and Consent Form

ADULT RESPONDENT INFORMATION LETTER
Chinese Center for Disease Control and Prevention, Ethics Clearance Number: XXXX
Human Research Ethics Committee, University of Waterloo Clearance Number: ORE17014

What is this research about?
Thank you for considering participation in the Wave 5 survey of the Tobacco Control Policy Evaluation in China Project. The ITC China Survey is a longitudinal survey of smoking behaviour, and knowledge, beliefs, opinions, and attitudes about smoking and tobacco use among adult smokers and non-smokers in China. The aims of this research are to 1) examine patterns of smoking behaviour in China, 2) learn more about the views of smokers on their smoking, and 3) determine smokers’ and non-smokers’ awareness of a range of things that happen in their community and how these affect their smoking. We are also interested in how culture affects smoking, so we will compare the views of Chinese smokers to those of smokers from Thailand, Malaysia, and Western countries such as USA, Canada, UK, and Australia.

Who is conducting this research?
The Chinese research team comprises:

- Dr. Jiang Yuan, Chinese Center for Disease Control and Prevention
- Dr. Feng Guoze, Chinese Center for Disease Control and Prevention
- Dr. Xiao Lin, Chinese Center for Disease Control and Prevention

The overall international project is being led by:

• Professor Geoffrey Fong (from Canada), and colleagues Dr. Michael Cummings, Dr. Gary Giovino (from the United States), Professor Mary Thompson (from Canada), Dr. Ron Borland (from Australia), and Professor Gerard Hastings (from the United Kingdom).

What are we asking of you?
The current survey is Wave 5 of an ongoing study designed to track smokers’ and non-smokers’ opinions over time. This research involves completing a face-to-face interview (approximately 30-45 minutes). You may already have completed a similar survey previous years. If you take part in the Wave 5 survey, we will contact you again to find out if you are willing to participate in two or more similar interviews, which will be done one or two years apart. The aims of the subsequent interviews are to find out if any of your opinions have changed over time.

Survey participation
Involvement in this research is voluntary and you are free to withdraw at any time or may decline to answer any of the questions. We encourage you to remain in the research study and complete all interviews. We will provide you with a token of appreciation for your time. You will be given a similar token of appreciation for each subsequent survey.

**Biomarkers sub-study**
Smokers who complete the survey in Guangzhou and Tongren may be eligible (18 years or older, a daily smoker, and a permanent resident in the city) to participate in a sub-study to examine the exposure of smokers and non-smokers to heavy metals (lead, calcium, and arsenic) from cigarette smoke and the environment. Participants in the sub-study will be asked to provide a sample of their urine which will be collected at the time of interview. Participants who are invited to participate in the sub-study will be provided with a separate information letter and a written consent form, and a separate token of appreciation.

**Risk**
There are no known or anticipated physical, psychological, social or cultural risks to participants in this study.

**Possible benefits**
This study will help the researchers to evaluate and understand the effects of national-level tobacco control policies in developing countries. Policy makers throughout the world will also be able to use this evidence to create and implement tobacco control policies for demonstrated effectiveness.

**Confidentiality and security of data**
All the information you provide is treated as strictly confidential, subject to legal requirements and limitations. It will be held in a secure storage area at the University of Waterloo, Canada that has a security certificate, is password protected, and is not shared with individuals or groups who are not associated with this survey can only be accessed by this research team. Data from the study will not be destroyed but any identifying information about you will be removed, so that your answers cannot be linked back to you. After two years, the survey data, but not your name or other identifying information, will be shared with researchers in other countries, as it will be used to make comparisons of smoking behaviour and attitudes across countries. For controlling and checking the data quality and consistency, we need to record the interview. This recording is strictly confidential and only the project manager and researchers will have access to the data.

**Concerns and complaints**
If you wish to discuss any questions or concerns about this research project, please contact: Jiang Yuan, Principal Investigator for China, Chinese Center for Disease Control and Prevention, No. 27 Nanwei Road, Xuan Wu District, Beijing 100050, P.R. China, Tel: (86-10)59361501

If you still have concerns, please contact the ITC Principal Investigator:
Professor Geoffrey T. Fong, Department of Psychology, University of Waterloo, 200 University Avenue West, Waterloo, Ontario, Canada, N2L 3G1 Tel: +1 519 888-4567 extension 33597.

