18. What do you think about the following statements? (tick one per line)

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Mildly agree</th>
<th>Mildly disagree</th>
<th>Strongly disagree</th>
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Smoking makes you feel good
You have to smoke if you are with friends who smoke
If you smoke, you worry about being told off about it
Smoking is not as harmful as they say
Guidelines for the Conduct of Tobacco Smoking Surveys
of the General Population

Report of a WHO meeting held in Helsinki, Finland
29 November - 4 December 1982

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1. INTRODUCTION

Smoking-related diseases have reached epidemic proportions in the industrialized countries and are now becoming widespread in developing countries. This is why many countries are now carrying out tobacco use surveys so as to assess the extent of the problem and to design, monitor and evaluate appropriate smoking control strategies. Health authorities in many countries, particularly the developing ones, which are now beginning to be involved in such action, turn to WHO for advice and provision of ready-made procedures - particularly questionnaires - to help them carry out national smoking surveys. Resolution WHA29.55 adopted by the World Health Assembly at its session of 19th May 1976, requested the Director-General of WHO "to promote the standardization of definitions, measurement methods, and statistics concerning smoking behaviour and tobacco consumption." The present guidelines are designed to assist in such standardization. The present proposal for standardized procedures is based in part on earlier attempts to a standardized approach (1,2,3) and on experiences gained in countries where regular surveys have been carried out.

The present proposal is based on the following assumptions:

a. It is not a do-it-yourself kit for surveys of smoking habits. A task force is needed (see section 4.1) to design and carry out a survey. Survey methods must be adapted to local conditions, particularly in developing countries, and these conditions are best known by the nationals, who make up the task force. Texts on epidemiological procedures should be consulted.

b. These proposals are not intended to interfere with or to dictate the conduct of smoking habit surveys which are presently carried out by health authorities or other institutions and individual researchers. They are designed to facilitate the collection and the reporting of a basic amount of information in a uniform way.

c. Widespread public health problems are associated with cigarette smoking. Thus, the present publication deals mainly with this kind of tobacco use although other types of tobacco use, e.g. chewing, hookah smoking, snuff-taking, etc., are also considered.

d. Countries differ in their availability of survey expertise and in their needs. In many instances, anecdotal information on smoking prevalence and attitudes is the only type of information available. In other countries, more extensive studies are available on smoking rates, socio-economic background, attitudes, knowledge, motives, type of smoking material, degree of inhalation, and other variables. To accommodate the wide range of needs a simple basic questionnaire and a more comprehensive one are therefore proposed. Different questionnaires are proposed for adults and young people.


2. SCOPE AND AIDS OF SMOKING SURVEYS

In many countries tobacco sales data are available or can be estimated from taxation records. If sales data were accurately reflecting consumption, it should, in principle, be possible to compare these with consumption estimates from surveys and hence to estimate under-reporting in surveys and monitor changes in such under-reporting over time. However, in many countries there may be factors which make the total sales figures inaccurate as indicators of total consumption. These would include:

- large, unrecorded cross-border movement of cigarettes, and smuggling.
- substantial tax evasion or exemption.
- changes over time in the weight of tobacco per cigarette.
- substantial home growing of tobacco.
- change in the ratio of hand-rolled to manufactured cigarettes.

Consequently well-conducted surveys may give a more accurate picture of consumption than sales figures. Furthermore, only surveys can provide estimates of smoking prevalence for different sex and age groups.

Surveys can be used for a variety of purposes. When initiating smoking control activities within a country, surveys can be an important means of drawing attention to the smoking and health issue. When repeated at regular intervals they can show trends in smoking by age, sex, socio-economic status and region etc., and suggest priorities for smoking control intervention. Therefore they:

- provide a basis for planning of national action to reduce smoking related diseases.
- permit the evaluation of intervention impact, and identify factors, both individual and environmental, which influence smoking rates.
- provide international comparisons.

The first of these aims includes the prediction of the likely extent of tobacco-related health problems. For long-term planning, it is important not only to estimate the prevalence of tobacco use but also to establish trends in the development of smoking habits. In order to identify major factors influencing smoking habits in different groups of the population it is necessary to record not only changes in actual smoking behaviour, but also changes in people's attitudes. Of particular interest are the expression of wish for help in smoking cessation, and the expectation of stopping smoking.

3. DESIGN OF A SURVEY

There are many factors involved in a survey design. The main factors to be considered are as follows:

3.1 Targets

Smoking surveys can be divided into different categories according to the groups to be studied.
3.1.1 Surveys of the general adult population

These surveys give an overview of the magnitude of the smoking problem in the country as a whole. The prevalence of smoking in major subgroups (males, females, specific income groups etc) can also be estimated from nation-wide surveys.

3.1.2 Surveys of young people

Young people are defined as "not adults", but definitions may vary from country to country. Typical definitions include compulsory school age or, otherwise, below the legal age of adult responsibility.

Assessment of smoking habits in young people require surveys of single year age-groups and special questions which do not assume regular smoking. Surveys of young people are of special importance since:

- those who begin to smoke are likely to become life-long smokers

- the earlier the age at which smoking begins the greater the long-term health risks involved.

3.1.3 Surveys of special target groups

Special groups can be for instance, those who belong to professions with a special responsibility for anti-smoking education or the prevention of smoking-related diseases (physicians, teachers, nurses etc.), or those who are at high risk because of high consumption of cigarettes or because of a high risk of negative health effects (pregnant women, asbestos workers, subjects with cardiovascular or other syndromes, etc). Studying physicians' smoking habits can be seen as a tool of making them aware of their professional responsibility. Low rates of smoking among "trend leading" groups can be used to influence and motivate other groups, as well as the general population, to stop smoking. However, these special categories will not be dealt with here.

