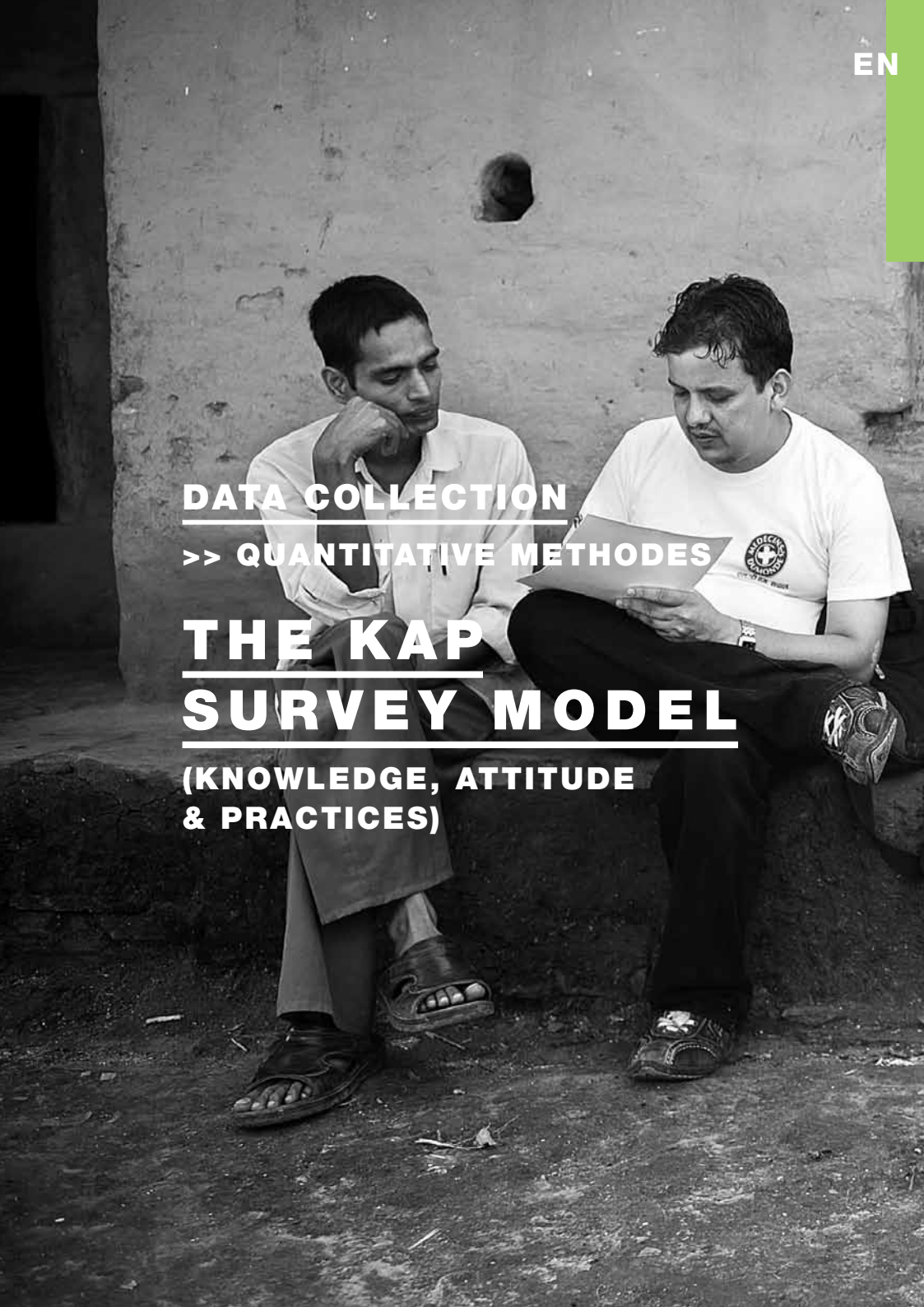
EN

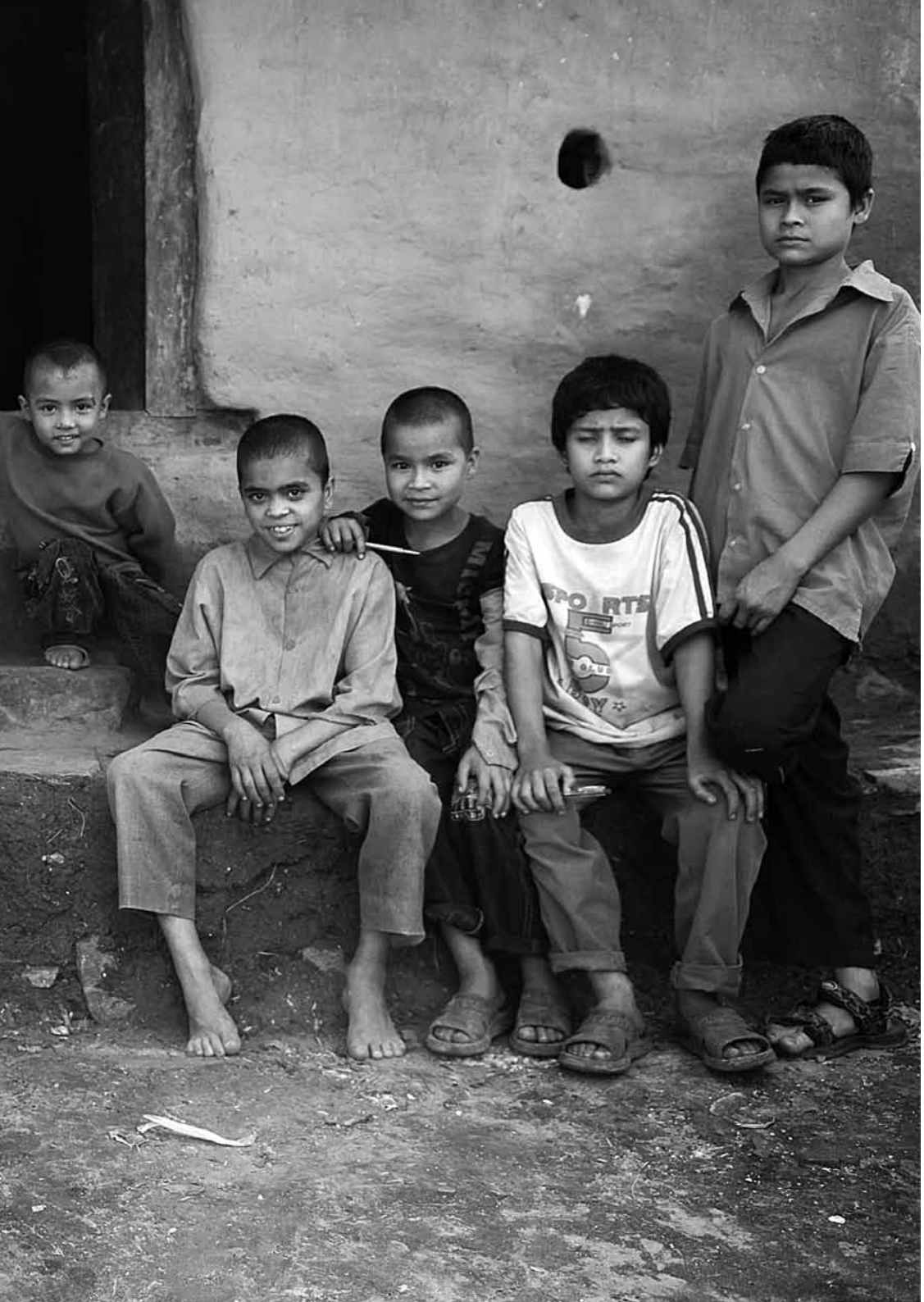


DATA COLLECTION

>> QUANTITATIVE METHODES

THE KAP SURVEY MODEL

(KNOWLEDGE, ATTITUDE & PRACTICES)



INTRODUCTION

The aim of this paper is to present the different steps and rules for the preparation and implementation of quantitative surveys which must be rigorously implemented in order to make full use of the results (i.e. capturing representative data, applicable to the entire population).

Here we have mainly **focused** on the **Knowledge, Attitude, Practices (KAP)** surveys, but most of the methodological and operational recommendations are not specific to KAP and are valid for other types of surveys (nutrition surveys, access care surveys, etc.). In these cases, the main difference will be in terms of the content of the questionnaires[1]. Those surveys offered as complement to this guide are models based on the BSS[3], DHS+[4] and MICS[5] questionnaires and present a selection of issues deemed to constitute a satisfactory basis and sufficient to meet the needs of KAP developed for most MdM projects.

This document aims to a) review the usefulness and value of KAP surveys and b) show MdM staff how to organise, manage and conduct these surveys in the field. We have attempted to illustrate the recommendations given in this document with **field experience,** chiefly taken from the KAP surveys conducted in **Liberia** in June 2008 and in the **DRC, in Kinshasa,** in May 2009. We have chosen not to limit ourselves to examples of good practices, since there was also much to learn from mistakes or trial and error.