This project has been reviewed by, and received ethics clearance through the China Center for Disease Control and Prevention, and a University of Waterloo Research Ethics Committee. In the event you have any comments or concerns resulting from your participation in this study, please contact:

Dr Ruotao Wang, Director of Internal Review Board, China Centers for Disease Control 27 Nan Wei Road, Xuan Wu District, Beijing, 100050, Tel: 010-63039085

or

Dr. Maureen Nummelin, Director, Office of Research Ethics, University of Waterloo, 200 University Avenue West, Waterloo, Ontario, Canada, N2L 3G1, Tel: 1-519-888-4567 extension 36005
ADULT RESPONDENT CONSENT FORM

Chinese Center for Disease Control and Prevention, Ethics Clearance Number: XXXX
Human Research Ethics Committee, University of Waterloo Clearance Number: ORE17014

I agree to take part in the above international research project conducted in China by a research
team based at the Chinese Center for Disease Control of the Ministry of Health. I have read the
participant information letter, which I will keep for my records. I am aware that:

- This project is being conducted for research purposes.
- Participation in the research is voluntary and that I am free to withdraw from the research
  at any time, or to withdraw any information previously supplied.
- Participation in this research involves completing a face-to-face interview lasting about 30-
  45 minutes today and at least two or more, done one or two years apart.
- I will be given a token of appreciation each time that I participate in the study.
- Only members of the research team will have access to any information I supply. After 2
  years, researchers interested in tobacco control will have access to the survey data, but
  this data will not include my name or any other identifying information.
- All the information I provide is treated as strictly confidential, subject to legal requirements
  and limitations.

I, ________________________________, give my consent to take part in this research.

PRINT NAME

Signed: …………………………………………………………. Date: …/……./……
(dd)/(mm)/(yyyy)

Witness Name: ………………………………………………………..

Witness Signature: ………………………………………………………..

Current address and contact details:

Address: ……………………………………………………………………………………………………………
Postcode: ……………………………

Telephone:

Home: ……………………………… Work: ………………………………. Mobile …………

Note: Please notify the research team using the postcard provided if there is a change in contact
details above before the end of the study
Appendix H: Cover Pages for Smoker and Non-smoker Survey at Tongren and Guangzhou for the Biomarkers Pilot Study

ITC China Wave 5 Adult Replenishment Smoker Questionnaire (Tongren)

DATE OF INTERVIEW : □□□□ YYYY □□ MM □□ DD

START TIME : □□ HOUR □□ MINUTE

Data Collection Sub-study Checklist

(please check appropriate box):

<table>
<thead>
<tr>
<th>Eligible (participated in Wave 5 survey)?</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreed to participate in pilot study?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data collection completed?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pilot Study Identification Number

Chinese Center for Disease Control and Prevention
ITC China Wave 5 Adult Replenishment Non-Smoker Questionnaire (Tongren)

Interviewer code
CODE0

City code
CODE1

Xiang Zhen code
CODE2

Village code
CODE3

Household code
CODE4

Individual code
CODE5

Respondent name: CODE_NAME

Telephone number: CODE_TEL

DATE OF INTERVIEW: □□□□ YYYY □□ MM □□ DD

START TIME: □□ HOUR □□ MINUTE

Data Collection Sub-study Checklist

<table>
<thead>
<tr>
<th>(please check appropriate box):</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible (participated in Wave 5 survey)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreed to participate in pilot study?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data collection completed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot Study Identification Number</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chinese Center for Disease Control and Prevention
ITC-China Wave 5 Adult Replenishment Smoker’s Questionnaire (Guangzhou)

