TCP India Survey

Wave 2 Technical Report

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1. Introduction

1.1 Background

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

The ITC Project is conducting parallel prospective cohort surveys with adult tobacco users in 21 other countries— Canada, United States, Australia, United Kingdom, Ireland, Thailand, Malaysia, South Korea, China, New Zealand, Mexico, Uruguay, Germany, France, the Netherlands, Brazil, Bangladesh, Mauritius, Bhutan, Kenya, and Zambia. Half of the ITC countries represent high income countries and the other half low- and middle-income countries.

In 2006, The ITC Project at the University of Waterloo partnered the Healis-Sekhsaria Institute for Public Health to create the Tobacco Control Policy Evaluation (TCP) Project. The TCP India Wave 1 Survey was conducted between August 2010 and December 2011. The TCP Wave 2 Survey was carried out from October 2012 to September 2013.

Note: The name Tobacco Control Project (TCP) is used in reference to the India Project instead of International Tobacco Control (ITC) Project, used with other countries, because in India the abbreviation ITC also refers to the Indian Tobacco Company.

1.2 Main Objectives

The broad objective of the TCP India 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 TCP India Project is essentially a part of the collection of LMICs participating in the ITC Project (the other countries are Thailand, Malaysia, Mauritius, China, Uruguay, Mexico, Kenya, Zambia, and Bangladesh). In addition to their contribution to evaluating the FCTC policies, these countries provide a basis for understanding the natural history of smoking and identifying factors that predict quitting among the smokers in LMICs.

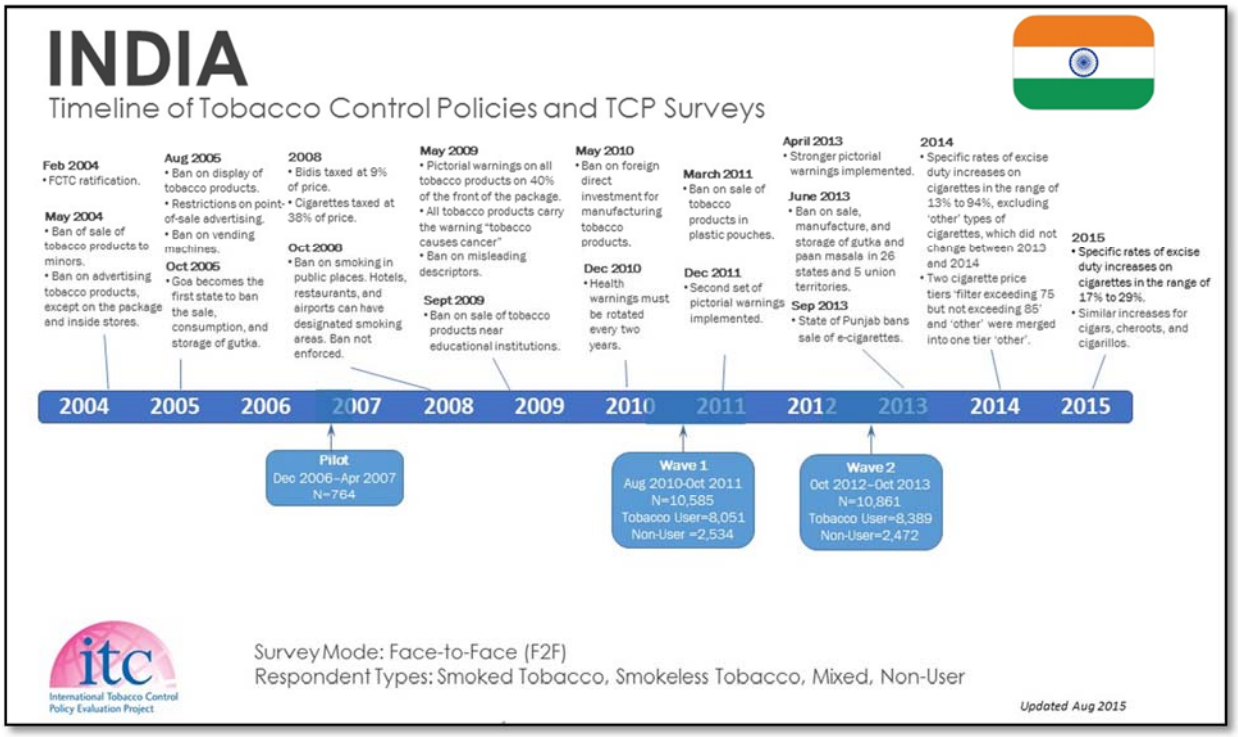
The objectives of the TCP India Project are:

- Effectiveness study aims:
  - To examine whether a policy introduced in India will affect self-reported tobacco use behavior (e.g., quit attempts, successful quitting, quit intentions) among tobacco users, as compared to tobacco users in countries where that policy is not being introduced;
  - To examine whether a policy introduced in India 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 India 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 India are being offset by compensatory behaviors (e.g., whether price increases lead to switching to discount brands 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). Of particular note will be whether FCTC policies serve to reduce disparities of tobacco use burden as a function of SES;
  - 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 India 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 India, 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 TCP India Project is a longitudinal cohort study. Respondents who participated in the Wave 1 Survey were re-contacted at the Wave 2 follow-up survey.

Figure 1: TCP India Project Timeline



1.4 The Research Team

The TCP India Project is conducted by researchers at the Healis-Sekhsaria Institute for Public Health in India, and an international team of ITC Project researchers including the Roswell Park Cancer Institute and the University of South Carolina in the United States, and project staff at the University of Waterloo in Canada.

The team at the Healis-Sekhsaria Institute for Public Health in India collaborate with key stakeholders in the states of Madhya Pradesh, West Bengal, and Bihar to successfully conduct the TCP India Survey in each state. The state collaborators are listed below:

Madhya Pradesh
Collaborating Institute: Madhya Pradesh Voluntary Health Association (MPVHA)
Head of Institute: Mr. Mukesh Kumar Sinha, Executive Director
Appointed State Coordinator: Mr. Bakul Sharma (Wave 1); Mr. Ashish Daniel and Mr. Aditya Nagrath (Wave 2)

West Bengal
Collaborating Institute: Cancer Foundation of India
Head of Institute: Prof. Maqsood Siddiqi, Chairman MC & Managing Director
Appointed State Coordinator: Dr. Soma Roy Chowdhury (Wave 1&2), Ms. Sutapa Biswas (Wave 2)

Bihar
Collaborating Institute: School of Preventive Oncology
Head of Institute: Dr. Dhirendra Sinha, Director

Appointed State Coordinator: Mr. Manibala Singh (Wave 1); Mr. Rajesh Verma (Wave 2)

Maharashtra

In Maharashtra the TCP India Project is conducted by the Healis-Sekhsaria Institute for Public Health which is based in Navi Mumbai.

2. Sampling Design

2.1 Sampling plan in Wave 1

The TCP India Survey was conducted in four states: Maharashtra, Bihar, West Bengal, and Madhya Pradesh (Figure 2). In each state, the principal or capital city (Mumbai in Maharashtra, Patna in Bihar, Indore in Madhya Pradesh, and Kolkata in West Bengal), and the surrounding rural areas were surveyed. In each state, the plan was to interview at least 2000 adult tobacco users and 600 non-users.

Within the urban part of each state, 10 Wards were selected with probability proportional to size, each ward having the same intended enumeration sample size in Wave 1. The intended sample size in each ward was 150 households. Within each Ward number 10 enumeration blocks (EBs) were selected at random, with the intention of using the first 4 of these in the sample, augmenting the list if necessary. The attempt was made to interview the maximum numbers of households from the 1st EB and continue with next EB, and so on, until the requirement of 150 households per Ward was achieved.

Where maps of the selected EBs were obtained, the dwellings in an EB were approached *in random order.* Each household was approached up to 2 times in an effort to enumerate (list the membership of) the household. Following enumeration, selection of individuals was to be made from the household roster, and the individuals were to be interviewed immediately or asked to give appointments. Up to 4 attempts were to be made to interview an individual unless that individual had refused to respond. This proceeded until the numbers for the EB had been reached.

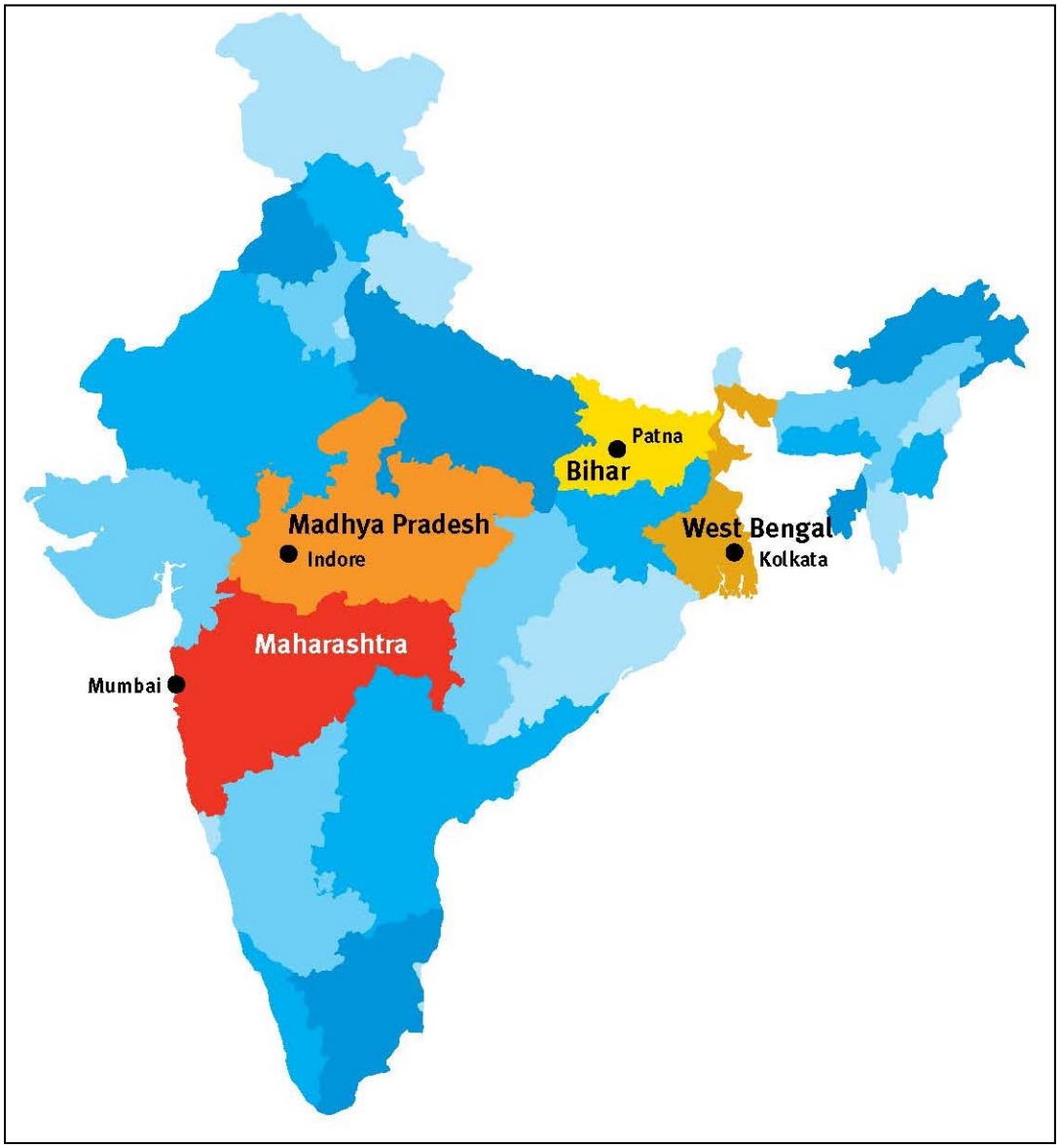
In each enumerated household, up to a maximum of 4 tobacco users were interviewed:

- If there were 4 or fewer adult (15 years of age or older) tobacco users in the household, all were to be interviewed.
- If there were more than 4 adult tobacco users in the household, all female adult tobacco users (up to a maximum of 4) were to be interviewed, and enough male adult tobacco users were to be interviewed to bring the total up to 4.
- When a selection of female or male tobacco users had to be made, because otherwise the total would be more than 4, those nearest the end of the enumeration list were be selected.

The plan was also to select for interviewing one adult non-user of tobacco at random (using a die) from every third household containing at least one adult non-user of tobacco.

Users of tobacco were purposely over-sampled in this design, and female users of tobacco were over-sampled a little more than male users of tobacco. Non-users of tobacco in tobacco-use households tended to have greater individual inclusion probabilities than non-users in non-use-of-tobacco households, and this was accounted for in weights construction.

Figure 2: TCP India Wave 2 Survey Sampling Areas



2.2 Household Sampling Plan at Wave 2

Where households were enumerated and randomly selected members in that household were interviewed at Wave 1 (W1), strong efforts were made to recontact those households and individuals.

Recontact within the enumeration blocks (EBs) in a Ward:

1. Made a list of the W1 households where members of the households were also interviewed.
2. Used the pre-filled Household Recontact Form (HRF) to approach the households in the list provided.

3. At each household, updated the household information with the head or informant of the household.
4. Interviewed recontact (Wave 1) respondents from the household.
5. Once all recontact interviews in W1 households in each EB in a Ward were completed, began the replenishment stage in that Ward.

Recontact within a Village in a rural area proceeded the same way. Once all recontact interviews in the Village were completed, the fieldwork team began the replenishment stage in that Village.

Household replenishment procedure: This procedure involved enumerating unused households and conducting interviews with new respondents to replace Wave 1 respondents who did not stay in the survey at Wave 2.

The fieldwork team tried to replenish the sample to bring up to the same totals within EBs and within Villages where possible.

A. Household replenishment procedure 1: (the normal procedure as per Wave 1)

Replenishment within an EB:

1. Made a list of households for the EB which were not enumerated in Wave 1.
2. Approached households in the list in random order as per the W1 procedure within the EB.
3. At each household, filled in a Wave 2 HEF from the information provided by the head or informant of the household.
4. Used the filled Wave 2 HEF to randomly select respondents who were tobacco users (using the method as per Wave 1) and in every third household to randomly select a non-user of tobacco.
5. Interviewed the randomly selected member(s) of the household.
6. Continued this procedure until the target numbers of tobacco users and non-users for the EB were reached.

B. Household replenishment procedure 2: (in cases where "extra" households were enumerated in Wave 1 with no interviews, to bring the total of enumerated households up to 2000 in the state)

Replenishment within an EB:

1. A list of the Wave 1 "extra" households (enumerated but with no interviews, after the close of interviewing) was provided in random order (Waterloo prepared the household lists for each EB in a Ward).
2. Approached households in the list from the top as per the W1 procedure within the EB.
3. At each household, filled in a Wave 2 HEF from the information provided by the head or informant of the household.
4. Used the filled Wave 2 HEF to randomly select respondents who were tobacco users (using the method as per Wave 1) and in every third household to randomly select a non-user of tobacco.
5. Interviewed the randomly selected member(s) of the household.
6. Continued this procedure until the target numbers of tobacco users and non-users for the EB were reached.

Carrying out the procedure of recontact household + replenishment procedure 1 and/or 2 for every EB unit the total sample size of 2000 tobacco users + quitters and 600 non-users of tobacco was to be reached in the state.

2.3 Recontact Challenges at Wave 2

An enhancement to Wave 2 survey fieldwork is that each HRF was pre-filled with the ID codes of each recontact household in the Form A and the name, gender and tobacco use status of the selected Wave 1 respondent(s). The enhancement helped to shorten the lengthy data cleaning process arising from having to enter hand-written ID codes. The version of Wave 1 recontact list used to pre-fill the HRFs was not the most recent one, however, and this resulted in some pre-filled ID codes not being correct and subsequently led to some recontact interviews being conducted with the wrong persons, i.e. persons who were not interviewed in the W1. In the end, 32 recontact interviews were conducted with the wrong persons and were treated as lost to follow up.

There was another unexpected consequence of using the old version of the recontact list, as the pre-filled household codes ended at given numbers and the replenishment household codes started at the next available household numbers. However, the newest version of the recontact list had household ID codes that extended beyond the start point of the new ones. This resulted in 2 replenishment respondents being mislabelled as recontact respondents. These two persons were treated as replenishment in the end.

2.4 Replenishment Challenges at Wave 2

During the planning of Wave 2 survey fieldwork, it was discovered that there were insufficient households left for the required number of replenishment in five EBs of four wards in West Bengal. However, in three of those enumeration blocks, maps were available; and thus replenishment could be conducted to obtain the required replenishment respondents.

Table 1 below shows the replenishment requirement in each EB with the availability status of households to replenish the required number in West Bengal.

1. In EB no. 9 (Ward 42), no extra HHs were available for replenishment due to redevelopment work. A pseudo map and new EB number 3 was created within EB 9. The replenishment was completed in the EB 3.
2. In EB 13 (Ward 110), no extra HHs were available for replenishment due to redevelopment work. EB 13 hence was replaced by EB 10 for replenishment.