Definition of Knowledge, Attitude and Practices

A KAP survey means **K**nowledge, **A**ttitude and **P**ractices. To properly carry out this type of survey it is important to establish a basic premise and provide definitions for each word.

K: Knowledge is a set of understandings, knowledge and of "science." It is also one's capacity for imagining, one's way of perceiving. Knowledge of a health behaviour considered to be beneficial, however, does not automatically mean that this behaviour will be followed. The degree of knowledge assessed by the survey helps to locate areas where information and education efforts remain to be exerted.

For example:
Do you think mosquitoes might be responsible for malaria? Yes/ No/ Don't know

A: Attitude is a way of being, a position. These are leanings or "tendencies to….". This is an intermediate variable between the situation and the response to this situation. It helps explain that among the possible practices for a subject submitted to a stimulus, that subject adopts one practice and not another. Attitudes are not directly observable as are practices, thus it is a good idea to assess them. It is interesting to note that numerous studies have often shown a low and sometimes no connection between attitude and practices.
For example:
If you think you have been exposed to tuberculosis after contact with someone who was coughing, what would you do? Go see a doctor / Take traditional medicines /Go to a laboratory / Nothing ...

P: Practices or behaviours are the observable actions of an individual in response to a stimulus. This is something that deals with the concrete, with actions. For practices related to health, one collects information on consumption of tobacco or alcohol, the practice of screening, vaccination practices, sporting activities, sexuality etc.
For example:
Did you protect yourself by using a condom when you last had sex? Yes / No

Why conduct a KAP survey?

The goal of quantitative **methods of data collection** is to quantify and measure a phenomenon through the use of questionnaires and statistical processing of the information collected. Questionnaire surveys are the primary method of collecting quantitative data. They include interviewing, using a questionnaire, a sample of individuals as representative as possible of the entire study population. One advantage of a KAP survey is to allow, in a single survey, the collecting of a large amount of data that will be subject to statistical analysis (which qualitative methods of data collection do not allow)[2].

A KAP survey is a quantitative type method (predefined questions and formatted in standardised questionnaires) that provides access to quantitative and qualitative information[3]. KAP questions tend to reveal not only characteristic traits in knowledge, attitude and behaviours about health related to religious, social, traditional factors, but also the idea that each person has of the body or of disease. These factors are often the source of misconceptions or misunderstandings that may represent obstacles to the activities that we would like to implement and potential barriers to behaviour change (e.g. awareness about the risks of HIV infection or promotion of condom use). **The obstacle to change may be a lack of knowledge** of the benefits of health, or lack of knowledge of the problem and its severity (for the former example, misunderstanding the modes of HIV transmission). It can also reveal sociocultural or religious representations strongly linked to the change in question (using a condom means that you are not a respectable person or that you do not trust your partner) or a lack of expertise (does not know how to use a condom). Finally, the obstacle to change, resistance or refusal may also be an expression of cultural resistance and/or may reveal a political stance.

Focusing on knowledge and attitudes of the respondents, these questions are intended to identify **key knowledge, social skills, and know-how** commonly shared by a population or target group about particular issues (HIV, malaria, reproductive health etc.) on which

1. Specifically on knowledge, attitudes and practices: KAP HIV[1] and SSP[2] questionnaires built in Excel.
[1], [2], [3], [4], [5]. Refer to page 72

2. Quantitative methods may include certain questions, permitting the free expression of the interviewees (called open questions), they also collect subjective or perceptual data.
3. "Qualitative information" is defined here as information of a subjective or perceptual nature, not to be confused with "qualitative methodologies".

one intends to start a programme and/or activities on health education (IEC, BCC)[4].

A KAP survey can:

→ Measure the extent of a known situation, to confirm or disprove a hypothesis, provide new tangents of a situation's reality;
→ Enhance the knowledge, attitude and practices around specific themes, to identify what is known and done about various subjects relating to health;
→ Establish the baseline (reference value) for use in future assessments and will help measure the effectiveness of the activities of health education in changing health behaviours;
→ Suggest an intervention strategy in light of specific local circumstances and the cultural factors that influence them, to plan activities better suited to the respective population involved (for example around HIV prevention activities/messages).

A KAP survey, because it contains very little (or no) open questions, does not, or hardly:

→ Reveal new problems;
→ Deepen the understanding of a situation.

A KAP survey essentially records an "opinion", and is based on the "declarative" (i.e., statements). In other words, the KAP survey reveals what was said, but there may be considerable gaps between what is said and what is done. These discrepancies may be unconscious: we can feel like we are doing something without that necessarily being the case. How can we track everyday practices, like washing hands, accurately?

Be especially careful in this type of survey, given the numerous biases that may jeopardise the validity of responses. The type of questions asked, the ways of administering the questionnaires and the reliability of the responses may be highly contentious, particularly due to ignorance of cultural contexts and an underestimation of the problems of translation.

Therefore, if one wishes to deepen one's knowledge and understanding of a situation or a problem, or highlight aspects that are not yet known, it is necessary to complete the KAP survey using individual and/or group interviews (focus groups) based on open questions[5]. These methods combine observations and open interviews and help deepen certain topics addressed during the KAP survey[6]. The focus group stimulates dialogue with a small group of target people around a topic and encourages spontaneous expression from the group, which helps to identify the points of view, to observe the way individuals interact and identify the ideas involved and the meaning or cause attributed to the practices. If the data gathered are small-scale and can be considered representative of the entire surveyed population, the focus group provides access to a finer gradation of information, which nicely complements those of the KAP survey[6, 7].
It is however recommended not to perform these two quite different methodologies simultaneously in the field as it can create confusion among respondents.

4. For more information on this topic, see S2AP document "Health Education >> A practical guide for health care projects" available on the MdM intranet in French, English and Spanish or on request at s2ap@medecinsdumonde.net.
5. These qualitative methods can also be implemented before the start of a programme at the diagnostic phase or when conducting a KAP survey when the target population is not well known.
6. For more information on these qualitative methods of data collection, refer to the guide "Data collection, qualitative methods", MdM 2009, available on the MdM intranet in French, English and Spanish, or on request at s2ap@medecinsdumonde.net.

[6], [7]. Refer to page 72

BOX: QUANTITATIVE AND QUALITATIVE METHODS OF DATA COLLECTION

"The quantitative approach is 3 questions for 1000 respondents, the qualitative approach is 1000 questions for 3 respondents."

The qualitative and quantitative methods are two ways to deepen knowledge on the populations and health systems:

→ **In the quantitative approach, the two critical qualities are validity of the measurement and the representativeness of the sample chosen to perform the measurement. The quantitative approach describes and explains phenomena by means of indicators and aggregates of the population.**
→ **In the qualitative approach, the two critical qualities are the diversity of expression and the presence in the sample of individuals with characteristics closely related to the phenomena studied. The qualitative approach describes and explains phenomena in detail from a limited number of observations.**

When is it appropriate to implement a KAP survey?

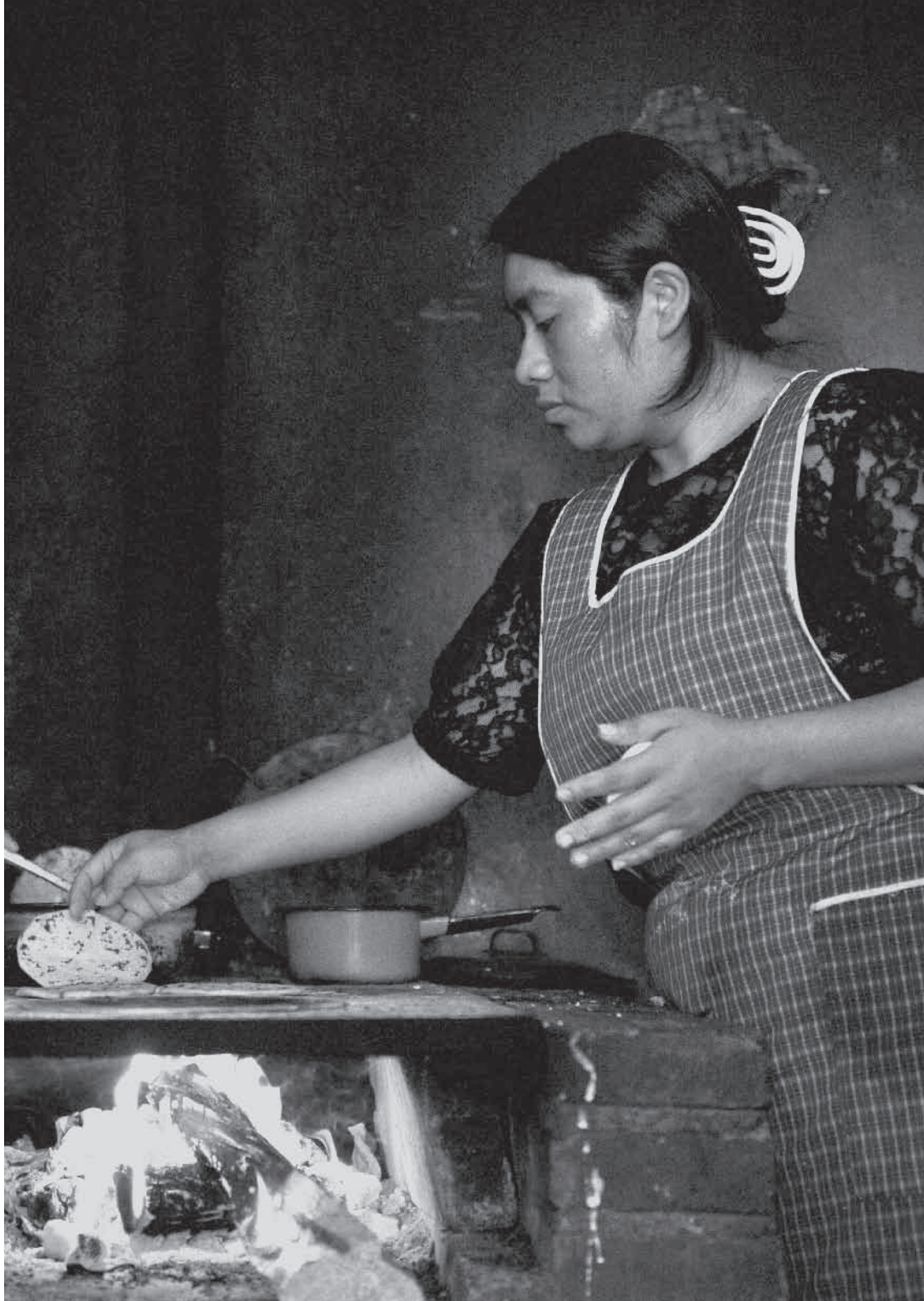
A KAP survey is useful in all phases of project cycle (diagnostic, programming, implementation, evaluation):