In addition, there might be a need for specific studies such as evaluation of smoking cessation procedures or of tobacco-related epidemiological surveys.

3.2 Types of surveys

In countries where no smoking surveys have been yet carried out, a single cross-sectional survey will give valuable baseline information to plan smoking control action. However, a series of regular cross-sectional surveys is to be preferred as it will show changes and trends over time, give considerably more information, and enable the evaluation of national programmes. Smoking surveys can be carried out as single purpose studies. This is often a resource-consuming strategy and does not always allow for regular data collections. In some countries it may be possible to include questions on smoking habits as part of other ongoing surveys or in the census. The advantages of such "adding on" would be:

- cheapness and
- ease.
The disadvantages of such adding on are that:

- relatively few questions on smoking behaviour and attitudes can be asked, and
- the same questions need to be included in the same type of survey to observe trends over time. If a ten-year census is used, this would be extremely restrictive.

In some countries general surveys e.g. on lifestyles etc. are carried out. Such composite surveys can show smoking behaviour in relation to other health behaviour. By such means it may be possible to e.g. evaluate the effectiveness of an integrated approach towards the modification of health damaging behaviours. Such approach requires close co-operation of different sections of preventive medicine and health education.

### 3.3 Sampling procedures and sample size

Once it has been decided which sections of a population should be studied, different procedures for drawing a sample should be considered. The choice of sampling procedure is related closely to the method of recording used. For personal interviews, the sample has to be chosen from geographically limited areas. For mailed questionnaires, simple random sampling may be the best procedure.

The most commonly used procedures for sampling are:

- simple random sampling
- stratified random sampling
- multistage random sampling
- cluster sampling
- sampling by an independent criterion (i.e. date of birth)
- sequential selection
- combined procedures

Which procedure should be chosen depends upon the purpose of a survey, and upon local resources and conditions. It is essential that an epidemiologist, a statistician or social scientist be involved at the very beginning of the survey planning stage and be consulted before the sampling procedure is decided: otherwise data may be collected which are of little value.

When determining the appropriate size of population samples, the following should be considered:

- the level of accuracy of results needed, and
- the degree of subgroup breakdown that is deemed necessary.
As a working basis it may be suggested that a sample size of at least 1000 would be desirable to estimate how many people smoke, by age and by sex. If more accurate estimates for a particular subgroup of a general survey of adults are needed, it may be more practical to carry out special surveys on that subgroup rather than increasing the overall sample size. Another alternative is to increase only the sample size of the specific group within the general survey population so as to increase the precision of estimate for that group.

3.4 Model Questionnaires

Four "model" questionnaires (1 to 4) are proposed. Questionnaires for adults and young people are presented separately. One important reason for presenting them separately, is that the definitions of categories of smokers are partly different. Young people averagely smoke much less than adults and the category occasional smokers used for adults is therefore replaced by the categories weekly smokers and experimental smokers. Further, some of the questions on attitudes and beliefs have to be stated differently.

For both adults and young people, a basic version as well as a more comprehensive version is presented. The basic versions only contain a basic core of questions which should always be included, even when the smoking survey is "added on" to other, ongoing surveys. The more comprehensive versions represent a kind of menu, where national survey researchers can combine a "meal" which corresponds to national needs and resources.

3.5 Other decisions to be made

1. Whether to use interview or self-completion questionnaire. Where there are low levels of literacy the former would be the only method but with literate subgroups the latter could also be used. Results obtained by the two methods would not necessarily be comparable.

2. Choice of institution which will carry out the survey. If the institution is not a reliable one and its survey method yields a low response rate, the whole survey could be invalidated.

3. How to deal with concealment of smoking. In certain developing countries children and women may conceal their smoking habits because of cultural taboos. Pre-testing is needed in which survey methods are systematically varied, if possible with chemical validation of testimony*, in order to establish the most accurate survey method.

4. Whether to use schools, or individuals as the basis of survey sampling in children. A school survey would be much cheaper though there would be a problem of low school attendance in many developing countries. Individual surveying may be very difficult in countries with a very large or widely scattered population in which case there would be a need for stratification into regions or sub-cultural groups with probability sampling or random sampling within strata.

Footnote(*)

(e.g. assays for plasma and/or urinary nicotine levels; expired CO; carboxyhaemoglobin levels; salivary thiocyanate).
5. How to ensure confidentiality. In general replies should be anonymous, that is no name is recorded, and clearly seen to be so. If anonymity cannot be provided because of a need for follow-up, then confidentiality should be provided by the use of code numbers with a confidential key. Anonymous and confidential replies are likely to yield more reliable estimates of smoking prevalence.

6. Whether to use the basic or the more comprehensive questionnaire formats proposed in this report.

4. OPERATIONAL ASPECTS

There are many operational aspects for carrying out surveys. The main headlines are given below.

4.1 Task force

In each country, there should be a focal point (preferably a specialized, government-approved committee or agency) for smoking and health questions which would co-ordinate the smoking surveys. In certain instances, this same body could also take responsibility for carrying out the field work aspects of the survey, while on other occasions other bodies may be involved to make up a task force. A task force should include behavioural scientists, demographers, statisticians, and trained interviewers. Representatives of health service sectors that would be involved in subsequent intervention and other action, as well as educators and primary health care workers should also be included, as appropriate.

The focal point and the task force could be located - either together or separately - in e.g. the ministry of health, a university institute, a survey organization, the national bureau of statistics or other appropriate governmental or non-governmental institution.

4.2 Interviewers

Interviewers need to be trained in how to establish rapport with people and instructed on how to cover all questions asked. Their work may need to be monitored through re-interview by supervisors, but this is only possible where surveys are not anonymous. In many countries there may be suitable groups of people who could be trained and used as interviewers (such as students, health professionals, primary health care workers, and members of voluntary organizations).