Table 1: Replenishment required in West Bengal

Sl	Ward no.	EB no.	No. of replenishments Required		Replenishment Required/not Required	Adequate Extra HHs present/No extra HHs present/Inadequate extra HHs	Proposed extra EB with available map
			Tobacco users	*Non-users*			
1	11	3	0	0	Not Required		
2	11	33	4	1	Required	Adequate Extra HHs present	
3	11	38	4	0	Required	Adequate Extra HHs present	
4	11	40	0	0	Not Required		
5	27	12	2	0	Required	Adequate Extra HHs present	
6	27	14	0	0	Not Required		
7	27	23	4	0	Required		
8	27	24	0	0	No New Enumeration Needed		
9	42	7	1	0	Required	Adequate Extra HHs present	
10	42	9	5	1	Required	No extra HHs present	19
11	42	15	8	1	Required	Adequate Extra HHs present	
12	42	16	14	4	Required	Inadequate Extra HHs	28
13	59	24	2	0	Required	Adequate Extra HHs present	
14	59	54	4	1	Required		
15	59	60	4	1	Required	Adequate Extra HHs present	
16	59	78	5	1	Required	Adequate Extra HHs present	
17	69	8	2	5	Required	Adequate Extra HHs present	
18	69	10	7	0	Required	Adequate Extra HHs present	
19	69	29	1	2	Required	Adequate Extra HHs present	
20	69	58	4	1	Required	Adequate Extra HHs present	
21	81	10	4	3	Required	Adequate Extra HHs present	
22	81	46	3	1	Required	Adequate Extra HHs present	
23	81	57	8	2	Required	Adequate Extra HHs present	

Sl	Ward no.	EB no.	No. of replenishments Required		Replenishment Required/not Required	Adequate Extra HHs present/No extra HHs present/Inadequate extra HHs	Proposed extra EB with available map
			Tobacco users	*Non-users*			
24	81	68	3	0	Required	Adequate Extra HHs present	
25	95	22	2	2	Required	Adequate Extra HHs present	
26	95	25	2	4	Required	Adequate Extra HHs present	
27	95	34	8	2	Required	Adequate Extra HHs present	
28	95	43	4	2	Required	Adequate Extra HHs present	
29	110	12	0	0	Not Required		
30	110	13	12	4	Required	No extra HHs present	10
31	110	30	1	0	Required	Adequate Extra HHs present	
32	110	33	2	1	Required	Adequate Extra HHs present	
33	124	12	0	0	Not Required		
34	124	15	5	2	Required	Adequate Extra HHs present	
35	124	20	2	3	Required		
36	124	44	2	2	Required	Adequate Extra HHs present	
37	138	13	7	1	Required	Adequate Extra HHs present	
38	138	20	5	3	Required	Adequate Extra HHs present	
39	138	21	4	3	Required	Adequate Extra HHs present	
40	138	62	16	2	Required	Adequate Extra HHs present	

In light of these new situations, it was decided that recruitment should take place in the remaining number of replenishments from new EBs which have maps and which were among the list of 10 EBs selected per Ward in Wave 1 according to the procedure below.

2.5 Participant Selection and Consent for Replenishment Respondents

Identifying Eligible Members

There were four different categories of eligible respondents:

- Adult users of smoked tobacco
- Adult users of smokeless tobacco
- Adult users of both smoked and smokeless tobacco (mixed tobacco user)
- Adult non-users of tobacco (eligible only in every third household enumerated)

Selection Criteria for Survey Respondents

Tobacco Users

- **Up to four (4)** adults who were tobacco users (status = T, L, M) in the household were selected to be interviewed.
- If there were 4 or fewer adult (15 years of age or older) tobacco users in the household, all were interviewed.
- If there were more than 4 adult tobacco users in the household, all female adult tobacco users (up to a maximum of 4) were interviewed, and enough male adult tobacco users were interviewed to bring the total up to 4.
- When a selection of female or male tobacco users had to be made, because otherwise the total would be more than 4, a die was used to randomly select individuals. This would occur in the following cases:
    - when there were more than 4 female tobacco users in a household
    - when there were more than 4 adult tobacco users but fewer than 4 female tobacco users and you need to select from the male tobacco users in the household

In each of the above two cases, the interviewer renumbered the eligible individuals starting from the bottom of the list.

- In each of the above two cases, eligible individuals were renumbered starting from the bottom of the list, beginning with the number 1, and ending with the number 6 if there were six or more eligible to be drawn. (If there were more than six, some did not have a number.) One die was rolled, until a number that appeared face up corresponded to the new number of one of the individuals in Form B1. That person was selected for interview. The interviewers continued to roll the die as many times as necessary until 4 tobacco users had been selected.

Non-Users of Tobacco

- Up to one (1) adult non-user (status = N, or Q; someone who had never used tobacco or was a past tobacco user or was a tobacco user less often than monthly or has quit tobacco completely) was randomly selected for interview from every third household enumerated, whether it was a tobacco use household or a household with no tobacco user.
- If a male non-user was recruited from the first “1 in 3” household in the enumeration area, a female non-user was recruited from the next “third” household.
- If there was no non-user of the gender being sought at an eligible household (i.e., one of the “1 in 3” households enumerated from which a non-user can be selected), the interviewers were to wait until the next “third” household to try to select a non-user of that gender. This procedure was to be repeated when the next third household did not have a non-user of that gender to be selected. Random selection of a non-user would occur when there is more than one non-user of the gender being sought in the household.
- If there was more than one non-user of the gender being sought in the household, the non-users of that gender were numbered from 1 to 6 starting at the bottom, and one die was rolled. If the number that appeared face up corresponded to the new number of one of the individuals in Form B1, that person would be selected for interview.
- If any selected non-user:
    - was confirmed to be away for the entire period of the survey, or

- had an Individual Outcome Code that required substitution,

the die was rolled again to choose another non-user. If no such person existed, then this spot was to remain unfilled for the household.

- **A substitution** from the same household was allowed ONLY if a selected individual from the Non-User category (N status) had Individual Outcome Code 2 (Language barrier) or Code 3 (Health/mentally incapable) or Code 8 (Away from the household for the entire survey period).

Members with Unknown Status

- Household members that had an unknown tobacco status (coded **U**) were asked individually *"Have you ever used tobacco, either smoked or smokeless, at least once a month?"*
- All who answered yes were coded as a tobacco user (Status=M, T, or L) in Form B1 and could then be selected for interview.
- A member who answered NO, was coded as a non-user (Status=N). If a non-user had already been selected for interview, this individual could not be interviewed (coded N in the Selected column).
- However, if there was no other non-user selected, and the household was one of those "1 in 3" households from which a non-user could be chosen, that individual could be interviewed (coded Y in the Selected Column).

Important: If the individual with **U** status was not present during any of the household visits, s/he could not be selected, because the interviewer could not determine that person's tobacco use status. The "Status" column for this individual remained blank, and the individual received an "N" in the "Selected" column.

Information and Consent

Once a respondent was selected and the respondent agreed to participate, the information letter was provided and the consent obtained (See Appendix B).

The information letter is a letter about the research project. The instructions given to interviewers were as follows:

- Allow respondent to read the information letter, or if respondent is of low literacy, explain the research project using the information letter as a reference to explain the purpose of the research. Request the respondent, upon his/her consent to participate, to sign or provide a left thumb print on two copies of the consent forms.
- Provide the information letter and one copy of the consent form to the respondent.
- Attach the other copy of the consent form for the project to the completed screener and survey questionnaire.

3. Fieldwork: Enumeration, Recontact and Survey

The Wave 2 TCP India field work included survey interviews for both recontact (Wave 1) respondents and replenishment respondents, the latter being newly recruited at Wave 2 to replace Wave 1 respondents who were lost to attrition. Before conducting the replenishment interview, the household enumeration was carried out.

3.1 Household Enumeration

The household enumeration at Wave 2 was carried out in urban and rural areas to replace lost of respondents from Wave 1. The household enumeration collected information about:

- The tobacco use status of household members — smoked tobacco user/smokeless tobacco user/mixed tobacco user/non-user of tobacco.
- The socio-economic status of households.
- Gender, age, and language of household members.

As in the Wave 1 household enumeration, some basic information was collected for every adult member (aged 15 and above) in the household. A maximum of 2 attempts were made to enumerate each household. The time required to complete the Household Enumeration Form was 15 - 20 minutes.

3.1.1 Definition of a Household

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

- One person living alone
- A family sharing the same residence
- A family together with a roomer/boarder or employee who lives in the same residence
- A group of people who were not related but shared the same residence and cooking facilities or living expenses
- A private residential unit is any dwelling that is considered to be the usual place of residence for at least one of the persons living there
- A private residential unit may be attached to a business, such as in the case of a business operating out of the home
- The following were **NOT** private places of residence:
  - Addresses that are businesses only (the employees don't live there)
  - Institutions (such as schools, hospitals, nursing homes or prisons).

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

Definition of a Household Member

Individuals who are considered members of a household are:

- Those who live in the residential unit all year round
- Those whose permanent address is the residential unit, but are studying in another place and only come home during school holidays
- Those whose permanent address is the residential unit, but are working abroad or in another city and only come home once in a while

If a member is absent for the whole period of time when fieldwork is being conducted, but still comes home at least once a year, s/he could be enumerated but would not be selected for an

interview. Visitors (relations or friends) who are there for a short visit or a short term stay are not considered members of the household.

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 person may be:

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

The following are types of private homes:

Independent Home: An independent home does not share wall, roof, floor or entrance with another dwelling.

Duplex Home: A duplex home has separate facilities from another dwelling with which it shares a wall, roof, floor or entrance.

Apartment in a Building: An apartment is one dwelling with its own facilities in a set of dwellings within the same building.

Room in a Building: A room in a building shares with another dwelling in the same building a wall and/or roof and/or floor. The residents of the room may also share water and/or washroom facilities with other dwellings in the same building.

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 from home.

Room Built for Other Reason (not for dwelling): This is a built room not intended as a dwelling, but inhabited at the time of visit. In such a case, it was asked whether there was at least one person living in that place at that time, so that the place could be considered a dwelling.

Ineligible Dwellings

The survey was not conducted with individuals living in institutions, such as schools, hospitals, nursing homes, jails, NGOs, or religious institutions.

3.1.2 Enumeration Form

The enumeration form was developed to fulfill two major objectives–first, to determine the tobacco use status—smoked tobacco user, smokeless tobacco user, mixed tobacco user, or non-user of tobacco of each individual member in the household age 15 and older. The enumeration data allowed us to estimate the tobacco use prevalence by region, ethnicity, gender, and age. The second objective was to serve as a sampling frame for selection of individuals within the household.

3.1.3 Enumeration Sample

Table 2 Enumerated households by state at Wave 2

State	Households Enumerated	Individuals/Adults Enumerated
Maharashtra	1,005	3,473
West Bengal	181	536
Madhya Pradesh	176	670
Bihar	51	189
Total	**1,413**	**4,868**

3.1.4 Household Recontact Form

The HRF was used specifically for the cohort sample to collect and update the household information. This form could only be used with recontact households – only those people already interviewed at Wave 1 could get a recontact form. All household recontact forms were pre-filled with the Wave 1 cohort sample information (see Appendix A).

3.2 Survey Questionnaires

There were one household survey, three types of screeners, and five types of individual tobacco use surveys. One of the three screeners, and one of the five individual surveys were administered after the household survey was completed. In addition, all replenishment respondents were required to finish the replenishment supplement survey.

3.2.1 Household Survey

In each selected household that contained eligible adult members, the identified key Informant or head of Household was given a brief Household (H) survey which collected information about the household including income, expenditure, and wealth index. The purpose of the Household Survey was to measure the socio-economic status of the household, as well as affordability/purchasing power of tobacco.

If the Key Informant/Head of Household was available at the first household visit, the H survey was administered before the individual household members were selected and interviewed. If not, an appointment was made to come back to complete the H Survey.

3.2.2 Individual Survey Types

- **Replenishment supplement (Pp)**: For all replenishment respondents in combination with one of the individual surveys listed below.

- **Smoked tobacco user (T) survey**: For respondents who smoked tobacco.
- **Smokeless tobacco user (L) survey:** For respondents who used smokeless tobacco.
- **Mixed tobacco user (M) survey:** For respondents who smoked and used smokeless tobacco.
- **Non-tobacco-user (N) survey**: For respondents who did not smoke or use any tobacco.
- **Quitter (Q) survey:** For recontact respondents only who had quit all forms of tobacco completely since last wave.

All replenishment respondents were administered the Pp in combination with one of the individual surveys. The Pp had to ALWAYS be paired with the M, T, L, or N.

Recontact respondents were administered the M, T, L, N, or Q depending on their tobacco use status at Wave 2.

Screeners

After completing the household survey and before administering the appropriate questionnaire listed above, each selected respondent was first given a screener questionnaire.
There were three screeners. The screener for a recontact respondent was determined by whether he/she was a tobacco user in Wave 1. There was a single screener for all replenishment respondents.

- Screener 1: For the replenishment respondents
- Screener 2: For the recontact respondents who were tobacco users in Wave 1
- Screener 3: For the recontact respondents who were non- users of tobacco in Wave 1

Each form for Screener 2 or 3 was pre-filled with the household ID and individual ID of the recontact respondent (See Appendix C).

Each screener contained two questions that were asked to each respondent in order to determine current tobacco use status, and thus determine the correct survey to administer.

Content of Individual Survey

- Demographic questions (e.g., age, gender, religion, education, income, socio-economic status);
- Questions relevant to the policies of interest (policy-relevant, or “proximal” measures) of the FCTC (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).

Language of Survey

All surveys were translated into three different languages – Hindi, Bengali, and Marathi. An English version of the survey was made available for those respondents who wished to

complete the survey in English. The process of translation and questionnaire testing was carried out as follows.

Translation

- Questionnaires were translated into two varieties of Hindi, each for Madhya Pradesh and Bihar, Marathi, and Bengali by a translation agency named *HONYAKU REMEDIES* based in Mumbai.
- Verification – Healis and the respective state collaborators reviewed the respective translated versions to verify that the translation into each language was appropriate (i.e., the meaning of the English questions had not changed)

Pretest

- The Wave 2 questionnaires (all) were tested for at least 2 respondents of each type in the urban environment.
- The performance of the pretest questionnaire including question and response wording, probing instructions, and skip logic programming was reviewed, and length and time of interview were also reviewed.

Length of the Interview

The survey was conducted by a face-to-face interview with the respondent. It took approximately 90 minutes for tobacco users and about 45 minutes for the non-user of tobacco survey.

3.2.3 Exit and Compensation

At the end of the interview, all respondents were debriefed, remunerated, and thanked for their time. Equivalent tokens of appreciation presented to respondents for each state are listed below:

1. Maharashtra – Kitchen utensils (plate, bowl, spoon, glass)/Bath towel in wave 2
2. West Bengal – Wall clock, umbrella or calculator/Serving bowl/Insulated tiffin box.
3. Bihar – Kitchen spoon set
4. Madhya Pradesh – Mosquito nets/ Bath towel in Wave 2

3.2.4 Sample Size and Representation

The total interview sample consisted of 10,861 respondents. A total of 56 records, not appearing in the Wave 2 sample, were discarded arising from the inability to link them to the Wave 1 cohort or Wave 2 replenishment (see 2.2 for details), including 30 from Madhya Pradesh, 25 from West Bengal and 1 from Bihar.

Table 3 Smoking Status, Gender in States of the Sample

Sample	Smoked Tobacco User		Smokeless Tobacco User		Mixed Tobacco User		Quitters*		Non–users	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Maharashtra	162	2	778	743	87	0	132	111	230	454
Bihar	84	19	953	693	155	4	30	68	246	354
Madhya Pradesh	293	0	1,001	376	138	1	119	77	212	373
West Bengal	604	6	528	541	229	4	63	28	146	457
Grand Total	1,143	27	3,620	2,353	609	9	44	284	834	1,638

***any type**

Table 4 Smoking Status, Residence Status in States of the Sample

Sample	Smoked Tobacco User		Smokeless Tobacco User		Mixed Tobacco User		Quitters*		Non–users	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Maharashtra	117	47	1,036	485	80	7	121	122	509	175
Bihar	83	20	1,202	444	123	36	68	30	443	157
Madhya Pradesh	158	135	1,072	305	110	29	173	23	439	146
West Bengal	443	167	816	253	165	68	78	13	453	150
Grand Total	801	369	4,126	1,487	478	140	440	188	1,844	628

*any type

Table 5 Retention Rates by tobacco use status between Wave 1 and Wave 2

Sample	Tobacco Use Status	Wave1					Wave 2	
		Total	Lost		Retained		Recruited	Total
		n	n	(%)	n	(%)	n	n
Maharashtra	User	2,051	526	25.6	1,525	74.4	480	2,005
	Non-user	688	152	22.1	536	77.9	158	694
Bihar	User	2,008	66	3.3	1,942	96.7	64	2,006
	Non-user	600	22	3.7	578	96.3	22	600
Madhya Pradesh	User	1,992	164	8.2	1,828	91.8	163	1,991
	Non-user	621	51	8.2	570	91.8	29	599
West Bengal	User	2,000	155	7.8	1,845	92.3	141	1986
	Non-user	625	50	8.0	575	92.0	45	620
Overall	Users	8,051	911	11.3	7,140	88.7	848	7,988
	Non-user	2,534	275	10.9	2,259	89.1	254	2,513

Table 6 Retention Rates by gender between Wave 1 and Wave 2

Sample	Gender	Wave1					Wave 2	
		Total	Lost		Retained		Recruited	Total
		n	n	(%)	n	(%)	n	n
Maharashtra	Male	1,480	478	32.3	1,002	67.7	387	1,389
	Female	1,259	200	15.9	1,059	84.1	251	1,310
Bihar	Male	1,469	48	3.3	1,421	96.7	47	1,468
	Female	1,139	40	3.5	1,099	96.5	39	1,138
Madhya Pradesh	Male	1,771	143	8.1	1,628	91.9	135	1,763
	Female	842	72	8.6	770	91.4	57	827
West Bengal	Male	1,608	148	9.2	1,460	90.8	110	1,570
	Female	1,017	57	5.6	960	94.4	76	1,036
Overall	Male	6,328	817	12.9	5,511	87.1	679	6,190
	Female	4,257	369	8.7	3,888	91.3	423	4,311

Table 7 Retention Rates by residence between Wave 1 and Wave 2

Sample	Residence	Wave1					Wave 2	
		Total	Lost		Retained		Recruited	Total
		n	n	(%)	n	(%)	n	n
Maharashtra	Urban	1,905	507	26.6	1,398	73.4	465	1,863
	Rural	834	171	20.5	663	79.5	173	836
Bihar	Urban	1,921	85	4.4	1,836	95.6	83	1,919
	Rural	687	3	0.4	684	99.6	3	687
Madhya Pradesh	Urban	1,972	192	9.7	1,780	90.3	172	1,952
	Rural	641	23	3.6	618	96.4	20	638
West Bengal	Urban	1,958	166	8.5	1,792	91.5	163	1,955
	Rural	667	39	5.8	628	94.2	23	651
Overall	Urban	7,756	950	12.2	6,806	87.8	883	7,689
	Rural	2,829	236	8.3	2,593	91.7	219	2,812

3.2.5 Fieldwork Strategies by State

Maharashtra
Fieldwork was launched in Maharashtra on October 9, 2012 and ended on September 15, 2013. A sampling sheet was prepared for Maharashtra. A reduced sampling frame was used in the urban wards with gated communities, where residential areas were converted to commercial complexes, and in residential areas where demolition work was in progress for redevelopment.