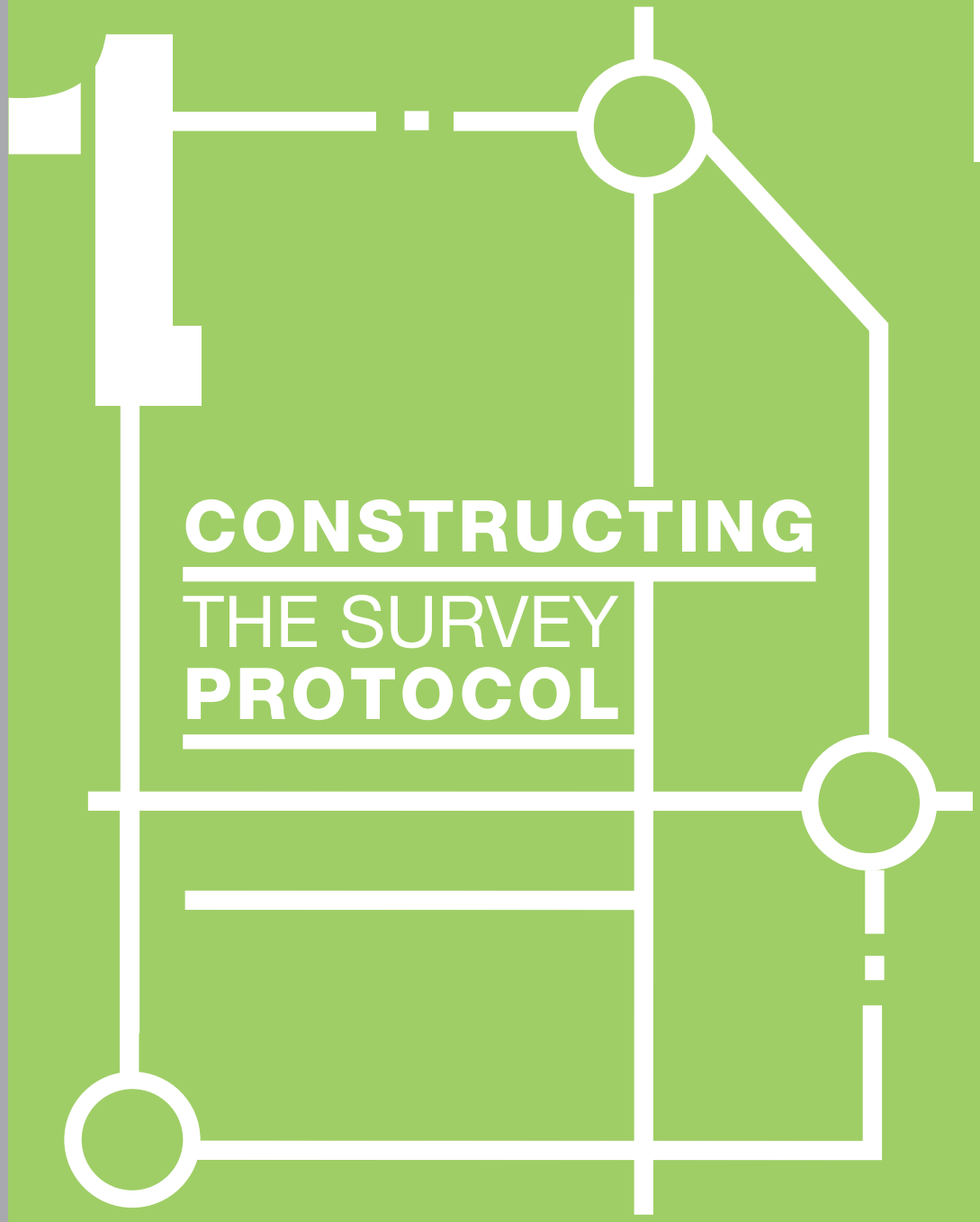
→ **Before the start of the activities** for a programme, in order to establish a baseline that will draw up an inventory of the existing places and help describe the context of intervention. A KAP survey can generate valuable information for any type of health programme, by optimally identifying the sociocultural specificities of the target population and thereby making it possible to tailor interventions and activities to this sociocultural context. It is even more interesting to construct the reference diagnostic on a KAP survey when the project includes a Behaviour Change Communication (BCC) component or develops health information, education and communication (IEC) activities. This type of survey collects quantitative and qualitative data from the population (individuals or households) to capture the level of knowledge, the prevailing attitudes and current practices in the programme's intervention space and what could be an particularly important part in health education activities.
→ **During the implementation**, in order to identify the levers and ways forward to anticipate and overcome potential obstacles: the information collected forms an essential basis for tailoring the activities to be undertaken to the local context.
→ **At programme end** (if there was a similar survey at the beginning of the programme) to monitor changes in behaviours that will be statistically significant. Indeed, using the same methodology, the same questionnaire and requisitioning in the same target population[7], it is possible to measure the impact of activities implemented and the change in knowledge, attitudes and practices of the population (known more precisely here as Behavioural Surveillance Survey – BSS). This will make it possible to make credible and reliable comparisons from one programme to another, or in the same programme, from one period to another.

7. Note: this does not mean that you re-interview the same people!

It is important to note that **conducting a KAP survey is a heavy undertaking,** which demands that a minimum of time and financial resources, personnel and logistics be available. It must therefore be planned and sanctioned on the basis of strategic inputs for the programme. The team in place must have a clear idea of why wants to conduct a survey (rather than a series of focus groups for example) and how it intends to use its results in the definition or orientation or the programme.

In fact, teams may want to take this opportunity to gather information not directly related to knowledge, attitude and practices of the population, but which remain significant for the programme, like the topics covered in the DHS and the MICS, more extensive than the model KAP questionnaires offered by the S2AP, and which include for instance, issues relating to the assessment of health centres, the practices of health workers or access to care.
Conducting a KAP survey may provide the opportunity to add some questions at the end of the questionnaire, for example, on the satisfaction of care provided in the health facility. It is however important to be careful not to overburden the collection of data.





CONSTRUCTING THE SURVEY PROTOCOL

1A

DEFINING THE SURVEY OBJECTIVES

The first essential step is to define the survey objectives; they enable us to know what information we will seek to collect and give meaning to the survey. The first step is to compile a list of questions that we **seek to answer:** it is from this list that the survey objectives are constructed. This list is prepared following international and national literature research and the experiences and findings of field teams. This is called the survey argument.

The main objective of the survey is usually expressed in a clear key sentence, e.g. “to assess needs for information, education and communication for young people aged 15 to 30 years in region X on AIDS, with the aim of adapting the IEC programme”. In addition, the operational objectives of the survey are similarly stated, which outline the areas where we expect the main results of the survey, for example, “to identify the main reasons that lead to consultations in the health centres” or “to identify risk behaviour (HIV transmission) and enter the profile of respondents that most demonstrate such behaviours. The objectives of the survey are generally articulated in a presentation of the context (geography, demography, politics, society etc.) and on hypotheses, for example, “increased prevalence is due to lack of preventive activities or to activities poorly-adapted to the difficulties of obtaining condoms or access to sites offering screening”.

It is essential to clearly differentiate the objectives of the KAP survey (strategic and operational value of researched data) from the objectives of the programme to which this survey belongs (relative to the activities to be conducted and the expected results).