4.3 Pre-testing

The questionnaire needs to be pre-tested for comprehensibility by the target group. The questions have to be adapted to cultural setting and may need to be pre-tested a number of times with slight variation in order to ensure comprehensibility and accuracy. However, it is important that the basic aim of the questions is not changed in this process.
4.4 Response Rate

All possible efforts need to be made to avoid a low response rate which would invalidate the survey. The minimum desirable or achievable rate will vary according to the sampling method, but should normally be no less than 70 - 80%. Multiple attempts to reach the target individuals should be made to increase the response rate so as, by comparing the reported prevalence of first and call-back interviews, to estimate the total prevalence. Where possible the characteristics of responders and non-responders in regard to sex, age and socio-economic status should be compared to gain some estimate of possible biases from non-response. Non-response for reasons connected with smoking should be regarded as more serious than those for other reasons.

4.5 Under-Reporting

Survey data may considerably under-represent total sales figures. There are indications that such under-reporting may be increasing in some countries.

Survey results may yield artificially low estimates of smoking due to:
- denial of smoking and
- under-reporting of consumption by a smoker

As indicated earlier (section 2) the criterion which is used for estimating under-reporting, namely, total sales data, may be in itself inaccurate.

4.6 Confidentiality

The interviewer should make sure that every questionnaire or interview on smoking habits start with some introductory remarks regarding confidentiality, anonymity and the sponsoring agency. These remarks should be adjusted to local circumstances, and should appear in the questionnaire.

5. INFORMATION TO BE RECORDED IN ADULTS

There are 3 kinds of variables to be recorded:
- socio-demographic variables
- smoking behaviour, and
- attitudes and beliefs

5.1 Socio-demographic data

a) Minimum obligatory information:
   - age (exact years, not age group)
   - sex
b) Additional information

This to be collected where the sample size is adequate to permit breakdown into additional variable and where the extra cost of gathering and analysing such additional information is justified by the purpose of the survey or by previous indications of importance. Such additional information could be:
- place of residence (e.g. urban/rural)
- socio-economic status (which may be defined differently in different countries but might include education level, occupation and family income)
- marital status
- ethnic group
- religion

5.2 Individual smoking behaviour

Information should be collected on frequency of smoking and types of tobacco products used within the surveyed population.

5.2.1 Smoking habits (categories of adult smokers)

With respect to individual smoking habits, a large number of categories could be used. It is proposed that the following categories be used, based on the questions contained in the questionnaires 1 and 2. It should be noted that these terms are sometimes loosely used and given varying and imprecise definitions. However, the working group strongly recommend that, for standardization sake, the definitions given here be used in future studies.

- Daily smokers: Anyone who, at the time of the survey, smokes some kind of tobacco product every day.
- Occasional smokers: Anyone who smokes, but less than once a day.
- Non-smokers: Anyone who, at the time of the survey, does not smoke at all.

Sub-groups of daily smokers which may need to be identified:
- daily cigarette smokers (this includes manufactured and hand-rolled cigarettes)
- other daily smokers

In some instances it would be desirable to make an even more detailed breakdown of the daily smokers, such as:
- daily smokers of cigarettes only
- daily smokers of other tobacco products only
- daily smokers of both cigarettes and other smoking materials

The category of non-smokers can also be subdivided, using the questions suggested in questionnaires 1 and 2 into:

a) ex-smokers who have smoked daily for at least 6 months, but who did not smoke at the time of the survey and
b) other non-smokers which include both those who have never smoked and those who have smoked too little (in terms of frequency and duration) to be regarded as ex-smokers.
In some countries it might be important to identify common groups such as bidi smokers or hookah smokers in the Indian subcontinent or goza smokers in Egypt. In addition it might be necessary in some countries to take into account snuff and tobacco chewing. Here again, the important categories to identify would be the use of such tobacco products alone or in combination with some other smoking practices. Basic essential questions are shown in questionnaire 1, but these might be supplemented in more comprehensive surveys.

5.2.2  
**tobacco consumption**  
The basic information on individual tobacco consumption would be individual consumption levels recorded by asking smokers how many cigarettes, cigars, or pipefuls they usually smoke per day. Cigarette smokers might, in addition, be asked about the brand they usually smoke. Questions regarding age when starting smoking tend to be unreliable, especially in older people. Answers to such questions should be interpreted with caution.

5.3  
**Attitudes and beliefs**  
Measures of smoking behaviour are not sufficient to map out the smoking problem because:

a) they leave out certain important baseline data, for example, whether people believe that smoking is harmful to their health, whether they believe that smoking cessation would be of any benefit to their health, and whether they support public action to control smoking.

b) they do not measure changes in attitudes which precede changes in smoking behaviour.

In the basic questionnaire in Annex 1 only a very simple question on attitude is included. This was made so in an effort to keep questions to the absolute minimum.

There are a number of topics on which questions might be asked. The choice of areas and detailed questions would depend on the purposes of the survey and how often it is likely to be repeated. The following are the main areas which are suggested for the more comprehensive questionnaire (No. 2) with their reasons for inclusion:

i) The strength of the wish to stop smoking. This information would help in designing cessation activities and mapping out the extent of the perceived smoking problem.

ii) The perceived likelihood of quitting smoking. This would be a more sensitive indicator of the impact of smoking control interventions than the number of smokers actually giving up smoking.

iii) Support for government action against smoking. Valuable in planning and justifying smoking control activities.

iv) Beliefs of the harmfulness of smoking and of the health benefits conferred by smoking cessation.
v) Motives for smoking or not smoking. This category would explore the social supports and sanctions for smoking in various sub-groups of age, sex and religious and ethnic affiliations. Also valuable in planning health and education campaigns.

vi) Social norms – these might provide sensitive indicators of changes in the social climate which may precede changes in smoking behaviour.