Table 3: ID Numbers of selected research areas – Maharashtra (Census of India 2001)[1]

State	U / R	District	Sub district / Ward	Village / EB
27	U = 1 and R = 2	21, 22, 23	**Sub districts:** 8, 12, 10 **Wards:** 527, 732, 934, 1256, 1564, 1668, 1975, 2080, 2282, 2487	**Villages:** 2729600, 2736700, 2789800, 2741100 **EBs:** 225, 1001, 170, 572, 46, 26, 20, 27, 85, 146, 390, 327, 3, 39, 70, 12, 357, 303, 78, 164, 111, 114, 49, 81, 20, 332, 166, 99, 99, 51, 46, 47, 93, 442, 613, 83, 271, 555, 723, 350.

Pseudo-Maps:
In wards 2282 and 2487, maps were not available. The project managers constructed pseudo-EBs and selected the required numbers of pseudo-EBs at random.
Project managers selected 4 EBs for ward number 2487 by adopting the following procedure (the same strategy was used for ward number 2282)

- Downloaded a map of ward number 2487. The almost square area of the map was divided into blocks with 19 divisions in each direction which encompassed 361 units, which were numbered from 1-361.
- Four numbers (99, 166, 332, and 20) were selected at random using a random number generator.
- EB maps of selected EBs were printed from magnifications of ward maps.
- Interviewers visited each EB and created detailed handmade maps.

Replacement of rural area

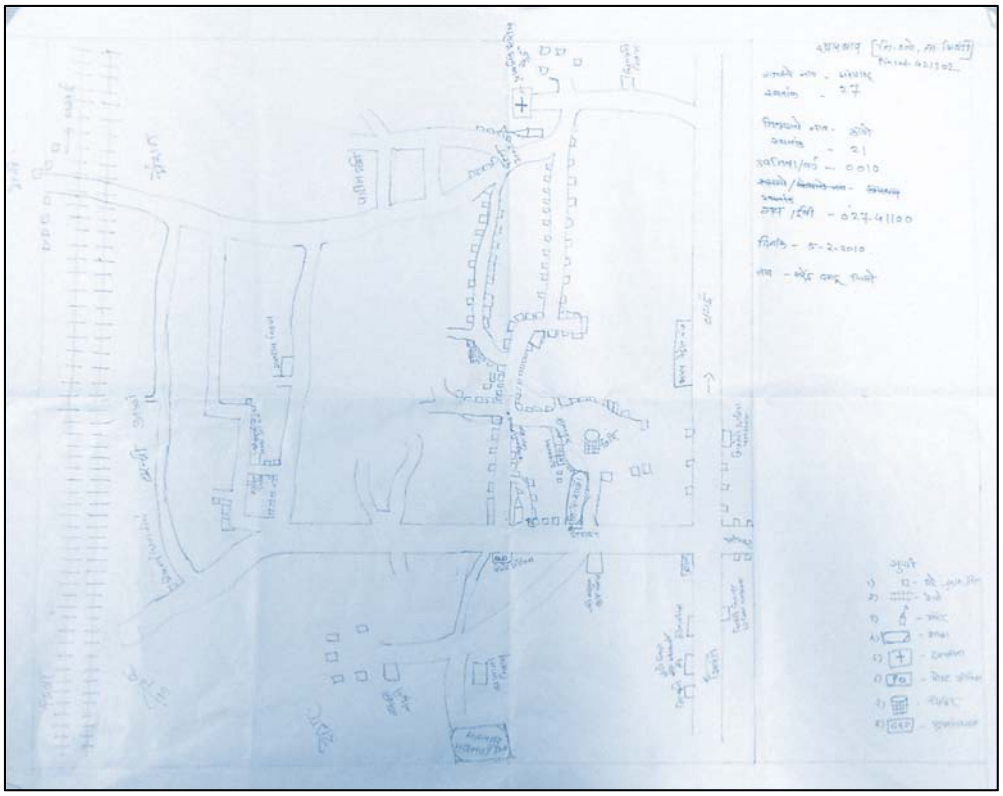
- According to the 2001 census 'Bolinj 02730900' was a village (rural area) in the sub-district Vasai. At the time of W1 fieldwork, it was affiliated under "Vasai Virar Municipal Corporation" as a part of an urban area.
- Bolinj was substituted with another village, 'Kharbav 02741100' from the remaining large villages with probability proportional to size.

The fieldwork team needed to enumerate additional 475 new households to obtain the required sample size of tobacco users and non-users of tobacco.

Final counts in Maharashtra:

- Total HHs enumerated – 475
- Total HRF=1,239
- Tobacco users completed –2,015
- Non-users of tobacco completed –684

Figure 2: Sample of a Pseudo Map in Maharashtra



Bihar

Fieldwork was launched in Bihar November 26, 2012 and ended on September 7, 2013. A sampling sheet was prepared for Bihar. All 42 wards from the Patna Urban area were reachable and included in sampling. Urban EB maps were obtained from the Census office in Patna; village maps were drawn by field interviewers.

Table 4: ID Number of selected research areas – Bihar (Census of India 2001)[1]

State	U / R	District	Sub district / Ward	Village / EB
10	U = 1 and R = 2	28	**Sub districts:** 2, 3, 5 **Wards:** 1, 3, 6, 9, 14, 17, 21, 24, 31, 37	**Villages:** 2940500, 2935200, 2939200, 2946800 **EB:** 168, 103, 269, 75, 453, 475, 499, 483, 825, 814, 899, 822, 340, 349, 358, 352, 1427, 1478, 1443, 1515, 1723, 1725, 1694, 1710, 34, 21, 7, 17, 23, 15, 6, 9, 2719, 2688, 2698, 2705, 2990, 2951, 2995, 2958

Unavailability of EB maps:

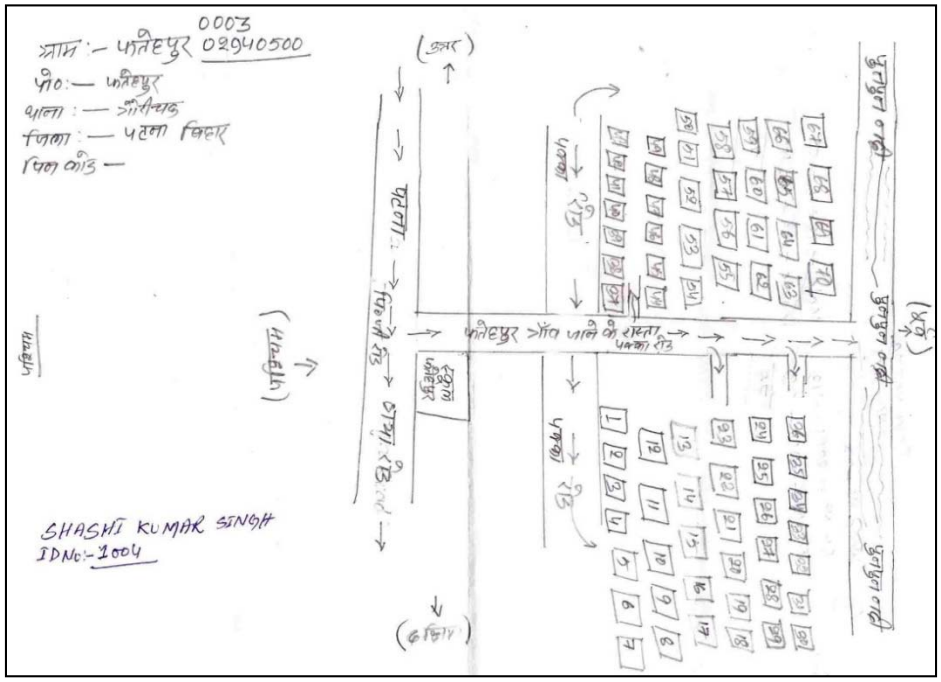
- EB maps for Wards 9, 21and 24 were unavailable.
- The team used alternate documents to display EB boundary information.
- According to the 2011 census, Ward 9 changed to 14; Ward 21 changed to 31; and Ward 24 changed to 35
- The team obtained new boundary information for Ward 9 and the selected EBs from the Patna census office. Based on this information, a map of the selected EBs was sketched.
- The team was only able to obtain ward boundaries of Ward 21(changed to 31) and Ward 24 (changed to 35). Satellite maps (pseudo-EB maps) of these Wards created by using the Ward boundaries provided by Census office were used.

The team was able to recontact 1,192 households participating in the Wave 1 Survey, therefore only needed to enumerate 44 new households, to obtain the required sample size of tobacco users and non-users of tobacco.

Final counts in Bihar:

- Total HHs enumerated –44
- Total HRF=1,192
- Tobacco users completed –2,006
- Non-users of tobacco completed – 600

Figure 3: Sample of a Village Map in Bihar



West Bengal

Fieldwork was launched in West Bengal on November 6, 2012 and finished on August 30, 2013. A sampling sheet was prepared for West Bengal.

Table 5: ID Number of selected research areas – West Bengal (Census of India 2001)[1]

State	U / R	District	Sub district / Ward	Village / EB
19	U = 1 and R = 2	11, 17	**Sub districts:** 10, 12, 17 **Wards:** 11, 27, 42, 59, 69, 81, 95, 110, 124, 138,42, 81	**Villages:** 1691400, 1707800, 1713200, 1748000 **EB:** 38, 40, 33, 3, 14, 23, 24, 12, 9, 3, 7, 16, 15, 24, 54, 78, 60, 15, 20, 44, 12, 21, 13, 20, 62, 8, 58,10, 29, 10, 57, 10, 46, 68, 22, 34, 25, 43, 13, 12, 33, 30

Maps used in wave 1, in addition to addresses mentioned on the HRF, were used to locate the HHs for wave 2 in urban as well as rural areas. However, for EBs in the urban area where replenishment was required and HHs were either demolished or were insufficient, a new EB (from the list of 10 EBs which had map available) was selected and replenishment was completed.

Final counts in West Bengal:

1. Total HHs enumerated –124
2. Total HRF-1,547
3. Tobacco users completed –2,003
4. Non-users of tobacco completed –603

Madhya Pradesh

Fieldwork in Madhya Pradesh began on November 16, 2012 and ended on June 3, 2013.

Table 6: ID Number of selected research areas (Census of India 2001)[1]

State	U / R	District	Sub district / Ward	Village / EB
23	U = 1 and R = 2	26	**Sub districts:** 3, 4 **Wards:** 4, 8, 11, 20, 29, 37, 50, 56, 63, 69	**Villages:** 3184900, 3195500, 3210400, 3211600 **EB:** 101, 118, 132, 115, 330, 323, 299, 335, 536, 521, 537, 530, 824, 812, 813, 810, 1036, 1044, 1041, 1040, 1266, 1286, 1257, 1271, 1541, 1551, 1532, 1530, 1760, 1752, 1763, 1773, 2017, 2006, 2005, 1996, 2259, 2274, 2262, 2277

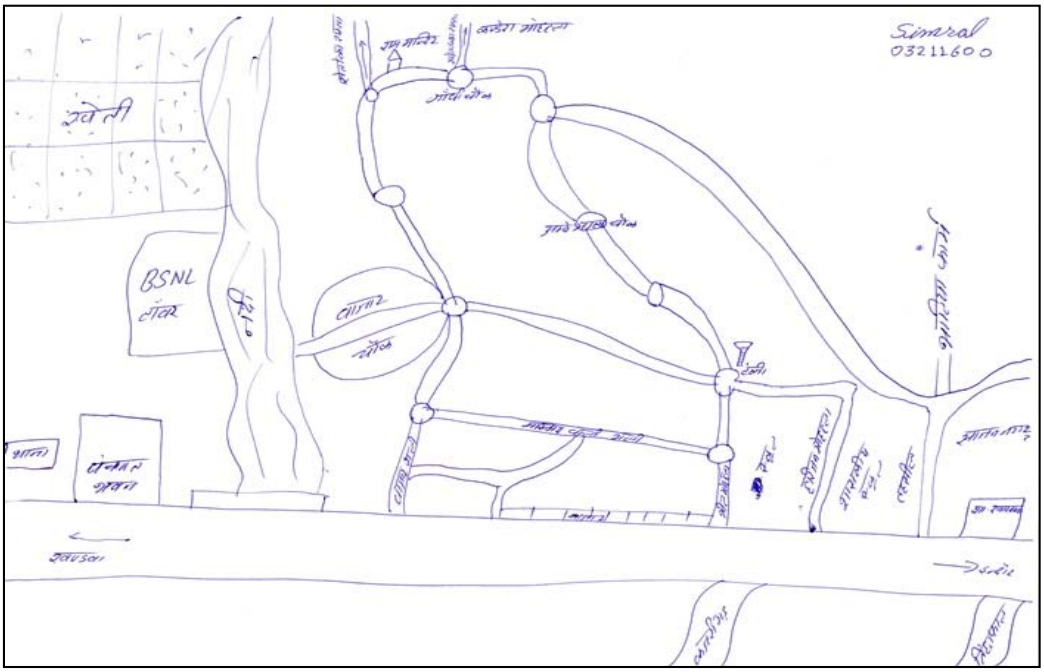
All 40 EB maps were obtained from the Census office. Indore and village maps were drawn by field interviewers.

The team was able to recontact 1,395 household participated in the Wave 1 Survey therefore only needed to enumerate 122 new households, to obtain the required sample size of tobacco users and non-users of tobacco.

Final counts in Madhya Pradesh:

1. Total HHs enumerated –122
2. Total HRF- 1395
3. Tobacco users completed –2,005
4. Non-users of tobacco completed –585

Figure 4: Sample of a Village map from Madhya Pradesh



3.2.6 Contingencies in Survey Fieldwork

- In the urban areas few HHs/areas were demolished. At the same time, there were changes in the ward numbers and their boundaries as per enumeration in Census 2011. So in case of necessity of replenishment, some of the EBs didn't have enough HHs to approach. In such cases, Field Investigators had to go with the addresses/land marks from the old maps into the area and locate the old area. They had to re-map the area for completion of the replenishment (in 3 EBs of 2 wards as mentioned earlier)
- Data collection in rural areas was difficult as most of the respondents were occupied in the fields. In particular, it was difficult to find male respondents during the day.
- Interviewers had to conduct surveys at inconvenient hours to accommodate busy urban schedules.
- Some areas did not offer appropriate restaurant options, necessitating interviewers to carry food for the day.
- On occasions when the interviews extended into late hours of night, interviewers had to spend the night in schools due to the absence of either appropriate transportation or accommodation.
- Rural and illiterate respondents were unfamiliar with words like bar, restaurant, or advertisements – these needed to be explained in depth.
- Most respondents were uncomfortable answering the section on psychosocial beliefs.
- Many villagers were reluctant to sign the consent forms due to a misconception that signing any consent would force them to give up their land.
- Disruptions in fieldwork occurred due to the monsoons, festivals etc.