**Interviewer code**

**City code**

**Street code**

**Ju Wei Hui code**

**Household code**

**Individual code**

**Respondent name:**

**Telephone number:**

---

**DATE OF INTERVIEW:** □□□□ YYYY □□ MMM □□ DD

**START TIME:** □□ HOUR □□ MINUTE

<table>
<thead>
<tr>
<th>Data Collection Sub-study Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td>(please check appropriate box):</td>
</tr>
<tr>
<td>Eligible (participated in Wave 5 survey)?</td>
</tr>
<tr>
<td>Agreed to participate in pilot study?</td>
</tr>
<tr>
<td>Data collection completed?</td>
</tr>
<tr>
<td>Pilot Study Identification Number</td>
</tr>
</tbody>
</table>

Chinese Center for Disease Control and Prevention
ITC-China Wave 5 Adult Recontact Non-Smoker’s Questionnaire (Guangzhou)

<table>
<thead>
<tr>
<th>Interviewer code</th>
<th>CODE0</th>
</tr>
</thead>
<tbody>
<tr>
<td>City code</td>
<td>CODE1</td>
</tr>
<tr>
<td>Street code</td>
<td>CODE2</td>
</tr>
<tr>
<td>Ju Wei Hui code</td>
<td>CODE3</td>
</tr>
<tr>
<td>Household code</td>
<td>CODE4</td>
</tr>
<tr>
<td>Individual code</td>
<td>CODE5</td>
</tr>
<tr>
<td>Respondent name:</td>
<td>CODE_NAME</td>
</tr>
<tr>
<td>Telephone number:</td>
<td>CODE_TEL</td>
</tr>
</tbody>
</table>

**DATE OF INTERVIEW:** □□□□ YYYY □□ MM □□ DD

**START TIME:** □□ HH □□ MM

<table>
<thead>
<tr>
<th>Data Collection Sub-study Checklist</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible (participated in Wave 5 survey)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreed to participate in pilot study?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data collection completed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot Study Identification Number</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chinese Center for Disease Control and Prevention
Appendix I: Interviewer Script for Recruiting Eligible Adult Smokers for the Biomarkers Pilot Study

A. Overview of Study

Say the following:

“The investigators for this pilot study are interested in analyzing the urine from smokers and non-smokers.

“Your urine would be tested to find out how much heavy metal may be in your body” “The results from these analyses would be linked to the responses to the questionnaire that you just finished in order to determine the possible relationship between public health policies, information from the samples of urine, and smoking behavior.”

B. Description of Data Collection

Say the following:

“Your participation would involve giving us sample of urine.”

SHOW the collection kit for the URINE and the directions for its use, and SAY

“For the urine collection, you would be asked to urinate in the container provided, making sure not to touch the inside of the container or its lid. You would then seal the container tightly, and give it to me so that we can store it until it is analyzed.”

C. Information on Remuneration

Say the following:

“If you agree to participate in this study, we will give you a token of appreciation for your time and effort.”

D. Obtaining Participant Consent

Say the following:

“Your participation in this study is your decision. There are no penalties for refusing to participate. Might you be interested in participating in this part of the study?”

Once the participant has provided you with a response, please follow the instructions below:

<table>
<thead>
<tr>
<th>Step 1: Does participant agree to participate in pilot study?</th>
<th>Step 2: How to proceed</th>
<th>Step 3: What to record on the Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Go ahead to CONSENT (see below)</td>
<td>Agrees</td>
</tr>
</tbody>
</table>
Interviewer Script for Obtaining Consent

Say the following:

“Before we collect the urine, you need to read the description of the study and the measures we are taking to ensure that the results will be strictly confidential. Please read it and let me know if you have any questions.”

“If you agree to participate you will be provided with a copy of the consent form that you may keep for your records.”

Please follow the instructions below in order to determine how to proceed:

<table>
<thead>
<tr>
<th>Step 1: Does participant agree to participate in the pilot study, and give written consent?</th>
<th>Step 2: How the interviewer/data collector should proceed</th>
<th>Step 3: What the interviewer/data collector records on the Questionnaire</th>
</tr>
</thead>
</table>
| Yes | 1. SIGN two copies of the Confirmation of Written Consent Form.  
2. Provide one copy of the signed consent form to the respondent.  
3. Keep one copy of the signed consent for yourself.  
4. Ask the respondent to provide the urine sample. | Agrees |
| No, and she/he is THE ONLY PERSON SELECTED from this household | Thank him/her and leave | Does not agree |
| No, but there is ANOTHER PERSON SELECTED from this household | Repeat script above, and then follow Steps 1 through 3 in this table for second person. | Does not agree for the first person |
Appendix J: Instructions for Providing Urine Samples

You will be required to collect some data from respondents during the urine collection procedure and will enter this data into the Biospecimen Module.