Part of the protocol should be reserved for the **ethical aspect of the survey,** which highlights the fact that it will be conducted in compliance with the law and respect for the individual. Indeed, all research must be justified (international and local data, epidemiological indicators etc.) and must provide benefits to the population. It is important to ensure that this survey is able to improve the implemented health project or to reduce or eliminate the possible adverse consequences to individuals or groups in the target population. The surveys should result in no personal gain for, or any adverse effect or potential harm to individuals. Such an approach should not undermine the integrity of the individual. The general benefit of a survey being to contribute to improving knowledge and information relating to the defined population.

All surveys must provide for individual informed consent. This means that those responsible for the survey are required to clearly present all the aims of and justifications for the data collection to those interviewed. This consent must be obtained early on in the survey. It is free from any coercion whatsoever.

1B

SAMPLING OF THE POPULATION SURVEYED[8]

1 / IDENTIFYING THE POPULATION / TARGET GROUP

A target group (*study population*) is a precisely defined population that can thus serve as the subject of an intervention or a specific study. It may be a specific group of people sharing common characteristics, such as youth under 18 years old, artisans or drug users (here the KAP questionnaires are aimed at individuals) or of a more general population, e.g. a region or village (questionnaires aimed at households).

To target the population to be surveyed, it is essential to conduct a review of existing documentation and literature before starting the KAP survey (national and international documents from institutions, associations and universities) and put together a bibliography the helps in collecting interesting information about the local situation.

This may also help the team carry out a first draft of the questionnaire and represent a major time saver. Then the team can **contact the resource persons, associations and the various stakeholders** involved with the population, in order to refine some information and fill in the outlines of the target group.

The tool for identifying the elements or the groups of elements of this population is what is called the **sampling frame. This tool** is quite adequate, provided it is available. The sampling frames are usually lists which list the individuals or groups of individuals in the population. These lists serve as a basis for defining the population and allow for the selection of samples.

Example of a sampling frame:

→ List of admissions to a health facility;
→ List of the inhabitants of a village;
→ List of students;
→ List of families receiving support from the World Food Programme (WFP);
→ List of registered population (census);
→ etc.

8. We have chosen not to develop sampling methods in this manual. These methods are complex to implement and this does not fall within the scope of this document. We therefore present here a simple summary of terms for the main sampling methods possible, without attempting to give any instruction on their use, given that excellent books on the subject already exist. We strongly advise MdM teams to use an external support to determine the sample size required and the sampling protocol. Further explanation can be found at http://www.statcan.gc.ca/edu/power-pouvoir/ch13/prob/5214899-fra.htm. For more, see Ancelle, T. Statistics Epidemiology, Basic Science collection, Maloine, Paris, 2006.

These lists may be able to identify all highly specific populations. For example, the lists of admissions to health services may find only people using these services. It is important to note that the lists may exist but be inaccessible for reasons of confidentiality. Attention must be given in advance to the accessibility of these lists and their cost. At the same time, it is often the case that no such list exists.

These important steps are used to define and list the criteria for **survey inclusion and exclusion** and to identify the people you would like to see answering the questionnaire. It may be criteria based on age, socioeconomic status, place of residence, nationality (for example in migration crossroad areas), or on the fact of using traditional medicine or of going to a health centre.

EXAMPLE HIV PROGRAMME

→ Three main factors for selection of subgroups within a country or region are:
– The status of the epidemic (seroprevalence);
– The type of epidemic (concentrated or generalised);
– Prevention efforts (ongoing or planned).

→ In some regions, HIV is mainly concentrated in sub-groups whose behaviours represent a higher risk than "normal", such as men who have sex with men (MSM), injecting drug users (IDU) and professional sex workers (PSW).

An inclusive/exclusive criterion for MSM may be having had sex with men during the twelve months preceding the survey.
→ It may also be that people belong to several sub-groups (e.g. certain drug users are also professional sex workers); you will need to identify those people using a quick assessment and possibly adapt the questionnaire taking account of these cross-references. We may also ask community organisations for help in understanding the characteristics of these subgroups.

EXAMPLE KAP KINSHASA:

The population that we wanted to question was the street girls of Kinshasa, but there was no sampling frame available and furthermore this population is highly mobile. Actually, the specific subgroup selected was street girls of Kinshasa from 12 to 24 years coming to the MdM reception centre.

→ Inclusion criteria:
– Aged between 12 and 24 years, inclusive;
– Girl found in the Bomoyi Bwa Sika reception centre;
– Girl pregnant or not pregnant.

→ Exclusion criteria:
– Refusal to participate in the survey;
– Age does not correspond to the defined age group;
– Girl not living in the street.

136 street girls responded to the questionnaire in the reception centre planned specifically for them. All the girls meeting the inclusion criteria and giving their consent were interviewed.

2 / CALCULATING THE SAMPLE SIZE

Before starting the survey, you must also define the "desired size of the sample", i.e. the least number of respondents needing to be interviewed in order to generalise the results. There are different ways of calculating this number by following statistical calculation manuals, sampling protocols or by using sampling software. Whatever the process chosen, the sample size still depends on survey objectives and the intended degree of accuracy and representativeness: the more detailed the questions, the larger the sample should be. This also depends on the budgetary and logistical constraints of the survey.

It is strongly advisable to seek the support of an expert at this stage (consultant or institution). Sampling is a very important step that ensures the validity of the survey and is often quite complex. Once the target group is identified by the team, the consultant will develop a feasible and reliable sampling plan (with the least possible bias) and manage the entire sampling process.

The formula most commonly used (as it does not take into account the total population) is as follows:

$$N = \frac{Z^2 \times (p) \times (1-p)}{c^2}$$

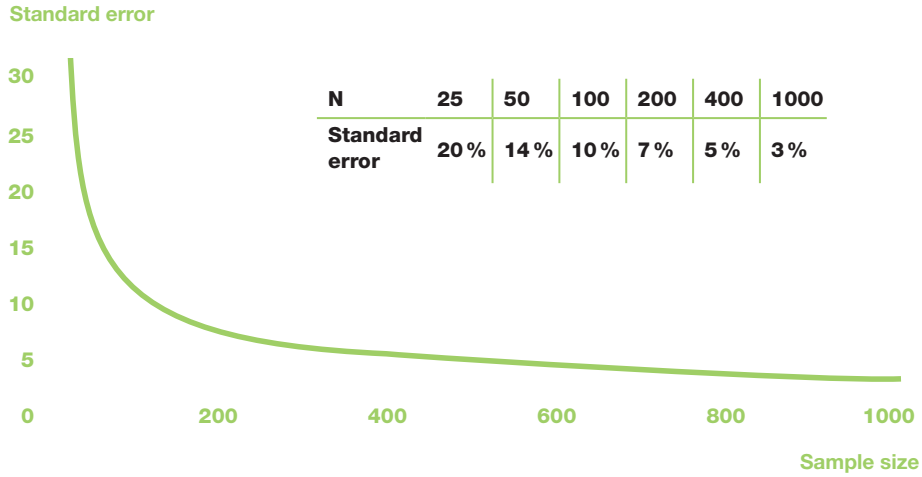
With:
N = sample size;
Z = value corresponding to a given confidence level (1.96 for a confidence level of 95%-value commonly used);
p = percentage of the primary indicator, expressed as a decimal (default 0.5);
c = standard error, expressed as a decimal (0.05 or 0.10 in general).

The following chart shows that the relationship between sample size and confidence interval is not linear[9]. From a given sample size, the standard error decreases less and less as more individuals are added to the sample.

Sometimes it is the chosen target group and/or the very specific context that will determine both the sample size and sampling method. This is the case particularly with "hidden" populations such as drug users, the homeless etc. In these cases, it is then necessary to use convenience samples and the sample size will be dependent on the number of respondents that can be reached.

Some examples of sample sizes:
- → Large international surveys such DHS and MICS: Sample sizes up to 4,000 households;
- → MdM survey on access to care in the Gaza Strip: 1,500 respondents;
- → RDR/Rave KAP survey: 100 respondents;
- → MdM KAP survey Liberia: 190 respondents;
- → MdM KAP survey Kinshasa: 136 respondents.

9. Graph constructed for p=0.5. The non-linearity of this relationship is true for any value of p.



N	25	50	100	200	400	1000
Standard error	20 %	14 %	10 %	7 %	5 %	3 %

NON-RESPONSE

This may apply to two situations:
- → A **non-response is said to be total** if the statistical unit included is not participating in the survey (refusal to participate);
- → A **non-response is said to be partial** when the statistical unit included participated but did not answer all the questions (dropping out of study, refusal to answer certain questions or answers that were not analyzed due to their inconsistency).

It is up to the survey manager to decide whether or not he/she will exclude the partial responses from the data analysis.

It is necessary during the presentation of a study to present the total response rate, or the refusal rate (100% complementary). This is a quality indicator of a survey.

$$\text{Response rate} = \frac{\text{Number of participants}}{\text{Number of people reached}}$$

In the survey conducted in Kinshasa, 138 people were interviewed. However, the analysis was limited to 136 people. This was because 2 participants had only partially agreed to answer the questions. The response rate was therefore 136/138 = 98.5%, the refusal rate was 1.5%.