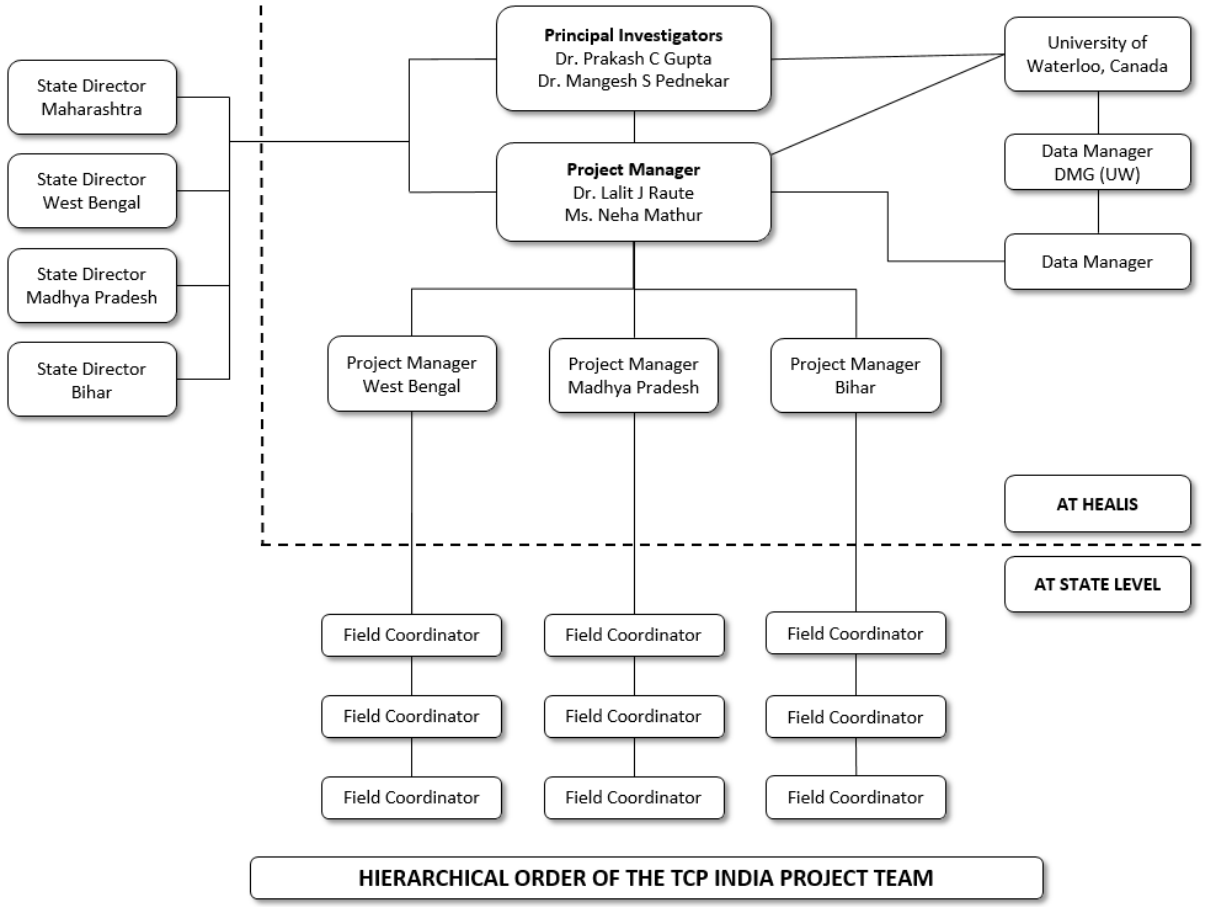
5. Monitoring and Quality Control

4.1 Management of Fieldwork Teams

The project fieldwork team consisted of seven levels of management, including:

- **Country Project Manager:** responsible for overseeing all aspects of the survey fieldwork, administrative duties, and communicating with the TCP India team in Waterloo. The country project manager is also responsible for Maharashtra.
- **3 State Project Managers:** responsible for liaising with the Healis investigators, country Project Manager, and teams from their respective state. The State Project Managers were also responsible for overseeing all aspects of the survey fieldwork in their respective states, providing guidance and documents as necessary.
- **3 State Collaborators/Project Directors from Bihar, Madhya Pradesh, and West Bengal:** duties included training the field supervisors and interviewers and assigning them to survey areas, obtaining supplies, managing all forms, and reporting on fieldwork progress.
- **Data Manager:** responsible for collecting and checking all completed forms and overseeing the data entry process. In addition, four data entry operators and two data analysts were engaged to conduct the data entry, checking, cleaning, and compilation.
- **3 Field Coordinators:** duties included training the field supervisors and interviewers and assigning them to survey areas, obtaining supplies, managing all forms, and reporting on fieldwork progress.
- **3 Field Supervisors:** responsible for contacting local authorities and monitoring the interviews.
- **Interviewers:** responsible for executing the TCP India Surveys in the field.

Figure 5: Hierarchical Order of the TCP India Project Team.



4.2 Interviewer Training

Training Workshops

In each state, the Interviewers and Field Supervisors were trained by the TCP India Project Manager and appointed State Project Manager from Healis-Sekhsaria Institute for Public Health, with the respective State Collaborator in a 4-day training session. PowerPoint presentations were prepared to review each aspect of the enumeration and survey procedures. During the training, the enumerators and Field Supervisors engaged in mock interviews with each other and practised filling out enumeration forms. They were given feedback to improve their interviewing skills. Details about the training workshops in each state are as follows:

- In **Maharashtra**, the interviewer training workshop was conducted at the Healis Sekhsaria Institute for Public Health, Navi Mumbai between April 16 and 20, 2012. Dr. Prakash Gupta, Dr. Mangesh Pednekar, Dr. Lalit Raute, Ms. Hemlata Shedge, Dr. Pratibha Pawar, Dr. Namrata Puntambekar presented at the workshop which was attended by the project coordinators from four states, 2 field supervisors and 7 field interviewers.
- In **Bihar**, The interviewer training workshop was conducted at the School of Preventive Oncology, Patna between September 13 and 17, 2010. Dr. Namrata Puntambekar and Ms. Hemlata Shedge presented at the workshop which was attended by 2 field supervisors and 10 field interviewers.

- In **West Bengal**, The interviewer training workshop was conducted at the Cancer Foundation of India, Kolkata between September 24 and 28, 2012. Dr. Mangesh Pednekar, Dr. Pratibha Pawar presented at the workshop which was attended by a Project Coordinator, a Field Supervisor and 10 field interviewers.
- In **Madhya Pradesh**, The interviewer training workshop was conducted at the Madhya Pradesh Voluntary Health Association, Indore between August 16 and 20, 2010. Dr. Lalit Raute, presented at the workshop which was attended by 2 Field Supervisors and 10 field interviewers.

Training Manuals

A manual on how to recontact or enumerate a household and conduct a survey interview was written to train survey interviewers before the survey fieldwork began.

4.3 Monitoring & Quality Assurance

Communication

- E-mail and telephones were used to communicate on a daily basis.
- All project managers kept files of written communications and changes as a record of correspondence.

Project meetings

- Formal progress meetings among the TCP India team members at Healis-Sekhsaria Institute for Public Health were held on a weekly basis (every Tuesday 2.30 PM) over the duration of the project.
- Ad-hoc meetings were arranged to deal with specific technical, fieldwork issues as they emerged.

Reporting

- For the first 3 months of survey fieldwork, progress reporting was conducted on a weekly basis.
- After 3 months, reporting was conducted on a bi-weekly basis.

Cross Checking

- To ensure that the fieldwork protocols were being followed, the team conducted 5% random checks of field surveys in March 2011.

Checking of HRF – Form B1 and B1'

- For the initial 3-4 four month, photocopies of ALL HEFs - form B1 and B1' - were sent to Healis every 2 months . These forms were checked by project managers for correct selection procedures and cross checked with fieldwork progress reports.

Visits to the states

There was no visit to the states to monitor fieldwork in Wave 2

4.4 Handling Special Situations

Private interviews
Adult participants were interviewed alone whenever possible. If another person insisted on being present, the respondent needed to agree for the interview to proceed.

Proxy Interviews
A proxy interview is an interview conducted with another knowledgeable member of the household on behalf of the selected respondent. Proxy interviews were not allowed in the TCP India Survey.

Respondent Not Available
If a respondent was unavailable, an appointment time (hard appointment) was rescheduled to interview that respondent.

Substitution
A substitution from the same household was allowed ONLY if a selected member from the Non-User category (N status) had an Individual Outcome Code 2 (Language barrier) or Code 3 (Health/mentally incapable) or Code 8 (Away from the household for the entire survey period).

5. Weights Construction

5.1 Wave 1 Sampling

The sampling plan was as follows, in each of the four states:

Maharashtra
Bihar
Madhya Pradesh
West Bengal

In each state, we surveyed in the principal or capital city (Mumbai in Maharashtra, Patna in Bihar, Indore in Madhya Pradesh, and Calcutta in West Bengal), and the surrounding rural area.

In each state, the plan was to enumerate at least 2,000 households, and interview at least 2,000 adult tobacco users and 600 non-users. That is, 2,000 households were enumerated, and if the required number of tobacco users and non-users had not been interviewed, more households were enumerated. In each enumerated household, up to a maximum of 4 tobacco users were interviewed:

- If there were 4 or fewer adult (15 years of age or older) tobacco users in the household, all were to be interviewed.
- If there were more than 4 adult tobacco users in the household, all female adult tobacco users (up to a maximum of 4) were to be interviewed, and enough male adult tobacco users were to be interviewed to bring the total up to 4.
- When a selection of female or male tobacco users had to be made, because otherwise the total would be more than 4, those nearest the end of the enumeration list were be selected.

The plan was also to select for interviewing one adult non-user of tobacco at random (using a die) from every third household containing at least one adult non-user of tobacco.

In each state it was decided to enumerate in (at least) 1,500 urban households and 500 rural households.

Within the urban part of each state, 10 wards were selected with probability proportional to size, each ward having the same intended enumeration sample size. The intended sample size in each ward was 150 households. Within each ward number 10 enumeration blocks (EBs) were selected at random, with the intention of using the first 4 of these in the sample, augmenting the list if necessary. The attempt was made to interview the maximum numbers of households from the 1st EB and continue with next EB, and so on, until the required 150 HH per ward was achieved.

Where maps of the selected EBs were obtained (or constructed), the dwellings in an EB were approached *in random order.* Each was to be approached up to 2 times in an effort to enumerate (list the membership of) the household. Following enumeration, selection of individuals was to be made from the household roster, and the individuals were to be interviewed immediately or asked to give appointments. Up to 4 attempts were to be made to interview an individual unless that individual had refused to respond. This was to proceed until the numbers for the EB had been reached.

Within the rural stratum of a state, namely the rural areas surrounding the urban stratum (within 50 Km diameter), a single district was chosen purposively, and 4 villages were selected from the district with probability proportional to size, from among those villages with at least 1,000 households in the census list. (In Bihar, the "district" was the rural part of Patna, and in Madhya Pradesh, the "district" was the rural part of Indore.) The cut-off point of 1,000 households was used so that with a household response rate of 1 in 8, the number of households that would agree to participate if asked would be at least 125. Each village chosen was mapped (unless a map already existed), and a random (preferred) or systematic sample of enough dwellings was chosen to achieve enumerations at 125 households in the village.

The dwellings in the sample within the village were approached *in random order* and up to 2 times in an attempt to enumerate (list the membership of) the household. Following this, selection of individuals was to be made from the household roster, and the individuals were to be interviewed immediately or asked to give appointments. Up to 4 attempts were to be made to interview an individual unless that individual has refused to respond. This was to proceed until the numbers for the village had been reached.

5.2 Wave 1 weights construction

5.2.1 Computation of enumerated household weights EHWT

Step H1: For each enumerated household, a secondary sampling unit (SSU) (EB or village) level weight $HW1$ was computed:

$$HW1 = H_{SSU} / h_{eSSU}$$

where H_{SSU} is actual the number of households in the SSU of the household in question, and h_{eSSU} is the number of households with composition enumerated in that same SSU.

Step H2: For each enumerated urban household, a ward (primary sampling unit) level weight $HW2$ was computed. This is the approximate number of households in the same ward represented by the enumerated household.

$$HW2 = (N_{ward} / n_{ward}) \times HW1$$

where N_{ward} is the number of EBs in the ward available and of sufficient size to be sampled from, and n_{ward} is the number of EBs in the ward from which samples were taken.

For each enumerated rural household, a district (primary sampling unit) level weight $HW2$ was computed. This is the approximate number of households in the same district represented by the enumerated household.

$$HW2 = (H_{dis} / 4H_{SSUc}) \times HW1$$

where H_{dis} is the number of households (according to census) in villages in the district available and of sufficient size to be sampled from, and H_{SSUc} is the number of households in the household's village from census.

Step H3: For each enumerated urban household, a city level weight $EHWT$ was computed. This is the approximate number of households in the same city represented by the enumerated household.

$$EHWT = H_{city} \times HW2/(10 \times H_{ward})$$

where H_{city} =number of households in city, H_{ward} = number of households in ward, according to census.

For each enumerated rural household, a rural level weight $EHWT$ was computed. This is the approximate number of households in the same rural area represented by the enumerated household.

$$EHWT = H_{area} \times HW2/(H_{dis})$$

where H_{area} = number of households in area, H_{dis}= number of households in district, according to census.

Notes:

The number of households in the area was obtained from the 2001 census with a few exceptions. In Bihar, since the 2001 census data could not be obtained for three urban area wards 9, 21, and 24, the corresponding 2011 census data (wards 14, 31, 35) were obtained with the number of EBs in these three wards and the number of households for each enumerated EB in these three wards. These numbers were used for calculating HW1 and HW2 in steps H1 and H2.

For the other wards in the urban area of Indore in Bihar, the urban area of Mumbai in Maharashtra, and the urban area of Kolkata in West Bengal, the obtained census data only contained population numbers at the EB level (P_{SSU}). To estimate the number of households at the EB level, the following equation was used.

$$H_{SSU}=P_{SSU}/ (P_{ward}/H_{ward})$$

Where P_{ward} is the number of population at the ward level and H_{ward} is the number of households at the ward level. P_{ward}/H_{ward} therefore represents the average number of household members in the ward. The calculated H_{SSU} were then used in step H1.

5.2.2 Prevalence estimates

We were able to use the urban *EHWT* weights to estimate the prevalence of tobacco use of various kinds in a city, by gender.

For example,

$$\hat{P}_{sm,male} = (\sum_j EHWT_j MALESM_j)/(\sum_j EHWT_j MALE_j)$$

where the sums are over enumerated households *j* in a city, and $MALE_j$ and $MALESM_j$ are respectively the numbers of male adults and male adult smokers in household *j.*

5.2.3 Computation of interview household weights IHWT

Step H4: For each household in which there is an interview, a city or area level weight *IHWT* was computed. The calculation is different for tobacco use households and others. It is interpreted as the number of households in the city represented by that household.

For tobacco use households we can think of this as being 0 for any enumerated household without an interview; the *EHWT* values for tobacco use households without an interview (perhaps because of refusal) are effectively redistributed to households with an interview. For a tobacco use household with an interview,

$$IHWT = EHWT \times \frac{h_{etSSU}}{h_{itSSU}},$$

where h_{itSSU} is the number of tobacco use households in the EB or village with an interview, and h_{etSSU} is the number of enumerated tobacco use households in the EB or village. (The ratio should be close to 1.) For a household with an interview but no tobacco use,

$$IHWT = EHWT \times \frac{h_{enSSU}}{h_{inSSU}}$$

where h_{inSSU} is the number of non-use-of-tobacco households in the EB or village with an interview, and h_{enSSU} is the number of enumerated non-use-of-tobacco households in the EB or village. (The ratio may be close to 3.)

Notes:
In the first of the above formulae, if we sum the IHWT over the tobacco use households in the EB, we get the same as the sum of the EHWT over tobacco use households. (This will hold in the exceptional case below also.) In the second, if we sum the IHWT over the no tobacco use households in the EB, we get the same as the sum of the EHWT over the no tobacco use households.

An exception applied in urban wards where, in one or more of the EBs sampled, no non-use-of-tobacco households had interviews, because the quota for non-users of tobacco had been filled. These included one ward in Maharashtra (Ward #527), four in Madhya Pradesh (Wards #4, #20, #37, #69), and four in Bihar (Wards #3, #6, #21, #31). Another exception applied where the number of non-user households with an interview was very low compared to enumerated non-user households. In those cases, namely if no non-use-of-tobacco households had interviews, or the ratio of enumerated non-user households over the interviewed non-user households was greater than 6, the following formula was used:

$$IHWT = EHWT \times \frac{\sum_{enPSU} EHWT}{\sum_{inPSU} EHWT}$$

where $\sum_{inPSU}$ and $\sum_{enPSU}^{inPSU}$ are respectively sums over the non-use-of-tobacco households in the ward with an interview, and the enumerated non-use-of-tobacco households in the ward.

Thus if we sum *IHWT* over all interview households in the city or rural area sample, we obtain the same value as the sum of *EHWT* over all enumerated households.

5.2.4 Computation of individual weights

Step I1: Each interviewed individual was given a household level weight W1. This is interpreted as the number of people in the same household in the category represented by the respondent.

- For an adult male tobacco user, W1 is the number of adult male tobacco users in the same household, divided by the number of interviewed adult male tobacco users in the household.
- For an adult female tobacco user, W1 is the number of adult female tobacco users in the same household, divided by the number of interviewed adult female tobacco users in the household.
- For an adult non-user of tobacco, W1 is the number of adult non-users of tobacco in the same household, divided by the number of interviewed adult non-users of tobacco in the household.

The value of W1 was capped at 4.

Step I1a: Each interviewed individual has been given an adjusted household level weight $W1a$. This adjustment guarantees that the prevalence estimates based on the *EHWT*s, the *IHWT*s, and the final individual weights will be close to the same.

Consider an EB or village stratum *h* to be defined by user and non-user households within the village.