Remember to always use universal precautions when handling urine and all other biospecimens.

When the respondent is ready to give a urine specimen, follow the steps outlined here.

1. Let the respondent know that you will set up the urine collection materials.

   **It’ll just take a moment to set-up the materials needed for the urine collection.**

2. On the Biospecimen Module page, record the following information: Date, Time, Interviewer ID, and Respondent ID.
3. Retrieve a Urine Collection Kit from your supplies. The Urine Collection Kit is labeled with a unique Kit ID number. Record the Urine Collection Kit ID on the Biospecimen Module page.
   
   **Exhibit B-1. Urine Collection Kit**

4. Open the Urine Collection Kit and remove only the Urine Collection Instructions (Exhibit B-2).
5. Hand the respondent the instructions and ask them to read it.
Here are the instructions you will need to follow to collect your urine. Please read them and let me know if you have any questions?

**Exhibit B-2. Urine Collection Instructions**

**URINE COLLECTION INSTRUCTIONS**

1. Wash your hands with soap and water.

2. Lay the paper towel in the kit on a flat surface. Take the lid off of the collection container and place it on the paper towel. The inside of the lid should be placed face down on the paper towel. Don’t touch the inside of the lid or the inside of the collection container. Don’t allow the inside of the lid or the inside of the collection container to come in contact with any part of your body, clothing, or bathroom surfaces.

3. Urinate directly into the container. Collect all of your urine; don’t let any of it go into the toilet unless the container is full.

4. Replace the lid on the collection container immediately so that the urine is only briefly exposed to the air.

5. Use the paper towel to wipe any urine from the outside of the container.

6. Wash your hands with soap and water after collecting the sample.

7. Give the collection container back to the interviewer.
6. When the respondent is done reading the instructions, ask them again if they have any questions.
7. Go over the instructions with the respondent by referring back to the hardcopy instructions. Make sure they understand what they are supposed to do. Use the following talking points:
   - They need to collect their entire void; do not let any urine go into the toilet.
   - They must wash and dry their hands before beginning.
   - They must lay out the paper towel in their bathroom and as they open the container, they must lay the lid on the paper towel with the inside facing down.
   - They must urinate directly into the container and need to put the lid on as soon as possible after they are finished.
   - They should use the paper towel to clean up any urine that might be on the outside of the container, then wash their hands, and bring the container back to you.
8. Tell the respondent that you must ask them a few questions before they collect their urine.
   
   **Before we start the procedure, I need to ask you a few questions.**

9. Read the urine collection questions to the respondent and record their responses in the Biospecimen Module as follows.

   **When was the last time you urinated?**
   - Record the date and time of the respondent’s last urination.

   **When was the last time you had anything to eat or drink other than water?**
   - Record the date and time the respondent last ate or drank anything other than water.

   **Have you had cancer chemotherapy within the past 2 weeks?**
   - This question is being asked to help evaluate the biomarker test results. Record the participant’s response.

10. Give the urine collection container and the paper towel to the respondent and tell them to begin. (See Exhibit B-3.) Remind the respondent to be sure not to touch the inside of the lid or the container, to put the lid on the paper towel as shown in the instructions, and to screw the top back on as soon as possible.
11. While the respondent is in the bathroom collecting the urine specimen, put on your lab coat (if not already on). Clean your hands and put on gloves. Lay out the Safety Drape on a flat surface, then take out and place all other items from the kit on the drape and make sure all items are present. Exhibit B-4 shows all items in the kit.