6. INFORMATION TO BE RECORDED FOR YOUNG PEOPLE

As with adults the information would be:

- socio-demographic variables
- smoking behaviour, and
- attitudes and beliefs

6.1 Socio-demographic data

The basic background variables would be sex and age. Age should preferably be expressed both as age in years at last birthday, and by indication of school grade. For young people not going to school, the highest school grade attained should be indicated as well as his present activity. Further, it can be useful to record place of residence and type of residential area (urban versus rural).

Some indications of socio-economic group would be useful by recording data regarding parents' occupation. There might be a need for other types of indicators such as the child's own educational and professional aspirations.

Many studies have conclusively shown that influences from the social environment have great predictive value with regard to childrens' future smoking habits. Therefore, conditions of this kind as well as ethnic and religious background might also be recorded.

In summary:

Minimum requirements:
- sex
- age

Additional information:
- cultural sub-group
- urban/rural
- parents' occupation
6.2

Individual smoking behaviour

Actual smoking patterns among young people differ to some extent from the patterns in adults, and so do the ways in which children look upon their smoking. This makes it necessary to adopt modified categories when classifying young people with regard to smoking behaviour.

6.2.1

smoking habits (categories of young smokers)

Among young people there might be, in addition to daily smoking, a pattern of smoking each week, but not each day. There may also be considerable experimenting with smoking where some young people might smoke every week or even every day for a period and then stop smoking, in some cases only to resume later. The following categories could be used, based on the questions suggested in Questionnaires No. 3 or 4. Only some of these categories are the same as in adults.

- Daily smokers: defined as anybody who at the time of the survey smokes any kind of tobacco every day (as for adults).
- Weekly smokers: defined as anybody who at the time of the survey, smokes at least once a week but not daily.
- Experimental smokers: defined as anybody who smokes, but less than once a week.
- Non-smokers: defined as anybody who at the time of the survey does not smoke at all (as for adults).

Footnote (*)

The smoking habits of young people are often extremely instable. After periods of smoking at an early age, non-smoking periods may follow, and change again to new experiments with tobacco. In spite of this, self-reports from a cross-sectional survey may give a fairly reliable picture of the magnitude of the smoking problem at group level in a population of children and youths. However, if the prediction of an individual's future smoking habits is of importance, or a classification into sub-groups according to more permanent smoking patterns is of importance, stability criteria may be used for classifying individuals. To be classified as a daily smoker, each individual has then to meet the criterion of, for example, having been a weekly smoker for at least three months. A stability criterion is not included in the basic definitions of this text, and it is left to the survey epidemiologists to decide as to its use.
Non-smokers can be divided into:

i) former weekly or daily smokers: non-smokers who in the past have been weekly or daily smokers for three months or more.

ii) former experimental smokers: present non-smokers who have smoked in the past, but not as much as once a week for three months or more.

iii) never smokers

6.2.2 Tobacco consumption

When recording consumption levels it should be kept in mind that those who smoke on a regular, although not daily, basis have to be given an opportunity to state their consumption in terms of cigarettes per week or some similar kind of measurement.

In summary:

Minimum requirements:
- How much do they smoke weekly, or daily

Additional information:
- Age started smoking (or started carrying cigarettes)
- Brand (exact specification)
- Degree of inhalation
- Filter or plain
- Sibling, peer and parent smoking
- Other

6.3 Attitudes and beliefs

When dealing with adolescents, it is especially important to delineate relevant attitude predictors for future smoking behaviour, particularly when the effects of intervention activities to prevent the onset of smoking are to be assessed. One such predictor would be expectancy of own future smoking behaviour, for example, at twenty years of age. Other such variables might relate to the way the respondent feels about smoking and smokers, for example, the image of smokers and non-smokers, self image and internal or external locus of control. In addition, those categories of variables that were mentioned above in relation to adults would also be applicable for children.
7. DATA PROCESSING AND PRESENTATION

The analysis of data involves data processing and data presentation. The points as listed may be helpful to individuals who are carrying out a survey on smoking habits.

1. It is essential that a person with experience in data processing and in the presentation of data, such as a statistician, an epidemiologist or a behavioural scientist, should be involved in both the survey design and in the analysis. If the survey is not well designed, it may not be possible to overcome such shortcomings at the analysis phase.

2. It is the experience of individuals who have undertaken surveys that the data processing and the analysis of data may take considerably more time than anticipated. Moreover, the analysis of a survey tends to be open-ended, and a good set of data provides opportunities for a number of valuable investigations. Hence, it is important to allow ample time and a sufficient portion of the budget for the analysis phase.

3. The first task in the analysis phase is to carry out the "cleaning-up or editing of the data. This implies checking the data for consistency, and checking the responses for completeness and accuracy. Some of this work can be carried out with an appropriate computer programme, but the quality of the edited data will in many cases be higher if the responses can also be checked manually. Any manual or automatic procedure for editing responses should itself be consistent and should be described in detail in the report of the analysis.

4. A next task is to check the frequency distribution of the various variables which have been obtained in the survey. For example, it is advisable to check whether these variables are distributed unimodally, or whether variables fall into fairly well defined subgroups. Also, responses might be graded e.g. on a 1-to-5 scale and it is then useful to check whether these different types of responses occur with similar frequencies.