Let $AMS_{hEB}, AFS_{hEB}, AMNS_{hEB}, AFNS_{hEB}$ be respectively the numbers enumerated in the EB or village stratum *h* of adult male users, adult female users, adult male non-users, adult female non-users.
Let $W1AMS_{hEB}, W1AFS_{hEB},. W1AMNS_{hEB}, W1AFNS_{hEB}$ be respectively the sums of W1 in all interviewed households for adult male users, adult female users, adult male non-users, adult female non-users, in the EB or village stratum *h*.

- for an adult male user in stratum *h* of the EB or village, $W1a$ will be given by

$$W1a = (AMS_{hEB} \times W1/W1AMS_{hEB})(EHWT/IHWT)$$

- Similarly for the other refined categories.

- In case there is representation of only one gender of users or of non-users in the EB or village stratum, the relevant categories can be collapsed by gender for that EB or village stratum. For example, for a tobacco user, $W1a$ will then be given by

$$W1a = (AS_{hEB} \times W1/W1AS_{hEB})(EHWT/IHWT)$$

where AS_{hEB} is the number of enumerated adult users in the EB or village stratum *h,* and $W1AS_{hEB}$ the sum of W1 in all interviewed households for adult users in the EB or village stratum *h*. A similar equation can be applied to the adult non-users.

- In case there is representation of only users or non-users in the EB or village stratum, the relevant categories can be calculated at the ward level, instead of EB or village stratum. For example, for an adult male user, $W1a$ will then be given by

$$W1a = (AMS_{hWARD} \times W1 / W1AMS_{hWARD})(EHWT / IHWT)$$

where AMS_{hWARD} is the number of enumerated adult male users in stratum *h* in the Ward, and $W1AMS_{hWARD}$ the sum of W1 in all interviewed households for adult male users in stratum *h* in the Ward. Similar equations can be applied to the other refined categories.

Step I2: Each interviewed individual was given a preliminary city or area level weight W4 which is thought of as the number of people in the same city or area represented by that individual.

The weight W4 is given by

$$W4 = IHWT \times W1a.$$

If we sum W4 over all individuals interviewed in the city or area, we should get an estimate of the adult population of the city or area.

In the absence of available population information by sex and age group in the cities or areas, the final inflation weights W6 have been set equal to W4. If information in sufficient detail becomes available from the 2011 census, W6 may be recalculated by calibration of W4 in the cities to census totals. Let $N_{a,dem}$ be the number of persons from the 2011 census in city *a* and demographic group (sex crossed with age group) *dem.* For a respondent in city *a* and demographic group *dem,*

$$W6 = W4 \times \frac{N_{a,dem}}{\sum_{a,dem} W4}$$

where $\sum_{a,dem}$ represents summation over all individuals interviewed in city *a* and demographic group *dem.*

W6 is variable aDE61915v in the data set.

5.2.5 Rescaling

Finally, the individual weights have been rescaled within each sampling category to sum to sample sizes in city/area crossed with tobacco use status (non-users, male tobacco users, female tobacco users) for use in pooled analyses. The rescaled weight is aDE61919v in the data set.

The formula used for each category is as follows:

Rescaled weight $RWT = n_C \times W6 / (\sum_C W6)$,

where n_C is the actual (i.e. unweighted) size of the sample in the category, and $\sum_C W6$ denotes a sum over that subsample of the inflation weights.

5.3 Wave 2 sampling

At Wave 2, strong efforts were made to interview all Wave 1 respondents. The Wave 1 respondents who could not be recontacted were replaced at the replenishment stage. At the replenishment stage, new households were enumerated in the same urban ward (the same EB if possible) or rural village, and individuals were selected for interview in the same manner as in Wave 1, until the same numbers (within EB if possible or within village) of interviews of tobacco users/quitters and non-users were obtained.
Two new EBs were enumerated in district 17 in West Bengal. They are listed in the table below.

State	district	sub district	EB
West Bengal (19)	17	42	3
West Bengal (19)	17	110	10

5.4 Wave 2 weights

There are two sets of weights at Wave 2, namely the Wave 1 – Wave 2 longitudinal weights, and the Wave 2 cross-sectional weights.

5.4.1 Computation of Wave 1 – Wave 2 longitudinal weights

These are Wave 1 – Wave 2 longitudinal weights for respondents present in both waves. They are used in analyses which require that the respondents used in the analysis are present in both waves.

For the longitudinal weights, we first considered the interviewed household weights IHWT from Wave 1. For those households which were still interview households in Wave 2, we rescaled IHWT to sum to the total of the IHWTs at Wave 1 for user households and for non-user households within each Ward or Village. This produced for those households a Wave 1-Wave 2 weight labelled IHWT12.

For each Wave 1 respondent still present in Wave 2, we multiplied IHWT12 by the within household weight W1a from Wave 1, producing a preliminary longitudinal weight W12WTT. We then rescaled these W12WTT weights to sum to the Wave 1 cross sectional weight (W1XWT, this is W4 in Wave 1 weights above) totals for age group (15-24, 25-39, 40-54, 55+) and gender within cities or within rural areas. This produced the longitudinal weights W12WT for individuals. W12WT is variable bDE61921v on the dataset.

There is also a version of these rescaled to sum to sample size within tobacco users vs non-users in each city or rural area. This is variable w12rswt on the data set, which is the variable bDE61951v on the dataset.

5.4.2 Computation of Wave 2 cross sectional weights

We first constructed Wave 2 cross-sectional interview household weights *IHWT2.* In each interview household in an EB or a village, whether a Wave 1 household or a household newly recruited at Wave 2, we let *IHWT2* be the total value of *IHWT* from Wave 1 for households of the same EB/village and household tobacco use status (TUS), divided by the number of interview households in that EB/village-TUS in Wave 2.

Exception: There are two new EBs enumerated in West Bengal, each in a different ward from Wave 1. First, for the interview households in the old EBs in such a ward, we let *IHWT2pre* be the total value of *IHWT* from Wave 1 for households of the same EB and TUS, divided by the number of interview households in that EB-TUS in Wave 2. Then, for interview households in the new EB, we let *IHWT2pre* be the average value of *IHWT2pre* over households in the old EBs in the same ward and TUS. Then for all interview households in the same ward and TUS, let

$$IHWT2 = (IHWT2pre / \sum IHWT2pre) \times \sum IHWT$$

where *IHWT* is the interview household weight from Wave 1, and the first sum is over all interview households in the ward and same TUS in Wave 2, while the second sum is over all households in the ward and same TUS in Wave 1. Thus the *IHWT2* should have the same total in the ward as *IHWT* for that TUS.

Step 2I1: Each interviewed individual, in an old household or a new household, has been given a household level weight *W1X2*. This is interpreted as the number of people in the same household with the same refined category.

- for an adult male tobacco user or quitter, *W1X2* is the number of adult male tobacco users or quitters in the same household, divided by the number of adult male tobacco users or quitters interviewed in that household
- for an adult female tobacco user or quitter, *W1X2* is the number of adult female tobacco users or quitters in the same household, divided by the number of adult female tobacco users or quitters interviewed in that household
- for an adult non-user of tobacco, *W1X2* is the number of adult non-users in the same household, divided by the number of adult non-users interviewed in that household

For a majority of recontact respondents, *W1X2* should be the same as *W1* from Wave 1. Where a Wave 1 household has some Wave 2 interviews, but also at least one dropout, or at least one person who has changed from being a non-smoker to being a smoker, *W1X2* will be different from *W1* for some members of the household. Recontact respondents quitting smoking would not cause a change from *W1* to *W1X2*.

Note: *W1X2* as defined above does not necessarily sum within the household to the number of people aged 15 and over in the household, since there will often be non-users where none was interviewed.

We have capped the value of *W1X2* at 4 to reduce the potential variability of the weights. Step 2I1a below ensures that each individual still represents an approximately correct number at the EB/village level.

Step 2I1a: Each interviewed individual has been given an adjusted household level weight $W1aX2$. This adjustment is meant to ensure that the prevalence estimates based on the *EHWTs* from Wave 1, and the final individual cross-sectional weights for Wave 2, will be approximately the same.

Consider an EB or village stratum *h* to be defined by user and non-user households (household tobacco-use status when recruited) within the village.

Let $CAMS_{hEB}$, $CAFS_{hEB}$, $CAMNS_{hEB}$, $CAFNS_{hEB}$ be respectively the contributions to total estimates at Wave 1of adult male tobacco users, adult female tobacco users, adult male non-users, and adult female non-users, from the enumeration in the EB/village stratum *h*. For example,

$$CAMS_{hEB} = \sum_{hEB} EHWT * n_{male,user}$$

where the sum is taken over Wave 1 enumerated households in the EB/village stratum *h*, and $n_{male,user}$ is the number of adult male tobacco users in the household at Wave 1.
Let $W1AMS_{hEB}$, $W1AFS_{hEB}$, $W1AMNS_{hEB}$ $W1AFNS_{hEB}$ be respectively the sums of *W1X2* in all Wave 2 *interview households* for interviewed adult male tobacco users/quitters, adult female tobacco users/quitters, adult male non-users, adult female non-users, in the EB/village stratum *h*.

- for an adult male tobacco user/quitter, $W1aX2$ will be given by

$$W1aX2 = (CAMS_{hEB} \times W1X2 / W1AMS_{hEB}) / IHWT2$$

- similarly for the other categories.

In case there is representation of only one gender of tobacco users or of non-users in the EB/village stratum, the relevant categories can be collapsed by gender for that EB/village stratum.

Exception: In the two wards in West Bengal where new EBs have been taken, for an adult male tobacco user/quitter in the old EBs, take

$$W1aX2pre = (CAMS_{hEB} \times W1X2 / W1AMS_{hEB}) / IHWT2$$

and for an adult male tobacco user/quitter in the new EBs, take *W1aX2pre = W1X2.*

Then let

$$W1aX2 = (W1aX2pre \times CAMS_{hward} / \sum (W1aX2pre \times IHWT2)$$

where the sum is over all adult male tobacco users/quitters in Wave2 interview households in the ward- and TUS *h* and $CAMS_{hward}$ is the sum of the $CAMS_{hEB}$ over the old EBs in the ward (including any that do not have respondents in Wave 2).

- similarly for the other categories in the two wards.

Step 2I2: Each interviewed individual has been given a preliminary city- or area-level weight *W4X2*.

W4X2 will be thought of as the number of people in the city or area and same refined category represented by that individual.
The weight *W4X2* is given by

$$W4X2 = IHWT2 \times W1aX2.$$

5.4.3 Calibration of individual weights at the city or area level

Step 2C1: Each interviewed individual has been given a calibrated city- or area level weight

$$W6X2 = W4X2 \times N_{area,dem} / W4X2_{area,dem}$$

where $N_{area,dem}$ is the known number of people in the same city or area with same gender (but regardless of tobacco use status) as the individual, and $W4X2_{area,dem}$ is the sum of the *W4X2* weights for interviewed individuals in the same city or area, with same gender (regardless of tobacco use status).

In the absence of available population information by sex group in the cities or areas, the final inflation weights W6 have been set equal to W4.

The weights $W6$ are what would be used for descriptive inference about the country's population. (The variable name for *W6X2* is bDE61915v).

5.4.3 Rescaling

Finally, the weights have been rescaled within each sampling category (male tobacco-user/quitter, female tobacco-user/quitter and non-user of tobacco) and city or rural area to sum to city or rural area sample sizes, for analytical use or in pooled analyses. The formula used for the final rescaled weights is as follows:

Rescaled weight $RWTX2 = n_C \times W6X2 / (\sum_C W6X2)$,

where n_C is the actual (i.e. unweighted) size of the city or area subsample for the sampling category, and $\sum_C W6X2$ denotes a sum over that subsample of the original weights.

(The variable name for rescaled weight is bDE61919v.)

Appendix A: Pre-filled Household Recontact Form

1. All ID codes of each recontact household in the Form A have been pre-filled Form (Page 1);
2. The name, gender and tobacco use status of each Wave 1 respondent in the recontact household has been pre-filled in the Form C (Page 4).

Page 1

FORM A

Form completed: ☐

TOBACCO CONTROL POLICY (TCP) SURVEY – INDIA WAVE 2

HOUSEHOLD RECONTACT FORM (HRF)

ID:	1 0	1	2 8	0 0 3 1	0 0 0 0 2 6 8 8	0 2 7	Interviewer ID: ☐☐ ☐☐
	State	Rural/Urban	District	Subdistrict/Ward	Village/EB	Household	

Interviewer's name: _____ Signature: _____ Date of Completion: _____

Supervisor's name: _____ Signature: _____ Date of Review: _____

Wave 1 Key Informant: ASHMAA KHATOON

Key Informant if different from Wave 1: _____

Total Household Members (including children): _____

Wave 1 Head of Household (if different from above):

Head of Household if different from Wave 1: _____

HOUSEHOLD ADDRESS

Address: MD SAHJAD HARNAHA TOLA DR SAYADU KI GALI PATNA CITY PATNA BIHAR

_____

_____ **PIN Code** _____

Telephone Number: _____

VISITING RECORD – HOUSEHOLD LEVEL (FILL IN AFTER END OF INTERVIEW)						
No. of visit	Date (dd/mm/yy)	Time	Notes	Completed	Next Appointment	
					Date	Time
1						
2						

If Household Refused:		Recontact Language (Circle one below)			
i) How many people aged 15 years and above live in this household?		1. English	2. Marathi	3. Hindi	4. Bengali
ii) How many of them use tobacco regularly?		Others (Specify):			
iii) Reason for refusal:					

Final Household Outcome Code (circle one below):		
1. Could not find dwelling	7. No Answer –Survey Period Ends	
2. Household moved, could not trace	8 . Household Refusal	
3. Household moved, out of range	9. Language Barrier	
4. Threat to safety	10. Recontact prevented for other reasons (specify)*	
5. No Contact-Weather Condition	11. Recontacted successfully	
6. No Answer- 4 attempts	*specify other reason:_____	

HOUSEHOLD RECONTACT FORM **FORM B**

Adults (aged 15 and above) by Tobacco Use Status and Gender	
Number of Male Tobacco Users	
Number of Female Tobacco Users	
Number of Male Non-Users	
Number of Female Non-Users	
Number of Household Members with Unknown Status of Tobacco Use	
Total Number of Adults (aged 15 and above) in Household	

Number of Children in the Household	
Aged 0-5	
Aged 6-12	
Aged 13-14	
Total Number of Children	

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

HOUSEHOLD RECONTACT FORM FORM C

ID at W1*	ADULT NAME (age 15 and above)**	Tobacco Use Status at W1***	Sex (M/F)	Age	Relationship to Informant at W2	Individual Outcome Code	Notes
1	ASHMAA KHATOON	L	F				
2	MD SAHJAD	L	M				
3	MD CHOTAN	N	M				
4	NILU	L	F				
5	KHAKSANA KAHTOON	L	F				

* ID number must be the same as the ID assigned in Wave 1

** Name of respondent must be the same as in Wave 1

*** Indicate Tobacco Use Status at Wave 1: **T= Smoker only, L=Smokeless user, M=Mixed user, N=Non-user**

Relationship to Informant Household Codes

Informant = **1**	Brother = **7**	Father = **13**	Niece = **19**
Spouse = **2**	Sister = **8**	Mother-in-law = **14**	Other family relative = **20**
Son = **3**	Brother-in-law= **9**	Father-in-law = **15**	Housekeeper = **21**
Son-in-law = **4**	Sister-in-law = **10**	Grandfather = **16**	Non relative = **22**
Daughter = **5**	Grandchild = **11**	Grandmother = **17**	Other (specify) = **23**
Daughter-in-law = **6**	Mother = **12**	Nephew = **18**	

Individual Outcome Codes

0a No longer part of household, and out of range or untraceable	**3** Health/Mentally Incapable
0b Deceased	**4** Proxy Refusal
1 Missed (after 4 attempts)	**5** Refusal
2 Language Barrier	**6** Incomplete (start, breakoff)
	7 Complete
	8 Away for the entire survey period

4

HOUSEHOLD RECONTACT FORM FORM D

	Individual Outcome Codes			
0a No longer part of household, and out of range or untraceable	**1** = Missed (after 4 attempts)	**3** = Health/ Mentally Incapable	**5** = Refusal	**7** = Complete
0b Deceased	**2** = Language Barrier	**4** = Proxy Refusal	**6** = Incomplete (start, break-off)	**8** = Away for the entire survey period

ID =		VISITING RECORD – INDIVIDUAL LEVEL				
No. of visit	Date (dd/mm/yy)	Time	Notes	Individual Outcome Code	Next Appointment	
					Date	Time
1						
2						
3						
4						

ID =		VISITING RECORD – INDIVIDUAL LEVEL				
No. of visit	Date (dd/mm/yy)	Time	Notes	Individual Outcome Code	Next Appointment	
					Date	Time
1						
2						
3						
4						

ID =		VISITING RECORD – INDIVIDUAL LEVEL				
No. of visit	Date (dd/mm/yy)	Time	Notes	Individual Outcome Code	Next Appointment	
					Date	Time
1						
2						
3						
4						

ID =		VISITING RECORD – INDIVIDUAL LEVEL				
No. of visit	Date (dd/mm/yy)	Time	Notes	Individual Outcome Code	Next Appointment	
					Date	Time
1						
2						
3						
4						

ID =		VISITING RECORD – INDIVIDUAL LEVEL				
No. of visit	Date (dd/mm/yy)	Time	Notes	Individual Outcome Code	Next Appointment	
					Date	Time
1						
2						
3						
4						

Appendix B: Information Letter and Consent Form

For respondent to keep

RESPONDENT INFORMATION LETTER

Research Project: Tobacco Control Policy Evaluation in India
(TCP INDIA PROJECT WAVE 2)
Healis IRB Epidemiological Ethics Committee
Clearance Number: OHPR IRB 00005608; FW A00010621
Human Research Ethics Committee, University of Waterloo: ORE # 15722

What is this research about?
The aims of this research are to find out: 1) the impact of specific tobacco control policies that have been, or will be, implemented in India, 2) the prevalence and patterns of tobacco use behaviour in India, and 3) the tobacco use behaviour and the impact of tobacco control policies between India and other TCP countries. We will also examine how religion and culture may affect smoking by comparing the views of Indian tobacco users to those of smokers from Bangladesh, China, Thailand, Malaysia, USA, Canada, UK and Australia.