Exhibit B-4. Urine Collection Kit Components

12. When the respondent returns with the urine specimen, thank the respondent for providing it and ask them to place it on the Safety Drape. They should place it down rather than handing it to you, to avoid the chance of dropping and spilling the specimen.

13. Check the lid of the urine collection container to make sure it is securely closed.

14. Inform the respondent that you need to take a minute or two to record some information. Record the Urine Collection Kit into the Biospecimen Module.

15. Record the collection time in the Biospecimen Module.
16. Record the status of the collection as “Collected,” “Attempted, Not Collected,” or “Not Collected” in the Biospecimen Module.
   a. For collected specimens, record “Collected.”
   b. If the respondent tried but was unable to collect any urine, record “Attempted, Not Collected.”
   c. If the respondent did not try to collect urine or if the specimen collection could not be done for another reason, record “Not Collected.”
   d. If your recorded “Attempted, Not Collected” or “Not Collected,” specify the reason the urine specimen was not collected. Choose the best response to explain the reason.
      i. If the respondent refused the urine collection, record “Respondent refused.”
      ii. If the respondent does not have time to provide the urine specimen, record “No time.”
      iii. If the respondent becomes ill during the visit or has an emergency that requires termination of the visit, record “Respondent ill/emergency.”
      iv. If the respondent is unable to understand or read the collection instructions for which translated materials and/or a translator is not available, record “Language issue.”
      v. If the respondent is unable to understand the collection instructions because of a cognitive or developmental impairment, record “Cognitive disability.”
      vi. If the collection supplies are inadequate, record “Defective/missing collection supplies.”
      vii. If the respondent is unable to provide the urine specimen due to a physical limitation, record “Physical limitations” and specify the condition.
      viii. If the urine specimen was not collected for a reason other than one that is listed, record “Other” and specify the reason.
17. Record any comments pertaining to the urine specimen collection in the Biospecimen Module.
18. Thank the respondent for giving the urine specimen and let them know that you need to take a few minutes to pack the specimen.

Thank you. We are done collecting your urine sample. I need to take a few minutes now to pack the sample to keep it cold while we finish our visit.

19. Check to make sure that the cap is tightly secured on the urine collection container again and that it has no leaks. Then follow these instructions to place the urine specimen in the bubble pouch, then in the transport bag.
   a. Place the tightly sealed urine collection container in the bubble pouch. (See Exhibit B-5.)
Exhibit B-5. Urine Collection Container in Bubble Wrap

b. Make sure absorbent pads are inside the bubble pouch. The absorbent pads will soak up any leakage from the urine collection container.

c. Place the bubble pouch with the urine collection container in the transport bag. Zip the transport bag shut.

20. Record the time you placed the urine specimen in the transport bag on the Biospecimen Module.
Appendix K: Fieldwork Feedback by Survey Location

Beijing
Beijing CDC started the Wave 5 fieldwork preparation in October 2013. For the first time, Beijing CDC contracted a survey company to conduct the fieldwork, instead of exclusively using CDC staff as in Wave 1-4. The survey company hired approximately two dozen interviewers. Most were middle-aged women with some survey experience. The main survey fieldwork training was conducted on February 2014. Both the survey firm staff and the district CDC survey coordinators attended one of the three training sessions.

Beijing conducted the Wave 5 fieldwork between April to October 2014. The Beijing survey team completed a total of 526 recontact smoker surveys (including quitter), 189 recontact non-smoker surveys, 254 replenished smoker surveys, and 38 replenished non-smoker surveys. The overall retention rate was 70.4%, 66.9% for smokers and 86.3% for non-smokers.

Compared to Wave 4, the retention rates of both smokers and non-smokers declined slightly. As usual, the smokers were less willing to participate in the survey than non-smokers in Wave 5. Other changes recorded in Wave 5 included: the survey firm interviewers were more flexible in scheduling, they were but less enthusiastic and less accountable; a few JWH did not cooperate in the fieldwork; there were quality control issues in a few districts or counties; the fieldwork funding was insufficient because the budget did not consider the additional cost of replenishment;

Beijing CDC may continue to work with the survey firm to conduct fieldwork for the next wave.