5. The next stage is to estimate the prevalence and intensity of smoking, according to the various sex and age groups. Prevalence implies the percentage of individuals who smoke in a certain manner and intensity of tobacco consumption provides an estimate of the amount which is smoked. When data are tabulated, results for males and females should be presented separately. Recommended age groups are those adopted by WHO and in accordance with earlier proposals of the UICC these are five-year groups, using the age at last birthday, namely 20-24, 25-29, 30-34, etc., and it is here recommended that the age groups over 65 should also be sub-divided into five-year age groups until the age of 80+. For smoking habits of young people it is desirable to use narrower age groups, typically single year groups over the age during which habits change rapidly. This procedure allows for the collapsing of data; that is, if samples are too small, age groups may be pooled, for example, under the headings of: below age 25, 25-44, 45-64 and over 64. Prevalence in terms of smoking behaviour can be estimated according to the classification system proposed in sections 5.2.1 and 6.2.1. In addition, it may be of interest to obtain similar data for individuals who use tobacco products other than cigarettes.

Tobacco consumption may be reported in various ways, but should include: a) mean number of cigarettes per day and b) the distribution of smokers by consumption levels. Following the UICC proposal (3) smokers should be grouped as smoking 1-7, 8-12, 13-17, 18-22, 23-27, 28-32, 33-37, 38-42, 43-47, 48-52, 53-57, 58-62 cigarettes per day, and so on. If the groupings are small, the data may be collapsed in a way which is judged most appropriate. These categories are chosen

Footnote (*) see footnote in page 1.
because reported consumption usually are clustered among values which are multiples of five and ten. Next, it should be noted that it may be important to investigate the prevalence of very light smokers, e.g. smokers smoking one to two cigarettes per day, since this is a pattern which might be expected to be prevalent in a number of developing countries and in young people.

The actual tabulations should show percentages for the different smoking behaviour classes as defined in sections 5.2.1 and 6.2.1 and for the different consumption levels as suggested above, as well as actual numbers, on which the percentages were calculated.

6. Another task involves the identification of associations between smoking and other variables. Such other variables might be the region of a country, the income of individuals, their education, or other variables apart from age and sex, which may be judged to be important in determining smoking habits. The sample counts of smoking behaviour types in the various subgroups give rise to two or higher dimensional contingency tables. The methodology is standard for simple random sampling, and some methodology has been developed for more complex designs. One general point that should be stressed in this connexion, and which can hardly be overemphasized, is the possible presence of confounding variables. That is, the methods outlined above will only indicate associations and do not necessarily imply cause and effect. Unless one is aware of the possible presence of confounding factors, misleading results may be obtained.

7. The estimation of errors. It is important that some measure of uncertainty be attached to each prevalence figure. One method of doing this is to calculate a 95% confidence interval, if this is a reasonably simple procedure given the sampling design used. However, it should be noted that such confidence intervals provide an estimate for what is referred to as the sampling error. This sampling error may be relatively small in large surveys involving randomly selected samples, while a much larger error may result from non-response bias; this occurs if non-respondents and respondents do not have similar smoking patterns and a large number of individuals have not responded. Consequently, it may be more appropriate simply to record the sample size on which each prevalence figure is based, and to report the associated percentage of non-response. In cases of moderate non-response, useful upper and lower bounds may be obtained by adding the "non-response" and "unknown" figures to each category, assuming that these individuals were either smokers or non-smokers. For example, if in a sample of 1000 there are 600 smokers, 300 non-smokers, and 100 unknown or non-responders, then the relevant ratios are $600/(900+100) = 6/10$ or $(600+100)/(900+100) = 7/10$ for the lower and upper bounds of the sample proportion of smokers. More generally, one should be aware of a large number of sources of possible non-sampling errors. Non-response is perhaps the major source. However, biases can also be introduced for example if interviews are carried out by proxy; parents responding for their children may not be aware of the actual amounts they smoke. Another source of error is response variability, if on repeated interviews the answers obtained differ. Repeat interviews on a sub-sample may assist in assessing response variability. As another example, the context in which a survey is conducted may also affect results.
Questionnaire No. 1

QUESTIONNAIRE FOR ADULTS
(Basic version)

This questionnaire is confidential.

This survey is sponsored by the [Name of sponsoring institution]

Answer by ticking one box for each question (unless otherwise instructed)

(CODING)

A. Sociodemographic data

1. What is your sex? (please tick)
   - male
   - female

2. Please write your age at your last birthday
   - years old

B. Smoking behaviour

3. Have you ever smoked? (tick one)
   - yes
   - no (GO TO QUESTION 7)

4. Have you ever smoked daily for six months or more? (tick one)
   - yes
   - no

5. Do you now smoke daily, occasionally or not at all?
   - daily (at least once per day)
   - occasionally (GO TO QUESTION 7)
   - not at all (GO TO QUESTION 7)

Footnote+: See comments at end of this questionnaire.
6. Please write the number of items you usually smoke per day of the following? (IF NONE, WRITE 0 NEXT TO THE APPROPRIATE ITEM(S)).

- manufactured cigarettes (no. of)
- handrolled cigarettes (no. of)
- bidis (no. of)
- pipefuls of tobacco (no. of)
- cigars/cheroots (no. of)
- goza/hookha (no. of)

C. Attitudes and beliefs

7. What do you think about your smoking habits five years from now? (tick one)

- will most certainly smoke daily
- will probably smoke daily
- will probably not smoke daily
- will most certainly not smoke daily

COMMENTS TO QUESTIONNAIRE NO. 1

The basic version contains an absolute minimum set of questions to be included in any survey. If possible, additional questions should be included on attitudes, beliefs, etc. See section 4.6 for statement on confidentiality.

Questions 1-5: Self-explanatory

Question 4: Daily smoking for 6 months is considered as an indicator of established habit.