Who is conducting this research?
The Indian research team comprises of Dr. Prakash C. Gupta and Dr. Mangesh S. Pednekar, Healis-Sekhsaria Institute for Public Health, Mumbai, India

The overall international project is being led by Professor Geoffrey T. Fong, University of Waterloo, Waterloo and Professor Mary E. Thompson, University of Waterloo, Waterloo, Canada, and Dr Maansi Bansal-Travers, Roswell Park Cancer Institute, Buffalo, USA.

What are we asking of you?
This research involves completing the survey interview (approximately 90 minutes for tobacco users and 45 minutes for non-tobacco users) today and in the next 1 to 5 years. We may return every 18 to 24 months to do follow-up surveys because we are interested in how people's opinions and behaviours might change 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. If you agree to participate in this research, we will provide you with a token of appreciation for your time. You will be given a similar token of appreciation for each subsequent time that you agree to participate.

Risk
Participants will not face any risk or harm to their well-being either physically, psychologically, socially or culturally throughout completion of the survey.

Possible Benefits
This study would help the researchers to evaluate and understand the effects of national-level tobacco control policies in developing countries. Also policy makers throughout the world would 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. Data from this research will not be destroyed, but any identifying information about you such as name and address will be removed so that your answers cannot be linked back to you.

The data will be held in secure electronic files at the Healis-Sekhsaria Institute for Public Health and at the University of Waterloo on computers that have security certificates, are password protected, and can only be accessed by the research team. Eventually, after two years, the data without names or personal information may be shared with other health researchers.

Concerns and Complaints

If you wish to discuss any questions or concerns about this research project, please contact:
Dr. Prakash C. Gupta, Principal Investigator, TCP India Project,
Healis-Sekhsaria Institute for Public Health, Maharashtra. Tel: 022 2757 5487.
OR
Dr. Dhirendra Sinha
Director, School of Preventive Oncology, Bihar
Tel: 612-275-0760 or Email: dhirendrasinha1@gmail.com
OR
Ms. Sutapa Biswas
Executive Director, Cancer Foundation of India, West Bengal
Tel: 033 24056161 or Email: cfindia@hotmail.com
OR
Mr. Mukesh Sinha, Madhya Pradesh
Executive Director, Madhya Pradesh Voluntary Health Association (MPVHA)
Tel: 731 2877733 or Email: mpvha@rediffmail.com
OR
Dr. Geoffrey T. Fong, Principal Investigator, TCP Project, Department of Psychology,
University of Waterloo, Canada. Tel: +1 519 888 4567 ext. 35811.

If you wish to lodge a complaint concerning the manner in which this research is being conducted, please contact:
Executive Assistant,
Healis-Sekhsaria Institute for Public Health, 601/B, Great Eastern Chambers, Plot No.28,
Sector 11, CBD Belapur, Navi Mumbai - 400 614, Tel: 022 2757 5487.
E- mail: admin@healis.org

If you feel that the local ethics committee has not resolved your concerns to your satisfaction, you may wish to contact the Human Research Ethics Committee in Canada that is overseeing the project:
The Director, Office of Research Ethics, University of Waterloo, 200 University Avenue West,
Waterloo, Ontario, Canada N2L 3G1,
Tel: + 1 519 888 4567 ext. 36005 or E-mail: OHRAC@uwaterloo.ca

RESPONDENT CONSENT FORM

Research Project: Tobacco Control Policy Evaluation in India
(TCP INDIA PROJECT WAVE 2)
Healis IRB Epidemiological Ethics Committee
Clearance Number: OHPR IRB 00005608; FW A00010621
Human Research Ethics Committee, University of Waterloo: ORE # 15722

I agree to take part in the above international research project conducted in India by the research team based at the Healis-Sekhsaria Institute for Public Health. I have read the respondent information letter, which I will keep for my records. I have been informed that:

- This project is being conducted for research purposes.
- Participation in the research is voluntary and that I am free to withdraw at any time or to withdraw any information previously supplied.
- Participation in this research involves completing a face-to-face interview lasting approximately 90 minutes for tobacco users and 45 minutes for non-tobacco users today.
- I will be given a gift as a token of appreciation for my time, if I am selected for the individual interview.
- Only those people involved with this research will have access to any information I supply.
- 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.
NAME

Signature: ……or ***Left thumb print***:

Date: ……/……/……

Interviewer Name:……

Signature: …… ***Date***: ……/……/……

Current Respondent address and contact details:

Address:……

……

……

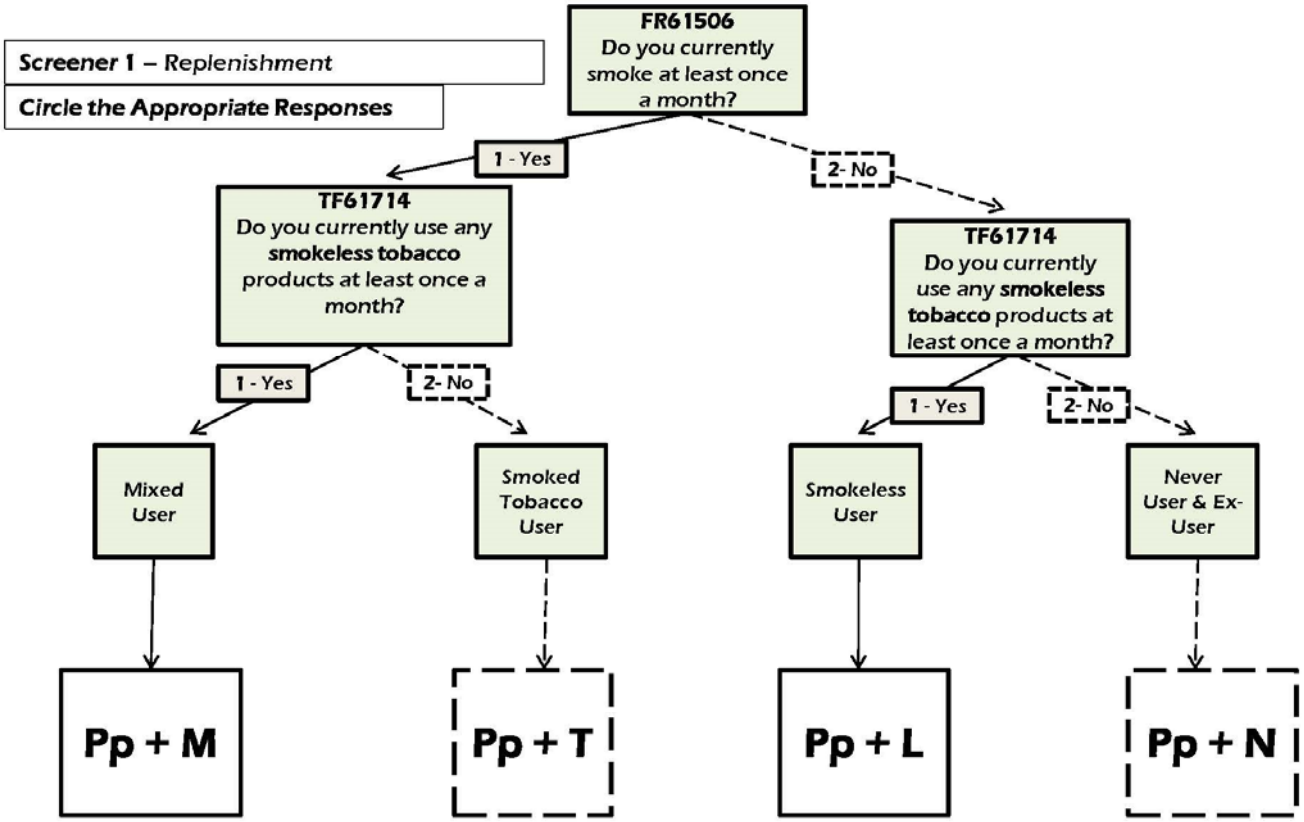
Pin Code:……

Tehsil:…… District:……

State:……

Telephone: Home: …… Work: …… Cell: ……

Appendix C: Screeners



2

TCP INDIA WAVE 2
(Screener 2: W1 Tobacco Users)

Interviewer ID: ☐☐ ☐☐

ID:	1 0	1	2 8	0 0 0 1	0 0 0 0 0 0 7 5	0 0 1
	State	Rural/Urban	District	Subdistrict/Ward	Village/EB	Household

Individual ID: 0 1

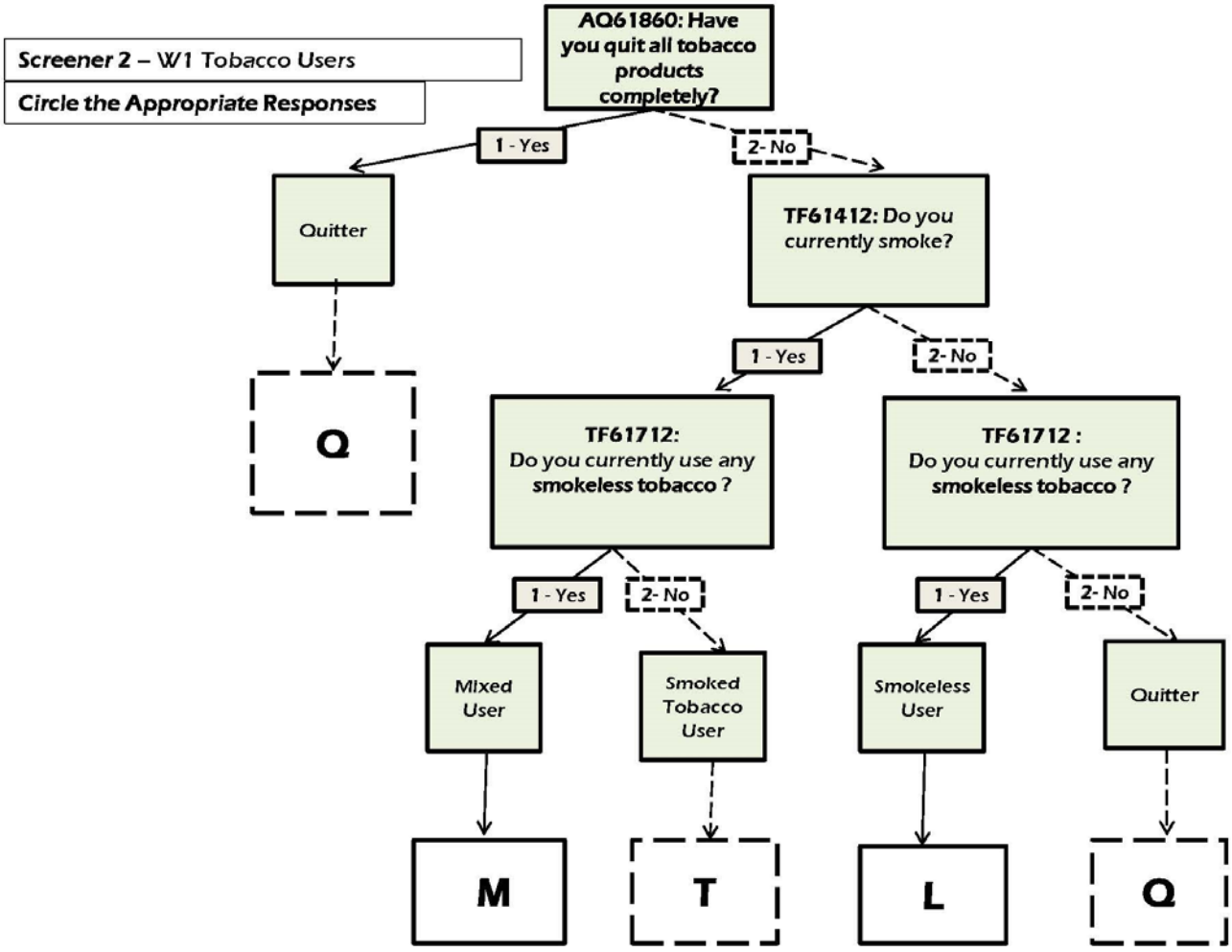
Date of Survey: _____ (dd)/_____(mm)/_____(yy)

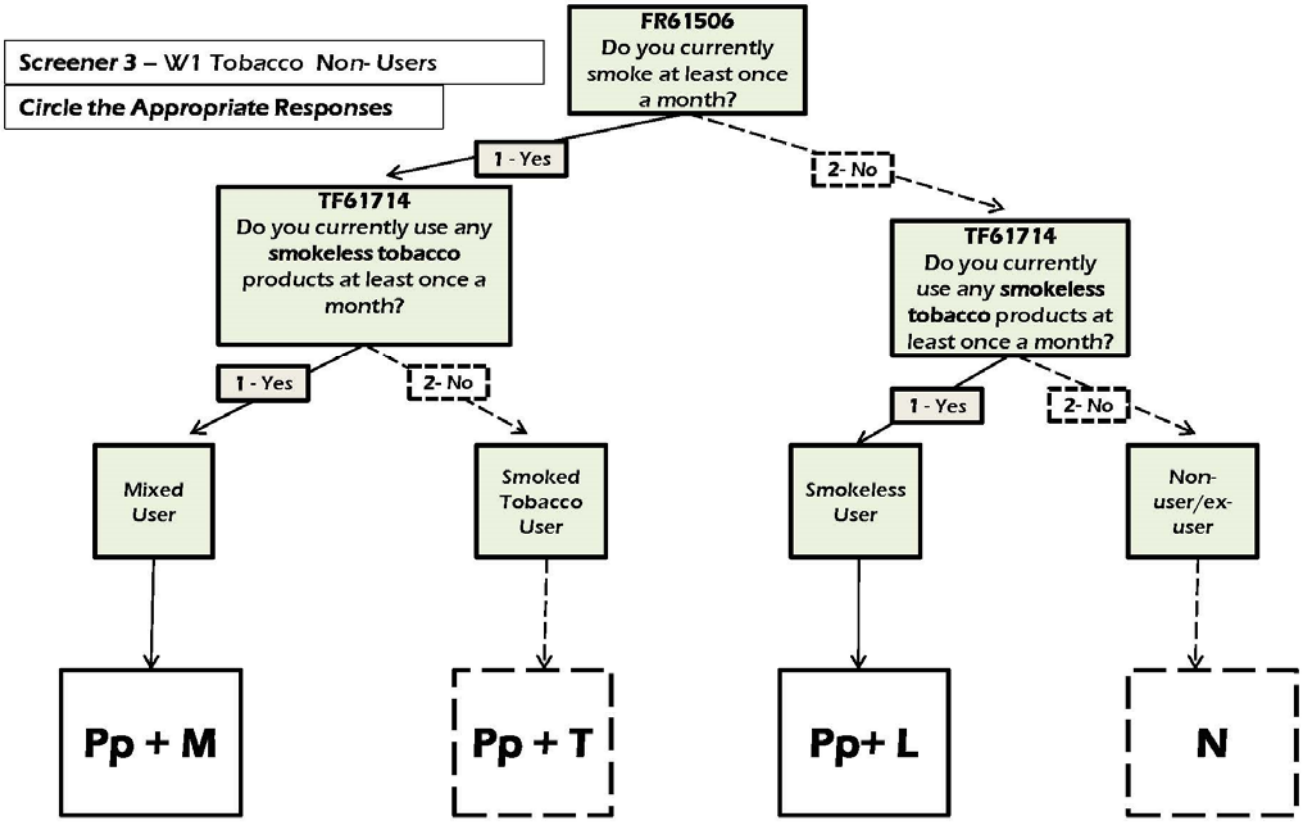
Start Time:_____am/pm

End Time: _____am/pm

Checked by:_____ (Name of Supervisor)

Date Checked:_____


Screener 2 – W1 Tobacco Users
Circle the Appropriate Responses
AQ61860: Have you quit all tobacco products completely?
1 - Yes
2- No
Quitter
Q
TF61412: Do you currently smoke?
1 - Yes
2- No
TF61712: Do you currently use any smokeless tobacco ?
TF61712 : Do you currently use any smokeless tobacco ?
1 - Yes
2- No
1 - Yes
2- No
Mixed User
Smoked Tobacco User
Smokeless User
Quitter
M
T
L
Q


Screener 3 – W1 Tobacco Non- Users
Circle the Appropriate Responses
FR61506
Do you currently smoke at least once a month?
1 - Yes
2- No
TF61714
Do you currently use any smokeless tobacco products at least once a month?
1 - Yes
2- No
Mixed User
Smoked Tobacco User
Pp + M
Pp + T
TF61714
Do you currently use any smokeless tobacco products at least once a month?
1 - Yes
2- No
Smokeless User
Non-user/ex-user
Pp+ L
N

Appendix D: Household Response Rates

State	Maharashtra	Bihar	Madhya Pradesh	West Bengal
#HH attempted	1332	71	180	181
#HH enumerated	1005	51	176	181
#HH refused or unable	327	20	4	0
HH cooperation rate	75.5	71.8	97.8	100.0
#HH enumerated with tobacco users	460	42	111	129

HH = Household

Appendix E: Replenishment Individual Response Numbers and Rates

Replenishment Individual Response Numbers

	Bihar	West Bengal	Madhya Pradesh	Maharashtra
(A) Total selected	88	229	197	781
(B) Number of completed interview	86	186	192	638
(D) Number ineligible	0	3	0	6
(E) Number missed	0	1	0	2
(F) Number of refusals	0	6	0	13
(C) Number of incompletes	0	0	0	0
(G) No information[1]	2	20	4	71
(H) Completed, not in survey data[2]	0	13	1	51

1. individual recorded as being selected for conducting a survey in the household enumeration form but for whom there is either no survey data and no disposition code; It was treated as a non-contact;
2. individual recorded as being selected for conducting a survey in the household enumeration form but for whom the disposition code shows that he/she completed the survey but there is no survey data; It was treated as refusal;

Replenishment Individual Response Rates

	Bhihar	West Bengal	Madhya Pradesh	Maharashtra
Contact Rate [(B + F + H)/(A - D)]	97.73	90.71	97.97	90.58
Cooperation Rate [B/(B + F + H)]	100.0	90.73	99.48	90.88
Response Rate [B/(A - D)]	97.73	82.30	97.46	82.32

NOTES:

Due to data entry errors, either in the numbers of people selected per household or in the final disposition codes for individuals within households, the number of selected respondents (A) did not equal the number of completed interviews (B) + number of incompletes (C). The enumeration data were checked and compared against the actual number of respondents surveyed from each household where mismatches were found, and either the total number of people selected (A) per household was corrected or the number of people missed (E) was corrected. The response rates above reflected rates computed based on the original and corrected data.