Guangzhou
A total of 1,006 surveys were completed, including 477 recontact smokers, 177 recontact non-smokers, 120 quitters, 189 replenished smokers, and 46 replenished non-smokers. The Guangzhou team reported that the retention rate was 76.2%. In addition, 50 urine samples were collected.

Guangzhou teams reported similar issues in the fieldwork as those in previous waves: the survey was too complicated; staff of some JWH did not cooperate well due to high turnover of their staff; the fieldwork was frequently interrupted by the unexpected public health crisis in China; and the retention rates were low.

Guangzhou CDC offered a few suggestions for future fieldwork: 1) additional funding from local government may be available if Guangzhou CDC knows the survey project plan in advance; 2) conducting the survey electronically is a better alternative; and 3) to obtain better cooperation from the selected respondents, it will be helpful to carry out education campaigns (e.g., pamphlet, poster, etc.) at the same time as the survey team conducts fieldwork.
**Kunming**

At Wave 5, Yunnan Health Education Institute (HEI) retained a survey firm instead of training newly recruited high school or college students as interviewers as done in Wave 3 and 4. The household enumeration training workshop took place in July 2013. The survey firm enumerated a total of 6000 households between July to October 2013.

Yunnan HEI did not continue to retain the survey firm to conduct the main survey fieldwork after realizing the firm did not use its regular survey staff, but followed its past practice of recruiting high school and college students for household enumeration. Wave 5 main fieldwork training workshop was held in September 2013 for the college students recruited directly by Yunnan HEI.

The survey fieldwork began in December 2013 and ended November 2014. A total of 1,005 surveys were successfully completed, including 679 recontact smokers, quitters and non-smokers and 326 replenished smokers and non-smokers. Kunming team reported that the overall recontact rate was 67%. The retention rate continued to remain low (67%), mainly due to refusal, as many respondents did not trust strangers, many respondents were pro-tobacco, there was a lack of cooperation by the JWH staff and a high turnover of the survey staff (200 trained, less than 100 participated in the fieldwork).

Yunnan HEI provided a few suggestions for the future waves: to have a better fieldwork planning; to have a better quality control; to make appointment with respondents by phone and SMS in advance; and to buy the gifts preferred by the respondents.

**Figure 1: ITC China Wave 5 Survey Fieldwork Activities at Kunming**
Figure 2: A thank you letter for respondents

感谢信

非常感谢您能够抽出宝贵的时间参与“中国履行世界卫生组织《烟草控制框架公约》昆明监测评价试点”项目调查。这项问卷调查将在昆明选取的1000户家庭中展开，您的配合使我们能够顺利完成这项艰巨的任务。

这份小小的礼物确实不足以表达我们对您的感激，只能用最真诚的祝福来表达我们的心意！祝您身体健康，幸福如意！明年的这个时候我们会再来拜访您，感谢您的支持。再见！

云南省卫生系统控烟领导小组办公室
云南省健康教育所
昆明市爱卫办
2013年12月

Figure 3: Community poster informing the residents of the upcoming ITC China survey in the Ju Wei Hu

通告

各位居民朋友：

为了解社区居民对烟草的知晓情况以及对烟草控制的态度和行为，我们将于2013年11月29日-12月30日期间开展中国履行世界卫生组织《烟草控制框架公约》监测调查。调查时间为同一至周日的下午4点至6点以及周四、五。

本次调查是国家卫生和计委云南省健康教育所实施的公共卫生项目内容之一，由云南省卫生厅控烟办、云南省健康教育所、昆明市卫生局、昆明市爱卫办以及社区居委会共同完成。调查结果将用于制定最新的公共卫生政策。每位参与完成调查的居民都将获得一份由云南省健康教育所提供的礼品。

在调查过程中，我们会采取严格保密措施，确保您的信息不会被泄露。调查人员将向您询问几个简单的问题（如您的姓名、是否吸食等）。这些信息仅用于本次调查。调查过程仅需3-4分钟，参与、完成此次调查不会对您生理、心理、社会或文化上产生任何风险。您提供的所有信息都将被严格保密。