Question 6: Could be extended to examine the smoking of occasional smokers by asking for smoking "per week" rather than "per day". The question deals with the basic types of smoking which are known to be widely prevalent in the country. Extra questions could be added to deal with other types of smoking which are prevalent.

Question 7: Expectancy of own future smoking habits can be a much more sensitive measure of the effect of anti-smoking campaigns than questions on the present smoking habits.
QUESTIONNAIRE FOR ADULTS
(More comprehensive version)

This questionnaire is confidential+

This survey is sponsored by the+ (Name of sponsoring institution)

Please answer by ticking one box for each question (unless otherwise instructed).

(CODING)

A. Sociodemographic data

1.* What is your sex? (please tick)
   ___ male
   ___ female

2.* Please write down your age at your last birthday
   ___ years old

3.+ In what kind of place do you live? (tick one)
   ___ city
   ___ suburb
   ___ town
   ___ village
   Write name of place ________________________.

4.+ What is your occupation? (use at least 2 descriptive words)
   ________________________

Footnote
(*) Questions which also make up the basic questionnaire for adults.
(+) See comments at end of this questionnaire.
5.+ What kind of schooling have you had? (tick as appropriate)
   ___ no schooling at all
   ___ primary school
   ___ vocational apprenticeship
   ___ secondary school
   ___ higher education (e.g. college, etc)
   ___ university

6.+ Write down your approximate monthly income

   ________________________

7.+ Please write which ethnic or cultural sub-group you belong to.

   ________________________

8.+ Which religious affiliation do you belong to, if any?

   ________________________

9.+ What is your present marital status? (tick one)
   ___ married
   ___ divorced/separated
   ___ widow/widower
   ___ single (never married)

B. Smoking behaviour

10.* Have you ever smoked? (tick one)
   ___ yes
   ___ no (GO TO QUESTION 15)

11.* Have you ever smoked daily for 6 months or more? (tick one)
   ___ yes
   ___ no
12.* Do you now smoke daily, occasionally or not at all? (tick one)

___ daily (at least once per day)
___ occasionally (GO TO QUESTION 15)
___ not at all (GO TO QUESTION 15)

13.* Please write the number of items you usually smoke per day (if none, please write "0" next to the appropriate item(s)).

___ manufactured cigarettes
(no. of)

___ handrolled cigarettes
(no. of)

___ bidis
(no. of)

___ pipefuls of tobacco
(no. of)

___ cigars/cheroots
(no. of)

___ goza/hookha
(no. of)

14+ If you smoke manufactured cigarettes please write down the type and brand name you usually smoke

filter tipped ________________________________

plain ________________________________

tick here if no special preference ___

15+ Do you use snuff? (tick one)

___ daily
___ occasionally
___ not at all

16+ Do you chew tobacco? (tick one)

___ daily
___ occasionally
___ not at all
17. Are there any other forms of tobacco you use which we have not mentioned? If so, please describe:

C. Attitudes and beliefs

18. For smokers only (non-smokers go to question 21): Have you ever thought about quitting smoking? (tick one)
   ___ yes
   ___ no (GO TO QUESTION 21)

19. Have you ever made a serious attempt to stop smoking? (tick one)
   ___ yes
   ___ no (GO TO QUESTION 21)

20. How long did you actually stay off tobacco smoking the last time? Write down the number of: (one answer only)
   ____ days
   ____ weeks
   ____ months
   ____ years

21. What do you think about your smoking habits five years from now? (tick one)
   ___ will most certainly smoke daily
   ___ will probably smoke daily
   ___ will probably not smoke daily
   ___ will most certainly not smoke daily

22. Do you think smoking is harmful to health? (tick one)
   ___ strongly agree
   ___ mildly agree
   ___ no opinion/don't know
   ___ mildly disagree
   ___ strongly disagree
23. For smokers only (non-smokers go to question 24): Are you concerned about the harmful effects that your own smoking may have on your health? (tick one)

___ very concerned
___ fairly concerned
___ slightly concerned
___ not concerned

24. Are you concerned about the harmful effects smoking may have on the health of nearby nonsmokers? (tick one)

___ very concerned
___ fairly concerned
___ slightly concerned
___ not concerned

25. Would you agree or disagree with the following opinions? (tick one for each opinion)

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Mildly agree</th>
<th>Neither agree nor disagree</th>
<th>Mildly disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

Opinions:

- There should be a health warning on tobacco packages.
- There should be a complete ban on the advertising of tobacco.
- Smoking in enclosed public places should be restricted.
- The cost of tobacco products should be increased sharply.
- The sales of tobacco should be completely prohibited.
- Doctors, nurses and other health workers should not smoke so as to set a good example.
- Teachers should not smoke so as to set a good example.
Parents should not smoke so as to set a good example to their children.

Everybody has the right to breathe air which is free of tobacco smoke.

Some cigarettes are more hazardous than others.