Appendix F: Country Profile

The Tobacco Landscape in India

The Global Adult Tobacco Survey India (GATS India), is a national study which provides the most current estimates on adult tobacco use and the overall impact of tobacco control measures in India. GATS India (2009-2010) found that 35% of adults (aged 15 years and older) used some form of tobacco, with a higher prevalence of tobacco use among males (48%) than females (20%). In India, tobacco is consumed in a variety of smoked (e.g., bidi, cigarettes, hookah) and smokeless (e.g., khaini, gutka, betel quid with tobacco) forms. Estimates from GATS India show that in 2009-2010 nearly one-quarter (21%) of adults used smokeless tobacco exclusively, whereas only 9% of adults usedsmoked tobacco exclusively. Findings also show that in 2009-2010 the prevalence of smoked tobacco use was much higher for males (24%) than for females (3%). Prevalence of smokeless tobacco use was also higher for males than for females, although the gender difference was not as extreme (33% for males vs. 18% for females). Overall, the prevalence of both smoked and smokeless tobacco use was higher in rural areas than in urban areas.

GATS India found that nearly one-third of adults aged 15 years and older reported exposure to second-hand smoke in their indoor workplaces. Moreover, nearly one-third of adults aged 15 years and older who had visited any public place in the 30 days before they completed the survey reported being exposed to second-hand smoke in public places. The GATS study also found that half of all adults who had visited a restaurant in the 30 days before they completed the survey and had seen a designated smoking area observed smoking in non-smoking areas.

The extent to which adults are exposed to anti-tobacco education varies by state and by tobacco product. GATS India (2009-2010) asked respondents whether they noticed any anti-cigarette, anti-bidi, or anti-smokeless tobacco messages across specific forms of media during the 30 days prior to the survey. The results showed that information about the harms of smokeless tobacco was more often noticed than information about the harms of bidis or cigarettes. Seven in 10 (69%) adults noticed smokeless tobacco information, 61% noticed information on bidis, and just over one half of adults (52%) noticed information on the harms of cigarettes. Noticing information on all forms of tobacco was the highest in Chandigarh and was the lowest in Bihar for anti-cigarette information, lowest in Assam for anti-bidi information, and lowest in West Bengal for anti-smokeless tobacco information. Although 85% of adults believed that smoking causes lung cancer, only half thought it causes stroke and less than two-thirds believed it causes heart attacks, suggesting that stronger educational efforts are needed. Based on findings that 71% of cigarette smokers, 62% of bidi smokers, and 63% of users of smokeless tobacco noticed health warnings on the packages of their respective products, the GATS report recommended enhancing pack warnings as a key source of information on the harms of smoked and smokeless tobacco. In addition, the report called for innovative media strategies focused on specific target groups to be included as part anti-tobacco mass media campaigns at the national and sub-national level.

Cessation

Nicotine replacement therapies (NRTs) are legally available in India from general stores and do not require a prescription, whereas buproprion and varenicline may be purchased from

pharmacies and require a prescription if the dosage is over 2 mg. The cost of these treatments is not covered by any national health insurance plan.

In addition to the TII centers, the first dedicated tobacco cessation clinics (TCCs) offering formal tobacco cessation treatment were established across India beginning in 2002 as a joint initiative of the Ministry of Health and Family Welfare and the World Health Organization (WHO). The initiative began as a pilot project with 19 centers located in various settings, such as cancer treatment centers, medical colleges, psychiatric centers, and non-governmental organizations. The majority of these clinics offered behavioural interventions, while others offered both behavioural counseling and pharmacotherapy treatment. Almost 35,000 individuals were treated through these clinics in the first five years of the program, and evaluation studies found improvement in quit rates among those who had received treatment: 26% of patients who were followed up had either quit or reduced their tobacco use by at least 50% after 3 months; 21% after 6 months; and 18% after 9 months.

The pilot project demonstrated the feasibility of offering tobacco cessation clinics at various settings, and found satisfactory improvement rates in tobacco users who had received treatment. The challenge now is to integrate these services into the health care system in India and make them available for a wider population, including both urban and rural tobacco users. The Government of India has already taken steps towards achieving this goal with the National Tobacco Control Programme (NTCP) launched in 2007-2008. As part of this initiative, the Government has made most of the TCCs self-sufficient, enabling them to sustain their activities from 2010 onwards.

The NTCP also included National Guidelines for Tobacco Dependence Treatment, which consists of training modules for doctors and health care workers in offering advice for tobacco cessation. The inclusion of cessation in the training modules for health professionals as of 2010 is a much needed initiative, as the Global Health Professionals Students Survey (GHPSS) conducted in India from 2005-2008 found a high prevalence of tobacco use among medical students, as well as a lack of adequate training in cessation and counseling techniques.

Smoke-free Public Places and Work Places

Section 4 of the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA) prohibits smoking in all public places, with the exclusion of open spaces. According to COTPA, “public place” is defined as “any place to which the public has access, whether as of right or not, and includes auditoriums, hospital buildings, railway waiting rooms, amusement centres, restaurants, public offices, court buildings, educational institutions, libraries, public conveyances and the like which are visited by the general public, but does not include any open space.”

The rules to enforce Section 4 viz. Prohibition on Smoking in Public Places Rules 2008 (vide G. S. R 417(E) dated May 30, 2008) came into force on October 2, 2008. By this Rule, the definition of public places was broadened to include open auditoriums, stadiums, railway stations, bus stops/stands, workplaces, shopping malls, and cinema halls. In all places where smoking is prohibited, proprietors must display sign boards that read *“No Smoking Area – Smoking Here is an Offence”* in English or one Indian language on a 60x30cm board at some conspicuous place; the name of the person receiving complaints must be clearly displayed; and any smoking paraphilia such as lighters and ashtrays must not be provided.

Designated smoking areas are not permitted at the entrance or exit of an airport, hotel, or restaurant. Where provided, these areas must be clearly marked as a “Smoking Area” or “Smoking Room” in both English and one Indian language. Because of the provision for designated indoor smoking areas, the current policy in India does not fully align with FCTC Article 8 Guidelines, which call for 100% smoke-free public places.

As per Section 21 of COTPA, any person who violates Section 4 by smoking in a public place is subject to a fine of up to ₹200. An officer of authority of a public place who fails to act on a report of such a violation will be required to pay a fine equivalent to the sum of each individual offence. In July 2007, before the national level COTPA regulations were enacted, Chandigarh passed legislation that made it the first smoke-free city in India. Chandigarh is the capital city of the Indian states of Haryana and Punjab and is also a Union Territory. Smoke-free initiatives in Chandigarh were followed by similar initiatives in districts of Kerala in September 2008, before the national level legislation came into effect.

Packaging and Labelling of Tobacco Products

Legislation on health warnings in India began with the 1975 National Cigarettes (Regulation of Production, Supply, and Distribution) Act, which required all cigarette packages, cartons and advertisements to display the text warning “Cigarette smoking is injurious to health”. The Act specified that the warning had to be a minimum of 3mm in height and appear in the same language as the branding on the package. However, the law did not apply to any other tobacco products, such as bidis and smokeless tobacco.

Under COTPA, the display of pictorial warnings on all tobacco products is mandatory, and the sale and import of tobacco products without the specified warnings is prohibited (Section 7); the warnings should be legible and prominent and should be conspicuous as to size and colour (Section 8); and the warnings must appear in the same language as given on the pack (Section 9). The rules to enforce Section 7 were notified in July 2006 [vide G. S. R. 402 (E), dated July 15, 2006] after a Public Interest Litigation filed in High Court of Himachal Pradesh demanded the implementation of pictorial warnings. Because the Rules notified under Section 7 experienced a constant delay, deferral and dilution, India failed to meet the three year deadline for introducing health warnings after ratifying the FCTC. The Indian government finally approved the first set of pictorial health warnings in 2008 under the Cigarettes and Other Tobacco Products (Packaging and Labelling) Rules, 2008 [vide G.S.R. 182 (E) dated March 15, 2008], which came into force on May 31, 2009. The final set of warnings were also weakened from the images that had initially been proposed to the government, and the provision in COTPA that had required the display of a skull and crossbones with the warnings was removed due to pressure from the tobacco industry. Research to evaluate these health warnings in India has shown them to be ineffective and poorly understood by the majority of the population.

Further amendments to COTPA legislation were implemented by the Ministry of Health and Family Welfare in 2010 and 2011. The Cigarettes and Other Tobacco Products (Packaging and Labelling) Amendment Rules introduced in December 2010 changed the period of rotation of the warning labels from every 12 months to every two years. One year later, in December 2011, another amendment required new Round 2 pictorial warnings to replace the older versions, including four warnings for smoked tobacco products and four additional warnings for smokeless tobacco products.

On September 27, 2012, a third round of pictorial health warnings was proposed. The new warnings were mandated to appear on all tobacco packages beginning April 1, 2013. The size

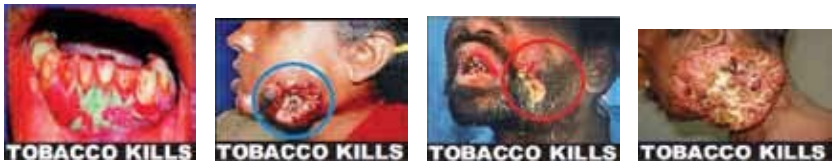
of the Round 3 warnings remains at 40% of the front of the package, which means that only 20% of the principal display areas, on average, is covered and thus the warnings still do not meet the recommended size of at least 30% set by Article 11 Guidelines.

Table 1: Summary of legislation on health warnings in India

Date of implementation	Name of law	Provisions
August 16, 1975	Cigarettes (Regulations of Production, Supply and Distribution) Act, 1975	All cigarette packages (not bidis, cheroot, or cigars) required to display the text warning ''Cigarette smoking is injurious to health'' in the same language as used in the branding on the package. The warning must be on one of the largest panels of the package, the text shall be legible and prominent, in bold and contrasting colour, and the letters must not be less than 3mm in height.
May 1, 2004	Cigarettes and other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA 2003)	Section 7 of COTPA specifies that all tobacco products offered for sale should bear the specified health warnings in the form of designated pictures (including a skull and crossbones). The warning shall appear on one of the largest panels of the package. Section 8 requires the health warnings to be legible and prominent, and conspicuous as to size and colour. Section 9 specifies that the warnings must appear in the same language as given on the pack.

Dateof implementation	Name of law	Provisions
Not implemented	G. S. R. 402 (E): Cigarette and other Tobacco Products (Packaging and Labelling) Rules of 2006	The picture of dead body and the skull and crossbones were found objectionable and hence not implemented.    
Not implemented	G.S.R. 633(E): Cigarette and other Tobacco Products (Packaging and Labelling) (Amendment) Rules, 2007 Products	   

Dateof implementation	Name of law	Provisions
May 31, 2009	G.S.R. 182(E): Cigarette and other Tobacco Products (Packaging and Labelling) Rules of 2008 S.O.2814(E): Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules, 2008 G.S.R.305(E): Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules, 2009	**All tobacco packages (including cigarettes, cigars, cheroots, bidis, pipe, hookah, chewing tobacco, snuff, and paan masala) required to display the health message "tobacco causes cancer", along with one of the specified round 1 warning images:** • Two images specified for smoked tobacco products: a drawing of a diseased lung, and an x-ray image of a lung. The image is accompanied by the text warning "SMOKING KILLS".   • One image specified for smokeless tobacco products: a scorpion. The image is accompanied by the text warning "TOBACCO KILLS".  The warnings shall appear in the same language as used on the package. If there is more than one language on the package, then the warning shall appear in two languages (S.O.2814(E). The text of the warning shall appear in white font, on a red background, and the message "Tobacco causes cancer" shall appear in black font. The warning shall occupy at least 40% of the principal display area of the front panel, parallel to the top edge of the package and in the same direction as the information on the principal display area. For conical-shaped bidi packages, the widest edge of the package is considered to be the top edge (GSR.305(E)). The use of false, misleading, or deceptive terms about the health effects of the tobacco product or its emissions is prohibited.

Date of implementation	Name of law	Provisions
December 1, 2010	G.S.R 176 (E): Cigarette and Other Tobacco Products (Packaging and Labelling) Amendment Rules, 2010	New pictorial warnings mandated for all tobacco products. 
December 20, 2010	G.S.R. 985(E): Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules, 2010	**Amendment to the rotation period of the specified health warnings:** the warning on tobacco packages shall be rotated every two years from the date of notification of the rules, or earlier as specified by the Central Government.
December 1, 2011	G.S.R. 417(E): Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules, 2011	**round 2 pictorial warnings mandated for all tobacco packages:** • Four new pictorial warnings specified for smoked tobacco products: three different images of a man with diseased lungs, and one image showing cancer of the mouth/jaw. All warnings accompanied by the text "SMOKING KILLS".  • Four additional warnings specified for smokeless tobacco packages, each showing a different image of cancer of the mouth/jaw. All warnings accompanied by the text "TOBACCO KILLS".  The text of the warning shall appear in white font on a black background. A provision for size, location, language and rotation of the health warnings remains the same.

Dateof implementation	Name of law	Provisions
April 1, 2013	G.S.R. 724(E): Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules, 2012	**round 3 pictorial warnings mandated for all tobacco packages.** • Three new pictorial warnings specified for smoked tobacco products: two images of a diseased lung, and one image of mouth cancer (the same image that was specified in the previous round). All warnings accompanied by the text "SMOKING KILLS".  • Three new pictorial warnings specified for smokeless tobacco packages, each showing a different image of mouth cancer (two of these images are the same as those specified in the previous round). All warnings accompanied by the text "TOBACCO KILLS".  The text of the health warning message shall appear in white font on a black background, and the word "WARNING" shall appear in red font above the message. The size of the health warning must maintain a ratio of 0.75:1.00 between the vertical and horizontal lengths of the specified warning. The warning shall occupy at least 40% of the principal display area of the front panel of the package.

Dateof implementation	Name of law	Provisions
April 1, 2015	G.S.R. 724(E): Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules, 2014	**round 4 pictorial warnings mandated for all tobacco packages.** • Two new pictorial warnings specified for smoked tobacco products: two images of throat cancer. All warnings accompanied by the text “Smoking causes throat cancer”.   • Two new pictorial warnings specified for smokeless tobacco products: two images of mouth cancer. All warnings accompanied by the text “Tobacco causes mouth cancer”.   Pictorial warnings are required to cover 60% of the package. Text warnings must cover 25% of the package. As a result, 85% of the package must be covered in warnings.

Tobacco Advertising, Promotion, and Sponsorship (TAPS)

Section 5 of the current tobacco control legislation in India (COTPA 2003) which came into force on May 1, 2004, prohibits any kind of direct or indirect advertising, promotion and sponsorship of cigarettes and other tobacco products. However, point of sale advertisement is still allowed in India with some restrictions. Proviso to Section 5(2) of COTPA allows for advertisements of tobacco products to be displayed at the entrance or inside of a warehouse or shop where cigarettes or any other tobacco products are sold. Specifications for this point of sale exemption were added in 2005 via The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution (Amendment) Rules, 2005. As per these Rules, the size of the advertisement board displayed at the entrance of a warehouse or a shop where cigarettes or any other tobacco products are offered for sale shall not exceed dimensions of 60x45cm, and must have a prominent and legible warning on the top edge of the board, in black with white background stating: “Tobacco Causes Cancer” or “Tobacco Kills.” Tobacco product display boards shall only list the type of tobacco products and have no brand pack photo, brand name, or other promotional message and picture. Finally, tobacco product display boards shall not be backlit or illuminated in any manner. The implementation of these rules was stayed by the Bombay High Court in 2006. Recently the Supreme Court of India by an order dated January 3, 2013 lifted the Bombay High Court stay orders that acted as an impediment to implementation of the point of sale advertising rules.