调查人员将由工作人员的协助下进行。我们每一位工作人员都会配有专门的工作证。在实施调查时，您有权要求他们出示。

衷心感谢您的支持与配合！

云南省健康教育所

………………云南省卫生系统控烟领导小组办公室
Shanghai

The main fieldwork training workshop was held in February 26-27, 2014 to 70 fieldwork staff coming from 7 project areas. The survey fieldwork spanned from February to July 2014, covering 29 JWH in 16 Jie Diao. A total of 1,020 surveys were completed, including 619 recontact smokers (including quitters) and 163 non-smokers. Shanghai team replenished 187 smokers and 41 non-smokers. At Wave 5, the recontact rate for smokers was 76.2% and non-smokers was 79.5%. Quality control efforts involved onsite and cross-referencing between the survey questionnaires and the MP3 recordings.

Shanghai faced similar fieldwork issues as reported before: some first time participants refused to be voice-recorded for the interview; the interviewers found that the households living in gated communities were much more likely to refuse being interviewed; some JWH staff did not cooperate and there were substantial demographic changes (e.g., death, relocation, and illness) in some communities.

Shanghai CDC had a few suggestions for the future waves: 1) to shorten the time gap between the training workshop and the fieldwork start date; 2) to have mini-training sessions before the fieldwork starts; and 3) to honor the long-time cohorts with some souvenir in addition to the token of appreciation; some early wave cohorts were too old to continue to join the future study.

Figure 4: ITC China Wave 5 Survey Fieldwork Activities at Shanghai
Shenyang
The main fieldwork training workshop took place in March 28, 2014. A total of 45 staff from 5 district CDCs attended the training. The main survey fieldwork started on June 6, 2014 and ended on July 24, 2015. Shenyang team wasn’t able to finish interviewing the target number of approximately 800 smokers and 200 non-smokers at Wave 5. In the end, Shenyang only finished a total of 878 surveys, including 519 recontact smokers, 48 quitters, 166 recontact non-smokers, 120 replenished smokers and 25 replenished non-smokers.

Shenyang team reported the following issues in the Wave 5 fieldwork: the turn-over rates of Ju Wei Hui staff and fieldwork coordinators were very high, the survey team had to rely on the new but less experienced staff to continue the fieldwork; the survey staff frequently were pulled out of the survey to perform other duties with a higher priority; respondents were hard to contact due to relocation or death; some older cohorts complained that the survey was too long to complete; and the survey staff had difficulty in verifying some of the interviewer’s identity (if he/she was the same person in two waves).

Shenyang CDC team offered a few suggestions for the future waves: 1) remove the redundant questions in order to shorten the survey length; 2) retire the Ju Wei Hui of lower retention rates, which can be replaced by those supportive of ITC Project; 3) increase funding for the fieldwork; and take a picture or use the personal ID card to verify the interviewer’s identity to verify identification of the respondents.

Figure 5: Shenyang CDC’s Notice to Conduct the ITC China Wave 5 Survey
Huzhou
The household enumeration training workshop took place on February 26, 2014. A total of 6,000 households from rural areas were enumerated between March and April 2014. The main survey training workshop took place in May 5-6, 2014. The survey fieldwork began in May 2014 and ended in January 2015. A total of 1,000 surveys were successfully completed, including 799 replenished smokers and 201 non-smokers.

Huzhou team indicated a few challenges of conducting the fieldwork: the survey contained too many questions and took a long time to complete; the township level CDC or public health department staff were less motivated to help the fieldwork due to inability to get paid under the new Ji Xiao wage system (staff is paid by a fixed salary but cannot earn more for the additional work); most rural participants could not understand the standard Putonghua and the survey questions had to be translated into local dialects; some residents were not cooperative; some survey staff did not follow the survey procedure properly; and some MP3 devices did not work.

Huzhou team offered a few suggestions for the future waves: 1) to allocate more funding for the fieldwork; and 2) to modify the survey questions to reflect the reality of Chinese society (e.g. questions concerning bars, as there were none in the area).
Yichun
The household enumeration training workshop took place on July 8, 2013. The household enumeration in the rural areas completed between October and November 2013. The main survey training workshop took place in March 25-26, 2014. The survey fieldwork began in June 2014 and ended in July 2014. A total of 1,000 surveys were successfully completed, including 800 replenished smokers and 200 non-smokers.