The response rate can be evaluated before the collection of data and must then be incorporated into the sample calculation. To find out which rate to choose, you will need to consult surveys previously conducted on the same kind of subject or have access to international data. Otherwise it will need to be assessed with the field teams.

In the KAP survey in Kinshasa the rate chosen was 90%, and included in the calculation.

3 / SELECTING THE SAMPLING METHOD

Except in some specific situations (e.g., active file), it is not necessary to interview all members of a target group (it's also rarely possible due to financial, logistical, human and time constraints). Selecting a **sample** of this target group allows you to interview only part of the target group. These are the people in this sample who will be interviewed and their responses will be considered as informing the survey in a realistic and characteristic way. The sample is considered **representative** when it shares the same characteristics (age, sex, socioeconomic status etc.) as the target group that you want to study. Without representativeness, the results obtained on a sample cannot be generalised to the target group studied.

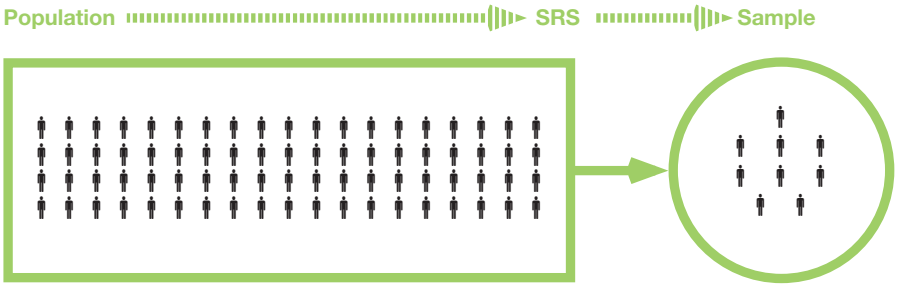
Random (or probability) sampling

To increase the chances of representativeness of the sample, **priority must be given to sampling methods that are based on the principle of random selection** (also known as probability or formal sampling), i.e. that one considers that all persons belonging to the target group have the same chance of being in the sample and the results so obtained are conclusive and representative of the entire target population. Less prone to bias, these methods ensure the "statistical significance" of the survey and make it possible to assess the errors from the data itself, so the results of one survey can be compared to another.

The most common methods of random sampling are:

Simple random sampling

In simple random sampling (SRS), each member of a population has an equal chance of being included within the sample[10]. This consists in randomly drawing "n" individuals from "N" people in a list. The benefit of this technique is that it requires no additional data in the sampling frame other than the **complete list** of the members of the surveyed population and their contact information. In addition, because the SRS is a simple method and the theory that underpins it is well established, there are standard formulas for determining the sample size, estimates, etc., and these formulas are easy to use. **N.B.:** in practice, this is a little used sampling method in the MdM fields of intervention, because we rarely have a complete census of the population.



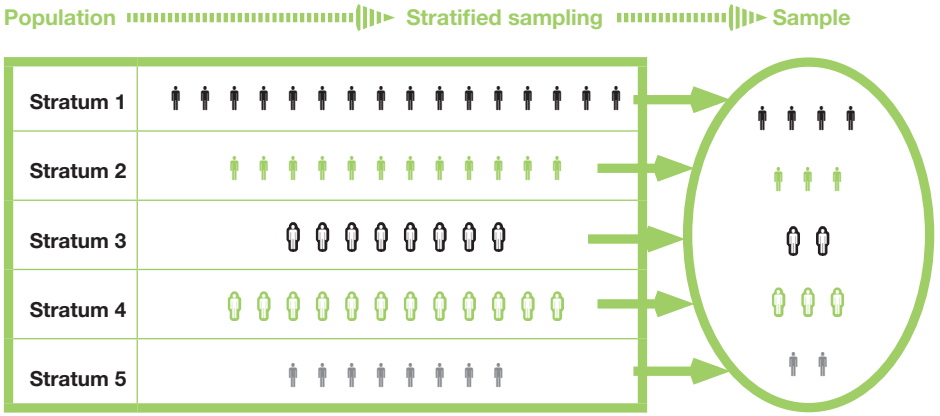
10. Here it is preferable to say that this random sampling is without replacement. It is therefore an equal probability sampling.

Systematic sampling

Sometimes called interval sampling, systematic sampling (SYS) means that there is a gap, an interval or no sampling, between each selected unit included in the sample. It is used when the population that we want to study is connected to an identified site, e.g. the active file of a health facility or patients attending a drop-in centre. In this case, you define a regular interval according to which you will choose people to whom you will offer the survey (i.e. interviewing one out of every five patients). You can choose to die, for example, the first person or first household interviewed and then apply the selected range. You can also use random tables[11].

Stratified sampling

This method is used when trying to target specific subgroups in the population to be surveyed, for example by age, gender or the fact of residing in urban or rural area. Then you divide the population into homogeneous groups (called strata), which are **mutually exclusive,** then select independent samples from each stratum. The stratified sampling method involves the selection of units from **all groups.** Stratified sampling ensures we get an adequate sample size for subgroups of the population in which we are interested. Since each stratum becomes an independent population when we stratify the entire population, we must determine sample size for each stratum. However, the stratified sampling method is feasible only if we know precisely the proportion of each group in the population, which means that one has a fairly comprehensive list of members of these groups (such as a census or sociodemographic survey).

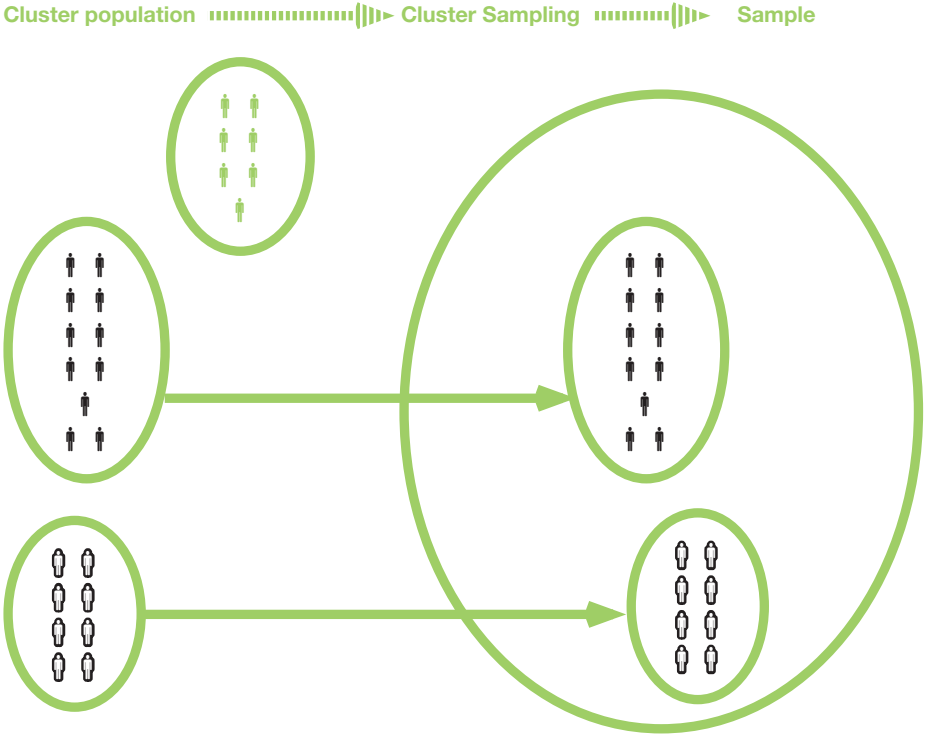


Note: the size of stratum in the sample is directly proportional to the size of the corresponding stratum in the target population.

11. Using a table of random numbers may vary but the general rule is as follows:
→ Randomly choose an entry point in the table. Then choose a direction of travel from the table to collect the figures while following the defined method.
→ The direction of travel can be:
– Either from the point of entry, the numbers read from left to right and from top to bottom;
– or from the point of entry, the numbers read up and from right to left;
– or from the point of entry, the numbers read diagonally down and left to right.