By allowing point of sale advertisements, the law introduces loopholes for the tobacco industry to exploit. An evaluation study of compliance with the point of sale legislation conducted in various cities in India between 2005-2006 found that violations of the law were extremely common (e.g., exceeding the size limit, placing two boards together to create the appearance of a larger advertisement, placing advertisement boards on shops where tobacco was not sold). A more recent evaluation study carried out among 125 tobacco vendors in Mumbai in 2010 also provided evidence for common violations of the point of sale rules, including placement and size of display boards, visible promotion in the form of pictures and stickers, and the use of backlighting.

Violations of COTPA regulations regarding the sale of tobacco products within 100 yards of educational institutions are also common, and may also encourage youth in India to start using tobacco. For example, there is evidence of a positive association between the density of tobacco advertising within 100 meters (or 109 yards) of schools and student tobacco use in Mumbai. In order to limit the exposure of youth to the sale and marketing of tobacco products, tobacco advertising bans need to be strongly enforced and expanded beyond 100 yards of educational institutions.

Another area where the tobacco industry has found ways to circumvent legislation is through indirect advertising of smokeless tobacco products. Many smokeless tobacco companies also manufacture products without tobacco under the same brand name, such as paan masala without tobacco. Therefore, even though advertising and promotion of smokeless tobacco is banned, the population is still being exposed to advertisements for these products through the mass media. Furthermore, clever advertising techniques are being used to associate these non-tobacco products with the actual smokeless tobacco products of the same brand name. Although this type of brand sharing or brand extension is prohibited under COTPA, tobacco companies are able to circumvent the law and promote their products using indirect advertising, which goes against the Article 13 Guidelines. The sale of tobacco products to persons under the age of 18 years is prohibited. A display board is required at the point of sale declaring that “Sale

of tobacco products to a person below the age of eighteen years is punishable offence", in Indian language(s) as applicable, accompanied by a pictorial depiction of the ill-effects of tobacco use on health.

Table 2. Tobacco advertising, promotion, and sponsorship ban policies in India

Description	Ban in place	Aligns with FCTC
Advertising on domestic TV, films, and radio	Yes	Yes
Advertising in domestic print media (e.g., newspapers, magazines)	Yes	Yes^
Outdoor advertising (e.g., billboards, posters)	Yes	No
Point of sale advertising	No	No
Tobacco product displays at point of sale	Partial*	No
Advertisements in or on tobacco packages	No	No
Tobacco industry sponsorship of national/international events or activities	Partial**	No
Offer or supply of tobacco products free of charge	Yes	Yes
Promotional discounts, gifts or prizes	Yes	Yes
Competitions linked to tobacco products or companies	Yes	Yes
Foods, candies, toys, and objects resembling tobacco products	No***	No
Brand stretching/sharing	Yes	Yes^
Vending machines	Yes	Yes
Sale of tobacco products to and by minors	Yes	Yes
Unpaid tobacco product placement in entertainment media	Yes****	Yes
Domestic and international internet tobacco product sales	No	No
Disclosure by tobacco industry to government on TAPS activities	Not required	No
Health warnings on permitted forms of advertisements (i.e., point of sale; films and TV programs in which tobacco products are displayed)	Required	Yes

^ While the law technically meets the FCTC Article 13 Guidelines, violations are common
* A 2011 amendment prohibits tobacco products only from being "displayed in a manner that enables easy access of tobacco products to persons below the age of 18 years
** The law only bans funding by the tobacco industry that is used to promote tobacco products. All other types of funding or sponsorship are allowed.
*** Toys and candy that resemble tobacco products may be included in the general ban on tobacco promotion in COTPA, but the current definitions of "tobacco advertising and promotion" make this unclear.
**** The display and use of tobacco products in films is prohibited. For films depicting tobacco products or their use which were produced prior to the law, an anti-tobacco health warning must be shown at the beginning and middle of the film, and the display of brands or close-up images of tobacco products or packages must be masked or blurred.

Education, Communication, Advocacy, and Public Awareness

In 2007-2008, the Ministry of Health and Family Welfare, Government of India launched the National Tobacco Control Programme (NTCP) in 42 districts of 21 States/Union Territories of the country, including Thane district in Maharashtra and Patna district in Bihar. As a part of this initiative, the Government of India allocated an annual budget of about $5 million USD towards anti-tobacco mass media campaigns, which aim to inform the public about harmful effects of smoked tobacco, smokeless tobacco, and exposure to second-hand smoke. For example, a national level media campaign highlighting the dangers of smokeless tobacco was broadcasted in 11 languages on television and radio in two separate phases from 2009-2011. An evaluation of this campaign showed high impact and recall among smokeless users.

The STEPS Project (Strengthening of Tobacco Control Efforts through Innovative Partnership and Strategies) was a three-year project (2009-2012) implemented in 12 districts of Andhra Pradesh and Gujarat in partnership with the respective state governments to strengthen the NTCP. The STEPS Project aims to implement evidence-based economic and policy research, advocacy, community-based cessation strategies, media interventions, and multi-level tobacco control initiatives to reduce tobacco use in India.

Mobilising Youth for Tobacco Related Initiatives in India (MYTRI) project, a multi-component intervention program, was conducted from 2004-2006 with the aim of preventing tobacco use among Indian adolescents. The program was implemented in two cities, Delhi and Chennai, and included behavioural components, parental involvement, and training of teachers and peer leaders. An evaluation of the program found that it was successful in reducing rates of tobacco use in the intervention schools by 17% over the two years. Following the success of the MYTRI project, another two-year intervention trial called Project ACTIVITY (Advancing Cessation of Tobacco Use in Vulnerable Indian Tobacco using Youth) was implemented in Delhi to test the efficacy of a comprehensive community-based trial for socio-economically disadvantaged youth.

The mission of the Advocacy Forum for Tobacco Control (AFTC) project was to create mass support for tobacco control policies through evidence-based, scientifically validated and concerted advocacy by its member organizations, targeted at policymakers through involvement of media, youth, and the general population to create a tobacco-free India. The Advancing of Tobacco Control (ATC) project in four districts of Maharashtra also advocates for tobacco control with various stakeholders (e.g., it institutionalized the enforcement mechanism for Sections 6 and 4 of COTPA 2003 at the project districts of Aurangabad, Nagpur, Pune and Thane). The Voice of Tobacco Victims (VoTV) initiative also serves as an effective platform for victims to create awareness among tobacco users and non-users, and reaches out to the media, non-governmental organizations, and other social activists to urge them to take up this cause in building a healthy, tobacco-free nation.

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media, non-governmental organizations, and other social activists to urge them to take up this cause in building a healthy, tobacco-free nation.

Pricing and Taxation of Tobacco Products

The tobacco tax structure in India is very complex, because various tobacco products are taxed differently and both central and state governments have the power to impose taxes. Tobacco taxes in India are low overall, with the most widely used products (such as bidis) taxed at the lowest rate among all forms of tobacco.

The central government in India imposes excise taxes on tobacco products, which are collected at the manufacturers' level and can consist of specific or ad valorem tax or compounded levies. The type and amount of tax imposed depends on the tobacco product; generally, smoked tobacco products such as cigarettes and bidis are subject to specific taxes (i.e., amount per 1000 sticks). Cigarettes are taxed according to the length of the product, while tax rates for bidis are set according to whether they are made by hand or by machine. Smokeless tobacco products are taxed on an ad valorem basis (i.e., percentage of retail price). Various types of excise taxes are also levied on tobacco products, including a basic excise duty imposed on all products since 1944; the National Calamity Contingent Duty, an earmarked tax on tobacco products used for calamity relief in states; the Health Cess, a central government tax on tobacco products (except bidis) that is used to provide resources for the National Rural Health Mission; the Bidi Workers Welfare Cess, a tax on bidis that is used for welfare activities for bidi workers; and an Education Cess on top of all other duties on tobacco products.

Table 3. Central Government taxes on tobacco products in India

Type of Product	2012-2013taxrate/amount(inR)per1,000sticks)	2013-2014taxrate/amount(inR)per1,000 sticks)	2014-2015 tax rate/amount(inR) per1,000sticks)	2015-2016taxrate/amount(inR)per1,000 sticks)
Cigars ,cheroots and cigarillos				
Cigars and cheroots	12% or 1,370 whichever is higher	12% or 1,781 whichever is higher		
Cigarillos	12% or 1,370 whichever is higher	12% or 1,781 whichever is higher		
Cigarettes of tobacco substitutes	1,258	1,511		
Cigarillos of tobacco substitutes	10% or 1,473 whichever is higher	12% or 1,738 whichever is higher		
Other	10% or 1,473 whichever is higher	12% or 1,738 whichever is higher		
Cigarettes(by length)				
Non-filternotexceeding65mm	509	509	990	1,280
Non-filter 65-70mm	1,463	1772	1995	2,335
Filter not exceeding 65mm	509	509	990	1,280

Filter 65-70mm	1,034	1,249	1490	1,740
Filter 70-75mm	1,463	1,772	1995	2,335
Filter 75-85mm	1,974	2,390	2875	3,375
Other	2,373	2,875	2875	3,375
Bidis				
Handmade	11	11		
Machine-made/other	23	23		

Cigarettes, which account for only about 14% of tobacco consumption in India, contribute about 85% of the excise tax revenue collected from tobacco products, as they are taxed the highest of all tobacco products. Excise taxes on cigarettes are levied based on the type of cigarette (filtered vs. non-filtered) and cigarette length, with taxes on the premium brand of filtered cigarettes being almost three and a half times greater than the lowest brand of filtered cigarettes. While non-filtered cigarettes were taxed lower than filtered cigarettes prior to 2008, the 2008 Finance Bill raised the rate on non-filtered cigarettes to be on par with filtered cigarettes of the same length. However, the length-based cigarette tax scheme means that micro non-filter cigarettes (≤60mm), which are low-priced cigarettes targeted to low-income markets, are under-taxed relative to the more popular regular filter cigarettes (≤70mm).
In 2014, excise tax on cigarettes increased in the range of 11 per cent to 72 per cent. The top two tiers of cigarettes (75-85 mm and other) were merged into one.In2015, excise tax on cigarettes was increased by 25% for cigarettes of length not exceeding 65mm and by 15% for cigarettes of other lengths.

Bidis, which account for at least 77% of the smoked tobacco market in India, are taxed at a much lower rate than cigarettes, even though they are equally or more harmful than cigarettes. The rate of specific excise tax imposed on bidis depends on whether they are handmade or machine-made; handmade bidis, which account for the majority (98%) of the market, are taxed at the lowest rate. Per gram of tobacco, handmade bidis only have one-third of the excise burden of the lowest taxed cigarettes (micro non-filtered), which in turn have only one-fifth of the burden of regular filter cigarettes. In addition, bidis produced by manufacturers producing less than two million sticks a year without machines are exempt from the excise tax; in the year 2006-2007, it was estimated that 52% to 70% of all bidis were not taxed, either due to this exemption for small producers or to non-compliance. Because of a very large number of bidi binders, the tobacco industry in India exerts a huge political clout. Based on the premise that bidis are most commonly used by smokers of a lower socioeconomic status, and that bidi binders are very poor, the industry continues to tax bidis at very low rates.

Smokeless tobacco products, such as gutka and paan masala containing tobacco, are subject to a compounded levy scheme but are taxed uniformly across various products, at around 96% of the retail price. However, because the price of smokeless tobacco is so low, the tax is ineffective.

In March 2006, states were given the power to impose sales tax or VAT on tobacco products, and all states but one levied a 12.5% ad valorem VAT on cigarettes, but not bidis. However, in the past few years, several state governments have raised VATs on both bidis and cigarettes. Table 4 lists the VATs on tobacco products (in 2012-2013 and 2013-2014) in the four states that were included in the TCP India Wave 1 Survey.

Table 4.State-level VATs on tobacco products

State	VAT2012-2013			VAT2013-2014		
	Cigarettes	bidis	Smokeless	Cigarettes	bidis	Smokeless
Bihar	20.0%	0.0%	20.0%	30.0%	13.5%	30.0%
Madhya Pradesh	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%
Maharashtra	20.0%	5.0%	20.0%	25.0%	12.5%	25.0%
West Bengal	20.0%	0.0%	20.0%	25.0%	0.0%	25.0%

In addition to the complex tax structure and low taxes on certain products, another problem with the Indian tobacco tax system is that it does not adjust for inflation, so all tobacco products have become increasingly affordable over the past decade. According to recent calculations by Jha et al. (2011), bidis were nearly three times more affordable in 2011 compared to 1990, and cigarettes were about 175% more affordable.

Other problems with the complex tax structure are that it allows the cigarette industry to minimize the effect of tax increases by altering the structure and length of cigarettes, and also allows consumers to avoid price increases by switching to different products. Consequently, it is more difficult for the government to enforce a complex tax structure, there are opportunities for tax evasion (especially among bidi producers), and the revenue stream from tobacco tax is unpredictable compared to a more simple tax system.

A report on the Economics of Tobacco and Tobacco Taxation in India (2010) found that raising the tax on cigarettes to ₹3691 per 1000 sticks would increase the tax to 78% of the retail price, avert 3.4 million premature deaths, and generate ₹146.3 billion in tax revenue. Raising the bidi tax to ₹98 per 1000 sticks would increase the tax to 40% of the retail price, avert 15.5 million premature deaths, and raise ₹36.9 billion in new tax revenues.

India Policy Report

Advertising and Promotion	Region	Policy Description	Effective Date
Print	Country Wide	Ban on advertising and promotion of tobacco products. Exceptions: advertisements on tobacco packages and advertisements displayed at the entrance or inside a warehouse or store where tobacco products are distributed or sold.	May12004
Point of Sale	Country Wide	Ban on display of tobacco products.	August12005
Billboard	Country Wide	Some restrictions on point-of-sale advertising, low enforcement.	August12005
	Country Wide	Clarification of indirect advertising rules. Ban on using the name, brand, colour scheme, trademark, or layout of	August12005

		particular tobacco products in advertising other goods.	
Cessation	Region	Policy Description	Effective Date
Programs	Country Wide	18 cessation centers are funded – there is not nationwide coverage or a quitline.	
FCTC	Region	Policy Description	Effective Date
	Country Wide	India Ratified the FCTC.	February 2004
Health Warnings	Region	Policy Description	Effective Date
Broadcast	Country Wide	Advertising within stores must contain a health warning at the top.	August 1 2005
Health Warnings	Country Wide	All tobacco products required to display the health message “Tobacco causes cancer”.	May 31 2009
Health Warnings	Country Wide	The text warning “smoking kills” must accompany pictures on smoked tobacco products. The text warning “tobacco kills” must accompany pictures on smokeless tobacco products.	May 31 2009
Pictorial Warnings	Country Wide	Pictorial health warnings on all tobacco products.	May 31 2009
Light/Mild Descriptors	Country Wide	Misleading descriptors are banned.	May 31 2009
% of Package	Country Wide	Pictorial warnings are required to cover 40% of one side of the package.	May 31 2009
Pictorial Warnings	Country Wide	Health warnings must be rotated every two years from the date of notification.	December 20 2010
Health Warnings	Country Wide	New set of pictorial warnings implemented.	December 1 2011
Health Warnings	Country Wide	More powerful pictorial warnings implemented.	April 1 2013
Pictorial Warnings	Country Wide	New set of pictorial warnings implemented.	April 1 2015
% of Package	Country Wide	Pictorial warnings must cover 60% of the package. Written warnings must accompany 25%. A total of 85% of the surface of the package must be covered in health warnings.	April 1 2015
Health Warnings	Country Wide	Smoked tobacco packages are required to carry the phrase “Smoking causes throat cancer”. Smokeless tobacco packages are required to carry the phrase “Tobacco causes mouth cancer”.	April 1 2015

Price & Taxation	Region	Policy Description	Effective Date
Price	Country Wide	Cigarette taxes account 35% of the retail price. Bidi taxes average 9% of the retail price.	2008
Other Issues	Country Wide	Ban of foreign direct investment (FDI) in manufacturing of tobacco products for domestic consumption as well as exports. Funds for brand building and marketing still allowed.	May 10 2010
Product Regulation	Region	Policy Description	Effective Date
Other	Country Wide	Prohibition of sale of tobacco products to minors.	May 2004
Other	Goa	Goa becomes the first state to ban the sale, storage, and consumption of gutka.	October 2 2005
Other	Country Wide	Ban on the sale of chewing tobacco and other paan masala products in plastic packets.	March 3 2011
Other	Country Wide	Ban on sale, manufacture, and storage of gutka and paan masala in 26 states and 5 union territories.	June 1 2013
Sale	Region	Policy Description	Effective Date
Sponsorship	Country Wide	Ban on sale of tobacco products through vending machines.	August 1 2005
	Punjab	Ban on sale of e-cigarettes.	September 5 2013
Smoke-Free	Region	Policy Description	Effective Date
Public Places Ban	Country Wide	Ban on smoking in public places. Exceptions: designated smoking areas allowed in hotels with thirty rooms, restaurants that can seat over 30 people, and airports. Ban not enforced.	October 2 2008
Public Places Ban	Country Wide	Prohibits the sale and consumption of tobacco products within 100 yards or educational institutions (including state schools and college campuses).	September 18 2009