Yichun team reported a few fieldwork challenges: the selected households were isolated geographically; the survey staff had to travel long distances—at times the interviewers had to stay overnight elsewhere to reach these households; substantial relocation happened after the household enumeration due to redevelopment; local residents migrated seasonally for work (half a year at home, half a year to city); participants reported that many questions were not appropriate for the rural setting (e.g. questions concerning bars, as there were none in the area).
Xining

The household enumeration training workshop took place on July 23, 2013. The household enumeration completed between November 2013 and January 2014. The main survey training workshop took place in April 2014. A total of 53 county, township and village coordinators participated into the training. The survey fieldwork began in June 2014 and ended in December 2014. A total of 950 surveys were successfully completed mostly conducted by the village doctors, including 750 replenished smokers and 200 non-smokers.

Xining team reported a few fieldwork challenges: some respondents complained that the survey questions were too difficult to understand; it was very difficult to get hold of rural residents because they were highly mobile (they usually worked in Xining during the day and returned home at night); many interviewees were not cooperative, either refusing to answer or answered “don’t know”; the staff at Huangyuan county managing the ITC Project were reckless, leading to many fieldwork issues; in most cases, the CDC staff were unable to follow the village doctors throughout the interviews, leading to some quality control issues; the literacy rate in the rural areas was so low that the interviewers had to ask the survey questions in local dialect and in some cases explained the meaning of the survey questions to the respondents.

Xining CDC gave a few suggestions for the future waves: 1) recommend conducting a pilot survey before going into the field; 2) bold or highlight some of the key words in the
survey questions; 3) adjust the interview schedule according the working schedule of the rural residents; and 4) carefully select gifts liked by the respondents to increase their cooperation.

**Figure 9: ITC China Wave 5 Survey Fieldwork Activities in Xining**

**Changzhi**

The household enumeration training workshop took place on July 22-23, 2013. The household enumeration completed between October and November 2013. The main survey training workshop took place in April 2014. The survey fieldwork began in May 2014 and ended in October 2014. More than 200 staff, including county CDC staff, fieldwork coordinators and village doctors participated in the survey. A total of 1,000 surveys were successfully completed mostly by the village doctor with assistance from the county CDC staff, including 800 replenished smokers and 200 non-smokers.

Changzhi team reported a few fieldwork challenges: only a few interviewers were trained directly by China CDC and others were trained by the Changzhi CDC; some interviewers’ interviewing skills were poor; and rural respondents reported that the survey questions were too difficult to understand.

Changzhi team offered a few suggestions for the future waves: 1) consider allocating additional funding to cover the travel and accommodation cost; and 2) to standardize the gifts for the interviewees.
Tongren
The household enumeration training workshop took place on February 26, 2014. The household enumeration completed between March and April 2014. The main survey training workshop took place in June 2014. The survey fieldwork began in June 2014 and ended in Nov 2014. A total of 1,017 surveys were successfully completed mostly by the village doctor, including 806 replenished smokers and 211 non-smokers.

Tongren team reported a few fieldwork challenges: there were not many working aged adults residing in rural areas; many village doctors were too old to conduct the entire interview; some interviewers could not handle the MP3 recording; respondents complained that the surveys were too long and too difficult to understand; natural disaster (flooding) made a few villages inaccessible to the fieldwork coordinators; all the enumerated samples were exhausted; and there was no educational campaign for the survey.
Tongren team offered a few suggestions for the future waves: 1) to carry out more educational campaigns before the survey; 2) to shorten the survey length; 3) to allocate more funding for the fieldwork; 4) to have more support from other governmental departments for the fieldwork; 5) consider allocating additional funding to cover the travel and accommodation cost; 6) to standardize the gifts for the interviewees; and 7) to carry out more educational campaigns before the survey.

**Figure 11: ITC China Wave5 Survey Fieldwork Activities at Tongren**
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