Cluster sampling

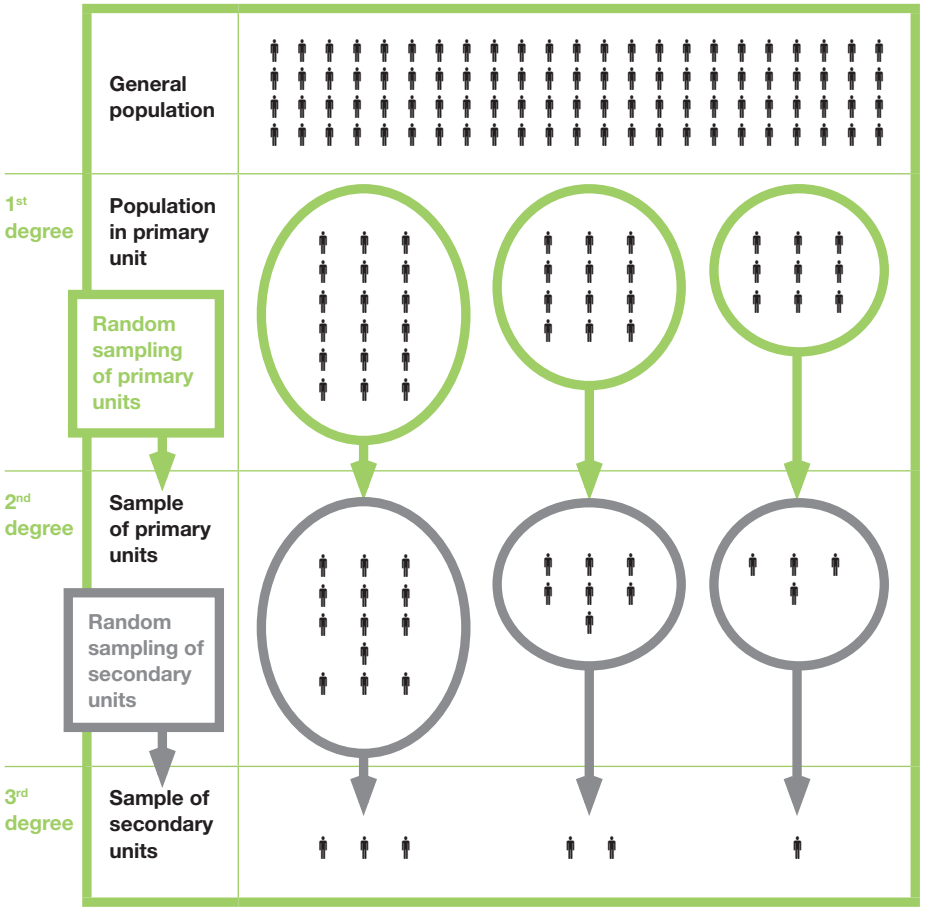
It is sometimes too expensive to spread a sample across the entire population. There is a risk that travel costs may become high when the surveyors need to survey people from one end of the selected area to another. The technique of cluster sampling helps to reduce costs. The method of cluster sampling is to divide the population into sub-groups also called "**clusters**". Not all these groups are selected: only a certain number of clusters are randomly selected to represent the target population. All units within the selected clusters are included in the sample (i.e. all people in these clusters are interviewed).



Most of the time the clusters are formed naturally and not by reference to a criterion, unlike strata. Clusters can be educational institutions, villages, health facilities etc.

Multistage sampling

Multistage sampling is a combination of the methods of random sampling outlined above, and the method chosen may vary to some degree. This type of selection is one that guarantees the greatest representativity for the survey vis-à-vis the target group and the validity of results but it is also one of the most complex methods.



EXAMPLE OF MULTISTAGE SAMPLING:

In practice, when the conducting KAP surveys, we most commonly use the method of multistage sampling. For example, we will first carry out a cluster sampling to randomly select villages to be included in the survey (1st stage). Then, from the selected villages, households are selected to be included in the survey (2nd stage). This can be achieved using such systematic sampling, for example, whereby households are selected at regular intervals and calculated.

Surveyors may follow, for example, the following protocol:

→ Identify the number of village in the previously defined health area (e.g. coverage area of a mobile team) and randomly select the villages (1st stage);

→ Position yourself in the centre of the village, the community, the site etc. (depending on the size or organisation);
→ Randomly define a crossroads, place a bottle in the field, spin it and go in the direction it points to when it stops;
→ Choose one side of the crossroads (by convention the right side, the key being to always choose the same side) and walk in the direction indicated;
→ Start to number the households in the selected side, always maintaining the same interval until you have reached the desired number (e.g. assign a number for every third or fifth household found). If no one is home at a selected household, interviewers will need to move on to the next (closest). If the surveyors reached the borders of the village without having selected enough households, they must return to the centre and repeat the same process in the opposite direction to that originally designated by the bottle.

The 3rd stage of sampling is selecting the respondents for the questionnaire. By examining the composition of these households, surveyors can, once contact is established, determine which persons meet the eligibility criteria for the survey and find out which parts of the KAP questionnaire they would like them to answer, (e.g. men and women between 15 and 49 years old, women with children under 1 year old, a young resident in his family home who is under 18 years old etc.). Only after this selection has been done can they begin the interviews[12].

ADDITIONAL RECOMMENDATIONS FOR HOUSEHOLD SURVEYS

→ If several children in the household are involved in a question, then make a random selection from those children meeting the selection criterion;
→ If there are twins, to the elder of them should be taken;
→ If you cannot find the desired type of respondent in the household or if the respondent is absent and hard to reach, the surveyor should visit the home next closest from the front door;
→ If the respondent is absent but reachable and nearby, the surveyor could go where the resident is and ask him/her, led by a person from the community.

Non-probability, purposeful or convenience sampling

There are other methods of sampling, not random this time: when the selection is considered "purposeful", the selection of participants is made according to their relevance to the objectives of the survey rather than the interests of statistical representation; the survey respondents are then selected by contact or when the opportunity arises. This sampling category includes voluntary, commodity or quota sampling. It is important to note that within the framework of surveys, **convenience sampling is selected by default.** Indeed, random methods are always preferred over them.The size of a convenience sample depends on criteria based on requirements related to the target population, on the context in which data are collected and on the time available for the survey.

The nonprobability method most commonly used for KAP surveys is that of **"snowball"** sampling. It is often used when the target population is difficult to reach or locate; in this case, the surveyors create a network of informants as part of the population of interest, which leads to other target group members and so on, until the desired number of respondents in the sample is reached (known as cascading progression). This technique can help create an extensive list of people matching the selected criteria who were not necessarily known to the surveyor, nor directly accessible. However, snowball sampling is an alternative method to be used only when probability sampling is not possible.

In Burma, the drug users interviewed as part of a KAP survey responded to the questionnaire in an old church requisitioned by the MdM team for this purpose. They were first contacted and asked to show up at the chosen site according to a set schedule.

This selection process is not probabilistic, since all individuals belonging to the target group have the same chance of being canvassed for the survey. Purposeful selection requires that a few extra precautions be observed. Indeed, picking out people to be interviewed directly may cause some negative effects and the community might, for example, reason that the survey is aimed at one group of people over than another because they are a "problem" group or probably more at risk than the others. In this case, it would be necessary to provide a place that allows respondents to speak calmly and confidentially in order to limit any **stigmatisation.**

EXAMPLE SNOWBALL SAMPLING

Injecting drug users (IDU) are on of the most problematic subgroups to survey. A recurring obstacle is the difficulty of locating sites (if there are any) frequented by IDUs, which prevents a random selection.

You consequently proceed to a snowball sampling by recruiting peers (IDUs or former IDUs themselves) who will contact to other drug users, who will in turn relay on to other members group etc. Ideally, the peers chosen cannot be related to one another or belong to the same networks; this makes it possible to recruit other people through them who do not exactly move within the same community. This helps to mobilise people from different areas. It is recommended that you consult resource persons other than selected **peers** (community members, former IDU) to make the various networks and social interactions in play between the various members of the subgroup of IDUs intelligible.

Some disadvantages:
→ Risk of **selection bias,** i.e. certain types of subjects is overrepresented and other types not enough. Lack of clear rules;
→ Problem of **reproducibility** when this involves repeated KAP surveys aimed at detecting changes in behaviour over time. Risk that the differences observed over the course of the surveying may not truly be due to behaviour change, but rather to a change in the sampling;
→ **No statistical basis** for assessing the accuracy or reliability of the results of a survey.

Similar to the snowball method, the **Respondent Driven Sampling** (RDS) method was developed and used to conduct surveys of people considered invisible or hard-to-reach. It retains the advantages of the snowball method while controlling its bias. It is more formalized and incorporates mathematical modelling to compensate for the fact that respondents were not selected randomly. For more complete information on this methodology, see the website http://www.respondentdrivensampling.org

12. If, ideally, you wish complete all the modules for a questionnaire within one and the same household, all "types" of respondents sought do not always belong to the same household: a number of questionnaires will therefore partially filled, and it will inevitably be necessary to fill a greater number of questionnaires to reach the desired number of modules completed.

1C

STEPS IN PREPARING THE QUESTIONNAIRE

The questionnaire is the medium for data collection. It is the operational tool of the survey, composed of a **list of questions and a list of responses made in advance**

The KAP questionnaires offered by the S2AP are constructed according to this standard structure: first the content of the questionnaire, then information for surveyors as a guide in how to handle the various modules and how to conduct interviews in an optimal way, the information relevant to conducting the survey and to identification and eligibility of the respondents, and finally "Introduction to the KAP survey", which allows the surveyor to approach the respondents, to check whether they have already been interviewed and ask them for their consent to participate in the survey. The rest of the questionnaire (mostly) is generally divided into modules that focus on thematic issues relating to a particular topic (on malaria, tuberculosis, HIV etc.).