26. How would you judge the importance of the following reasons for not smoking (Tick more important or less important for each reason)

<table>
<thead>
<tr>
<th>More important</th>
<th>Less important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promoting fitness and well-being</td>
<td></td>
</tr>
<tr>
<td>Preventing diseases</td>
<td></td>
</tr>
<tr>
<td>Setting a good example</td>
<td></td>
</tr>
<tr>
<td>Saving money</td>
<td></td>
</tr>
<tr>
<td>Demonstrating independence and self-control</td>
<td></td>
</tr>
<tr>
<td>Respecting the rights of non-smokers</td>
<td></td>
</tr>
<tr>
<td>Avoiding destruction by fire</td>
<td></td>
</tr>
<tr>
<td>Promoting clean homes and work environment</td>
<td></td>
</tr>
<tr>
<td>Religious reasons</td>
<td></td>
</tr>
</tbody>
</table>

27. Among those who are important to you, how strongly do they encourage or discourage smoking? (tick one)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>strongly encourage smoking</td>
<td></td>
</tr>
<tr>
<td>mildly encourage smoking</td>
<td></td>
</tr>
<tr>
<td>neutral</td>
<td></td>
</tr>
<tr>
<td>mildly discourage smoking</td>
<td></td>
</tr>
<tr>
<td>strongly discourage smoking</td>
<td></td>
</tr>
</tbody>
</table>

If this version is too comprehensive for a survey being planned, a subset of questions should be selected according to the purpose of the study. Alternatively, additional relevant questions may be asked. See section 4.6 for statement on confidentiality.
International comparison of the relation of smoking to many of these demographic variables may be difficult. However, the main purpose is to examine how the variables are related to smoking in a particular country rather than to try to make international comparisons.

Questions marked by an asterisk are also included in the basic version of the questionnaire.

Questions 1-2: self-explanatory

Question 3: It is important to map smoking by type of community and this is an example of a simple question. There is a UN standard classification system by which place of residence is classified by size of community. Where possible this should be used but may be beyond the resources as it involves considerable coding. In most counties there are national coding systems which may be preferred. If regional differences are to be examined this would need a separate classification variable.

Questions 4 and 5: Can be used as components of a measure of socio-economic status but may also be of interest in their own right; e.g. high risk occupations such as asbestos workers. Occupation is a question which is often difficult to code due to imprecision in the answer. It may be coded by a standard national system or following the ISIC international code. The most basic question which might be asked would be manual vs non-manual work, but it should be more detailed for particular purposes.

Question 6: Income may need to include income in kind derived from e.g. agriculture. It may also need to include information on the number of dependents. It is a very sensitive question which often provokes refusal. It can be supplied by the interviewer (possibly using a broad categorisation into top middle and lower third) of the national per capita income distribution.

Question 7: This is not the actual question which would be asked, but an indication of the topic. It would be appropriate in some countries and could be very sensitive or impossible to ask in others. In some cases the question appropriate would be: the language used at home by adults.

Question 8: This may be a very sensitive question in some countries, but may be important as studies have shown that tobacco usage differs in certain affiliations.

Question 9: There are variations between countries in definitions of marital status. Surveys have shown it to be an important variable related to tobacco use in some countries.

Questions 10 to 12: self-explanatory

Question 11: see comment in basic questionnaire

Question 13: Could be extended to examine the smoking of occasional smokers by asking for smoking "per week" rather than "per day". The question deals with the basic types of smoking which are known to be widely prevalent in the country. Extra questions could be added to deal with other types of smoking which are prevalent.

Question 14: The exact form of the question will depend upon its purpose. If it is to establish exposure to harmful substances the question would need to be detailed enough to identify the precise brand, taking into account that the same brand may have very different tar and nicotine levels within and between countries, and between different varieties of the brands sold in one country. If confined to measure the wish for low tar cigarettes a somewhat different and less detailed question would be required.

Question 15: In some countries question 15 might need to be distinguished between snuff taken in the nose and in the mouth.

Questions 16 and 17: Are designed to explore the prevalence of other types of tobacco use which may then be explored in more detail by inclusion within question 13.

Questions 18 to 20: self-explanatory

Question 21: Expectancy of own future smoking habits is a much more sensitive measure of the effects of anti-smoking campaigns than questions on the present smoking habits.

Questions 22 to 27: self-explanatory
QUESTIONNAIRE FOR YOUNG PEOPLE
(Basic version)

This questionnaire is confidential+

This survey is sponsored by the+

(Name of sponsoring institution)

Please answer by ticking one box for each question (unless otherwise instructed)

(CODING)

A. Sociodemographic data

1. What is your sex? (please tick)
   _ boy
   _ girl

2. Please write your age at your last birthday
   _ years old

3.+ Write what class (grade) are you in at school
   _ grade
   If no longer at school:
   What was the highest grade you attended at school?
   _ grade

B. Smoking behaviour

4. Have you ever smoked even once? (tick one)
   _ yes
   _ no (GO TO QUESTION 8)

Footnote:(+) See comments at end of this questionnaire
5. Have you ever smoked at least once per week for 3 months or more? (tick one)
   ___ yes
   ___ no

6. Do you now smoke daily, weekly, less than weekly or not at all? (tick one)
   ___ daily
   ___ at least once per week but not daily
   ___ less than once per week
   ___ not at all

7. Please write the number of items you usually smoke in one week of the following: (If none, write "0" next to the appropriate item(s)).
   ___ manufactured cigarettes (no. of)
   ___ handrolled cigarettes (no. of)
   ___ bidis (no. of)
   ___ pipefuls of tobacco (no. of)
   ___ cigars/cheroots (no. of)
   ___ goza/hooka (no. of)

C. Attitudes and beliefs

8. Do you think that you will smoke daily when you are about ___ years old? (tick one)
   ___ definitely yes
   ___ probably yes
   ___ probably not
   ___ definitely not
COMMENTS TO QUESTIONNAIRE NO. 3

The basic version contains an absolute minimum set of questions to be included in any survey. If possible, additional questions should be included on attitudes, beliefs, etc.). See section 4.6 for statement on confidentiality.

Questions
1 - 2: self-explanatory

Question 3: In countries where many children are not at school it may be necessary to ask about present occupation.

Question 7: This question only lists the types of tobacco consumption most frequent in a country. In certain countries additional questions on snuff taking, tobacco chewing etc. might be included, if these types of tobacco use are prevalent.