Some modules will be aimed at all respondents, while others will target specific respondent profiles. Even if individuals are selected based on the inclusion criteria of the survey, some question modules are aimed more specifically at certain profiles and require that the respondents meet new eligibility criteria. Thus, if the survey targeted all people belonging to a sample, a module on reproductive health or maternal and child health will be aimed only at women between 15 and 49 years, or a module on HIV and sexual behaviour may contain more specific questions aimed at men who have sex with men or drug users.

EXAMPLE OF THEMATIC CLUSTERS WITHIN THE KAP KINSHASA

- → Section 1: Description of the interviewee;
- → Section 2: Knowledge of the female body;
- → Section 3: Knowledge of reproductive health;
- → Section 4: Knowledge of STI/HIV/AIDS;
- → Section 5: Knowledge of ways of dealing with sexual abuse;
- → Section 6: Sexual practices and reproduction;
- → Section 7: Attitudes towards STIs/ HIV/AIDS and reproductive health.

When constructing the questionnaire, it is important to ensure the organisation of the questions asked. These should be coherently linked together; a questionnaire should give the sense of unfolding smoothly: it should go from the general to the specific, from the simple to the complex, from questions involving the least to the most personal, by avoiding backtracking, which gives respondents the impression that they are answering the same question over and over. To do all this, different types of questions (closed questions or open) can be used.
→ See summary table.

The following sections entail different steps to preparing a survey questionnaire.

1 / SELECTION OF QUESTIONS FROM STANDARDIZED QUESTIONNAIRES

KAP survey questions are most often closed questions (fixed answer options, such as Yes / No / Don't know) or preformed questions (possible answers prepared in advance, or form of the answers defined by the question, "How old were you when you first had intercourse?" the answer will be "when I was X years old.").

In the process of developing a questionnaire, it is advisable to refer primarily to the questionnaire model offered by S2AP (available in English and French), itself built on the basis of DHS and MICS surveys[13]. The truth is, **formulating a "neutral question", free from bias or subjectivity of any kind is not as easy as it might sound.** The questions in DHS and MICS standardized questionnaires have been carefully formulated in simple language that can be understood regardless of educational level. This standardization allows for the comparison of results from one country to another since the questions were asked in the same way to different populations. These questions have been extensively tested and are considered reliable and valid.

From the exhaustive list of items offered in the S2AP model, the team can draft its own questionnaire to the match the objectives of the survey. This point here is **to not change the content and format of the questions** (shown in the second modules column), but to select the questions considered most relevant for obtaining the sought information, and to identify any missing questions.

You must make certain that the questions be selected in the most balanced way possible between questions about knowledge, those about attitudes and those about practice. To do this, S2AP questionnaires are constructed with a colour code, which allows you to quickly identify what statements refer to.

In practice, this balance is not easy to achieve (this is not the case in the KAP questionnaire models offered by S2AP or in the DHS or BSS questionnaires). Balance is also a function of the survey objectives (i.e., for example, you are primarily interested in practices).

13. Multiple Indicator Cluster Survey http://www.childinfo.org/mics3_questionnaire.html and Demographic Health Survey http://www.measuredhs.com/pubs/search/search_results.cfm?Type=35&srchTp=type&newSrch=1

Table 1: Types of questions	Advantages/Disadvantages
CLOSED QUESTIONS	
The subject responds by choosing one or more answers, depending on what is specified by the surveyor or indicated in the questionnaire. The number of methods may be more or less important. This type of question is suitable for the calculation of simple indicators.	Simple and effective questions
Numerical questions Numerical answer: quantity, age... It is very important not to forget to specify the unit expected. **E.g.:** How old are you ? |__|__| years old	Many statistical processing options possible (grouping into classes, average etc.).
Categorical questions The answers are categories and the respondent can identify him/herself with only one of these categories. **E.g.:** Gender	Simple statistical processing. Variables used for cross-referencing results by respondent profiles.
Binary questions Only two methods are offered and the respondent must select the answer that corresponds to it. **E.g.:** Are you on an ARV regimen ? Yes/No	Overestimation in most cases of the proportion of consent. To minimise this risk, asking yes/no questions should be avoided. The "yes" may be chosen since a "no" is too strong.
Multiple choice questions One or more methods are offered to the respondent and he/she must select the one (s) which correspond (s) to him/her. **E.g.:** What treatment do you usually have during a malaria attack? (Mark a cross in the box in front of the treatment you are taking, do not check the others). Artesunate-Amodiaquine / Coartem /Quinine / Chloroquine / Traditional Medicine / Other	Indicate the number of possible answers (one or many). In the case of a question that does not allow only one answer, if the subject does not find the response satisfactory, he/she may not respond or turn to the statement that is closest to his/her opinion.
Scaled questions These questions make it possible to obtain a level of satisfaction or perception. **E.g.:** How satisfied are you after your [medical] consultation? Very/Somewhat/Not very/Not at all (satisfied)	A scale with an even number of answers (e.g.: Very/Somewhat/Not very/Not at all) requires a respondent to choose between a positive answer (Somewhat) and a negative answer (Not very). Conversely, a bias may exist if the scale has an odd number of responses. Some of the undecided respondents will give an answer from the middle of the scale (e.g.: "Somewhat" in "Very / Fairly/ Somewhat / Not very / Not at all").
Ordinal questions These questions are used when trying to assign a rank to the answers given by respondents. **E.g.:** Rank the qualities of a community health worker in order of importance from 1 to 4 (1 for being the most important to you, 4 for the least important): Medical knowledge/Availability/ Organisation/Hygiene.	Limit the number of answers to be ranked 4 or 5. These questions may be difficult to analyze, the simplest analysis is only consider the first selected answer.
OPEN QUESTIONS	
Filling out a formatted questionnaire is often limiting; so it is sometimes important to appreciate the position of the interviewee. A free field is an area where the person filling it in is free to write/answer what he/she wants to in response to a question. The answer isn't limited any more, neither the substance nor the form of the answer are controlled. When the survey is face to face, the surveyor may be asked to note down all or part of the answer, and to reinterpret the answer in his/her own words. **E.g.:** How do you think you can protect yourself from an STI?	Allows the person to respond freely to the issue in his/her own words, free from the constraint of an imposed answer. Despite the interest they may have in theory (especially when you don't know the list of possible answers), it is recommended that you make moderate use of them (3-4 per questionnaire max), reserving them for "Other" type questions, and for a free comments section at the end of the questionnaire. The analysis of open questions is time-consuming.

2 / IDENTIFYING SUPPLEMENTAL QUESTIONS

If the team believes, after having consulted the questionnaire models offered by S2AP, that it still lacks some questions, it may in this case refer to DHS, MICS or BSS questionnaires (as part of an HIV KAP survey) which are much more comprehensive. However, it must be very vigilant in the choice of questions, which, as we have previously explained[14], are not only about the knowledge, attitudes and practices of a population.
If the team considers the questionnaire incomplete or even wishes to address any additional topics, it can approach the S2AP, with whom they will look for the best way to formulate new questions.

In the KAP survey conducted in Bong County by the MdM Mission in Liberia, questions on mental health have been difficult to formulate, given the lack of reference materials and the difficulty of translating these issues into the local language. After discussion with the STAO, the decision was to keep only four questions, which may however be reused in future surveys.

3 / ADAPTING ANSWERS

If teams do not create the questions, they with then need to **adapt the suggested answers** to the context of the local population (third column of the questionnaire). This reformulation is very important since it is not based on models but reflects the specificities of each field and each survey. Adapting the responses may be supported by a review of existing documentation and information provided by resource people to the team during the identification of the population to survey. Note, however, we must not lose sight that no resource person is neutral in the nature of this information, and he/she can only present his/her own perspective.
Instructions to the attention of surveyors should be specified in the first column:

→ By convention, typography is used to distinguish what should be read aloud by the surveyor (standard practice) from what is read only by him and for him (in italics).
→ These instructions usually specify whether one or several responses are possible from a list and if the items on this list need to be read to the respondent or not.

The lists of proposed answers may contain erroneous answers: this helps to highlight the misconceptions of the respondent and see if the person responds automatically (quickly) or does so thoughtfully (e.g. when they are asked "Can HIV can be transmitted by a mosquito bite?"). For multiple-choice questions, it is generally recommended not to exceed six proposed answers.

4 / CODING THE QUESTIONNAIRE

When developing the questionnaire, it is imperative to prepare the coding of responses. This coding is digital and makes for faster entry and easier reading of the analysis results.
By international convention, some answer codings are to be observed:

→ Don't know = 88
→ No answer = 99

14. See introduction.

5 / DOUBLE TRANSLATION OF QUESTIONNAIRES

Translation into local language

The questionnaire absolutely must be **translated by professionals and written in the vernacular (local) language** and use appropriate terminology to ensure that the original meaning of the questions is not lost. The wording of the questions after the translation should be kept simple and within reach of people with low educational levels.

IMPORTANCE OF A WRITTEN TRANSLATION FOR LIMITING THE RISK OF BIAS:

The written translation helps to avoid the pitfall of having surveyors, who are not professional translators, improvise oral translations while the questionnaire is being administered.
The introduction of bias, even light, is most often unconscious, but may put the results and the value of the survey in jeopardy (e.g. the variable use of synonyms or of language register – familiar, formal, etc. – according to respondents, their status, age, gender, etc.).