Question 8: The age to be used should be age of adult responsibility as customary in the country under study. Alternatively, age used must be above upper age limit of young population under study.
Questionnaire No. 4

QUESTIONNAIRE FOR YOUNG PEOPLE
(More comprehensive version)

This questionnaire is confidential
This survey is sponsored by the
(Name of sponsoring institution)

Answer by ticking one box for each question (unless otherwise instructed)

(CODING)

A. Sociodemographic data

1.* What is your sex? (please tick)
   ___ boy
   ___ girl

2.* Write down what was your age on your last birthday
   ___ years old

3.*+ What class (grade) are you in at school?
   ___ grade
   If no longer at school:
   What was the highest grade you attended at school?
   ___ grade

4.+ What kind of place do you live in? (tick one)
   ___ city
   ___ town
   ___ countryside
   ___ village
   Write name of place ____________________________

5. What do you think you will be doing when you have reached the age of ___?
   ___ stay at school
   ___ go to other full time education
   ___ get a job
   ___ be unemployed
   ___ don't know
B. Smoking behaviour

6.* Pave you ever smoked even once? (tick one)
   ___ yes
   ___ no (GO TO QUESTION 12)

7.* Have you ever smoked at least once per week for 3 months or more? (tick one)
   ___ yes
   ___ no

8.* Do you now smoke daily, weekly, less than weekly or not at all? (tick one)
   ___ daily
   ___ at least once per week but not daily
   ___ less than once per week
   ___ not at all (GO TO QUESTION 12)

9. When did you last smoke? (tick one)
   ___ yesterday or today
   ___ 2 days to less than a week ago
   ___ a week to a month ago
   ___ a month to six months ago
   ___ more than six months ago

10** Please write the number of items you usually smoke in one week of the following (If none, please write "0" next to appropriate item(s)).

   ___ manufactured cigarettes
       (no. of)

   ___ handrolled cigarettes
       (no. of)

   ___ bidis
       (no. of)

   ___ pipefuls of tobacco
       (no. of)

   ___ cigars/cheroots
       (no. of)

   ___ goza/hookha
       (no. of)
11.+ If you smoke manufactured cigarettes please write down the type and brand name you usually smoke.

filter tipped ____________________________.
plain ____________________________.
tick here if no special preference ___.

12.+ Do you use snuff? (tick one)
   ___ yes
   ___ no
   ___ occasionally

13. Do you chew tobacco? (tick one)
   ___ daily
   ___ occasionally
   ___ not at all

14. Do any of the following smoke:
   (Tick one box for each person)

<table>
<thead>
<tr>
<th>Smokes</th>
<th>does not smoke</th>
<th>don't know</th>
<th>don't have</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

C. **Attitudes and beliefs**

15. What would these people think if they saw you smoking?
   (Tick one box for each person)

<table>
<thead>
<tr>
<th>would not like it</th>
<th>would not mind</th>
<th>don't know</th>
<th>don't have</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

father
mother
older brother
older sister
best friend
16.*+ Do you think that you will smoke daily when you are about ____ years old? (tick one)

____ definitely yes
____ probably yes
____ probably no
____ definitely no

17. Please read each of the following questions and tick the response which best describes what you think: (Tick one per line)

<table>
<thead>
<tr>
<th>True</th>
<th>Not true</th>
<th>Don't know</th>
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</thead>
<tbody>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|      |          |            | Smoking is only bad for you if you smoke a lot every day
|      |          |            | Smokers usually die younger than non-smokers
|      |          |            | Breathing smoky air harms babies and young children
|      |          |            | Just about everyone who gets lung cancer has been a regular smoker
|      |          |            | A woman who is going to have a baby would harm the baby if she smokes
|      |          |            | Smoking decreases heart rate
|      |          |            | Smoking can annoy others who don't smoke
|      |          |            | There are some cigarettes which are not dangerous
|      |          |            | Nicotine from smoking contracts the blood vessels
|      |          |            | Smoking is bad for you only if you smoke for many years
|      |          |            | If you smoke you are more likely to cough

18.+ What do you think about the following statements? (tick one per line)

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Mildly disagree</th>
<th>Mildly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>
|                |       |                 |                 |               | Smoking makes you feel good
|                |       |                 |                 |               | You have to smoke if you are with friends who smoke
|                |       |                 |                 |               | If you smoke, you worry about being told off about it
|                |       |                 |                 |               | Smoking is not as harmful as they say
My parents should not allow me to smoke
Teachers should not be allowed to smoke at school
Advertising of tobacco should not be permitted
Cigarettes should be more expensive in order to stop young people from smoking
Smoking should not be permitted in public places
Smoking makes you appear grown-up

COMMENTS TO QUESTIONNAIRE NO. 4

If this version is too comprehensive for a survey being planned, a subset of questions should be selected according to the purpose of the study. Additional relevant questions may be added. See section 4.6 for statement on confidentiality.

Questions 1 and 2: self-explanatory
Question 3: In countries where many children are not at school it may be necessary to ask about present occupation.
Question 4: It is important to distinguish types of community. This is an example of a simple classification which might be appropriate. See comments to Questionnaire No. 2, question 3, for further details.
Question 5: The age used should be the age of compulsory full-time schooling or failing that, the age of adult responsibility. At any rate, it should be above the upper age limit of the young population under study.
Questions 6 to 9: self-explanatory
Question 10: See comments to Questionnaire No. 3, question 7.
Question 11: See comments to Questionnaire No. 2, question 16.
Question 12: See comments to Questionnaire No. 2, question 15.
Questions 13 to 15: self-explanatory
Question 16: The age used should be the age of adult responsibility. Alternatively it should be above the upper age limit of the young population under study.
Question 17: self-explanatory
Question 18: For younger children two categories (agree/disagree) would be more suitable.