An oral translation leads to biases:
→ either because the translation does not accurately reflect the meaning of the original question;
→ or because the way the question is worded suggests the answer.

Finally, if all the surveyors are translating the questions on the fly and in their own way, the standardisation of the questions can no longer be guaranteed, nor therefore can the validity of results.

The questions for the Liberia KAP survey could not be translated into the vernacular, since the Kpelle language is rarely used as a written language. They were actually written in English, then had to be translated orally during interviews.

In this scenario, a written translation was not possible. A morning of training was devoted to oral translation of the questionnaire from English to Kpelle to find the most appropriate and consensus-oriented interpretation for all, which helped to reduce difficulties and potential biases.

The questions for Kinshasa KAP survey were translated into vernacular language, Lingala. The translation was done by a translator who understands life on the streets and its special language. Indeed, the street girls use both the local language and street slang to express themselves. It is thus necessary to call upon a person who is familiar with the source population in order to translate the questions in the most faithful way possible. A first check of the translation was done between the survey manager and the translator. The translator had the questionnaire in Lingala (and only the Lingala version) and had to orally back-translate it to the manager.

Back-translation into the source language

Back translation by individuals or by translation agencies is just as essential (translation from the vernacular language to

the original language of the questions). It makes it possible to verify the quality of the first translation, to identify the wordings that pose the most difficulties, to find different possible translations for the same term, etc. The passages thereby identified as problematic will be discussed in greater detail during the training of surveyors. Back-translation completes the loop that ensures the quality of translation carried out.

The second verification of the translation for the Kinshasa KAP was performed with the surveyors. The survey manager similarly asked them to verify the consistency between the Lingala and the French. This step helped to correct some vocabulary words. Moreover, it enabled surveyors to take ownership and become familiar with the data-gathering tool.

6 / QUESTIONNAIRE PRE-TEST

Once the questionnaire has been developed, it is recommended that you conduct a preliminary test of it. This pre-test is not in the actual conditions of the survey: its purpose is simply to establish the validity of the questionnaire. The pre-test of the questionnaire should not be confused with the survey pilot test, which is much more rigorous, covering all aspects of the survey (see Chapter 2.1).

The questionnaire can be administered by the survey manager, assisted by translators or members of the local team before recruiting teams of surveyors and supervisors. Alternatively, it can be administered during the training of the latter during the collective review of the proposed questions and answers and completed by a pegboard test and by filling out paper forms. The questionnaire is then administered to a population identical to the study population, but about which you only know that it will not be in the sample (e.g.: village not selected during the sampling procedure).

This pre-test makes it possible to:

- → Certify the proper interpretation (or not) of the meaning of the questions asked and to verify that the same concepts stand behind each word;
- → note comprehension difficulties and the need to clarify some questions and answers, or to review a translation of the questionnaire, to check that the answers truly match the local conditions;
- → Identify the reactions of the respondents and potential problem questions (refusal to answer or topics to be addressed with more care);
- → Highlight oversights or "natural" biases that slip into the questionnaire, even when the team prepares it with the utmost attention;
- → Check that the length of time administering the questionnaire has remained "reasonable". The duration of an interview (of a respondent) must not exceed 45 minutes;
- → To test the workability of the questionnaire; that there is sufficient space for surveyors' annotations, that the information is easy to follow and that questions are clearly coded.

The Liberia KAP questionnaire consisted of 108 questions, divided into five parts, and was perceived as (too) long by most respondents, which could have led some breaking off the interview to return to their activities.

The Kinshasa KAP questionnaire consisted of 80 questions, divided into 7 sections. It was just perceived as acceptable by the girls interviewed. Indeed, when administering the questionnaire, it appeared that after thirty minutes the girls had a little trouble concentrating. These respondents are young and it is difficult to hold their attention for longer than about twenty minutes.

This pre-test also gave us the opportunity to be able to change certain question phrasing or even remove questions:

- → **The first version of the questionnaire included a question on knowledge of the menstrual cycle. It turned out that the translation in local language was difficult to do and girls did not understand the question. It was then decided to withdraw the question;**
- → **Another change was made to the question on the reasons for using/not using a condom the last time they had sexual relations. Initially it was planned to ask for one single answer, yet girls gave several answers, not just one. The question was consequently offered with the option of giving several answers.**

The pre-test questionnaire is an important step that allows you to refine both the content (wording, translation) and format (presentation) of the questionnaire in order to complete the questionnaire.

The survey pilot test, which is done after the training of the survey teams, more comprehensive than the pre-test, allows for a situation scenario tested under real conditions to verify the proficiency of the questionnaire but also the respondent selection procedures, the information procedures and procedures for obtaining consent etc. (see Section 2.D).

7 / CONSTRUCTING THE DATA ENTRY FORM

The construction of the data entry form is performed by computer software chosen for data analysis. Various softwares are available but their use is not necessarily identical. It is thus important that the person handling the data entry form is trained in the software in question.

The construction of the data entry form does not have to be carried out by the person responsible for data analysis. It is not mandatory that this person be involved in the creation of the questionnaire, however, the work will be facilitated if he/she is.

The data entry form should be constructed once the questionnaire has been validated. Indeed, if started too early, corrections made to the questionnaire will also need to be reproduced on the data entry form, which doubles the workload. The data entry form is readjusted after the pre-test questionnaire. The data entry form must be clear, easy to use and faithful to the questionnaire (question placement and headings). Input controls can be created to increase data entry speed and reduce input errors: these controls can, for example, limit the choice of numbers to be entered (e.g. impossible to enter a number greater than 120 for the age); to program automatic skip patterns

to questions, to hide certain questions depending on the answer given etc.).

Always test the data entry form before entering the actual data to ensure its feasibility. This test is performed by the person constructing the data entry form:

- → An initial test is done by entering the data from the pre-test questionnaire;
- → A second test is done following the changes which may take place during the survey pilot test;
- → A third test can be planned with people entering the data in order to monitor and verify that all input controls are correct, no matter who is using the data entry form;
- → A final test should be conducted on the first collections of real data. In fact, this step completes the data entry form and provides a good correlation between the questionnaire answers given by the people and the input.

During the KAP survey in Kinshasa, the questionnaire had been previously constructed off the field and then readjusted with the field team. It was following the different modifications of the questionnaire and after validation by the STAO that the data entry form was begun, that is, ten days before the data collection itself. The person responsible for the construction of the questionnaire and the analysis was in charge of the construction of the data entry form.

Changes were made after the pre-test questionnaire. The time required to create the data entry form in the KAP survey in Kinshasa was three days in total. These three days include time for changes made as a result of the survey pilot test and the input of raw data.

8 / FINALISING THE QUESTIONNAIRE

The finalisation of the questionnaire generally only takes place after the training of surveyors and the survey pilot test day. It is only at this point that it may be printed in quantities necessary for conducting the survey. It is important to have the printing and photocopying service(s) arranged sufficiently in advance.

Do not forget to number the pages of the questionnaire and to provide good staplers to ensure that pages are kept together and not confused with other questionnaires.

The layout of the questionnaire for its final printing must strike the right balance between the need to keep a limited number of pages (reduced costs and storage requirements) and proper font sizes and white space so as to not interfere with the readability of the document and possible annotations. It is imperative to facilitate the work of the surveyors with retranscribing answers. If the font size is too small or if the space provided for open-ended responses is too small, the surveyors may not include everything and get tired during the course of administering the questionnaire.

During the KAP survey in Kinshasa, the questionnaire included 19 pages in total, including 6 for explanation of its use. Some surveyors complained because the space to answer open questions was too small. This forced them to have to write on the back of the sheet.

1D

DEVELOPING THE ANALYSIS PLAN

The analysis plan is an important step in constructing a survey protocol. It must be thought out in advance, at the same time as the objectives of the survey are being defined and the questionnaire constructed.

It is advisable to establish an analytical framework by indicators to identify the specific results according to selected criteria and thus to establish comparisons. This step is all the more crucial as it can keep you from getting lost in carrying out analyses that are not of use for the project. The analysis plan keeps the work limited to the chosen themes and avoids unnecessary data processing. It gives teams the opportunity to clearly establish the desired results. It also allows field teams, which are not necessarily responsible for the analysis, to clearly follow the progress of the work.
Indeed, many analyses may be considered but they are not necessarily relevant to the programme.

The analysis plan is written with an eye to the desired objectives and the questionnaire. When creating the questionnaire, the choice of questions
is based on what you are seeking to confirm or refute.

An analysis plan should:

- → Present the various hypotheses raised by the study objectives;
- → Identify the indicators to test these hypotheses;
- → Define the variables to measure these indicators;
- → Plan:
  - – Descriptive analyses, general trends of the entire population;
  - – Cross-referencing of variables;
  - – Statistical calculations (comparisons of averages and percentages, calculation of scores).

The analysis plan is a general framework. However, it is not rigid and often the need for unforeseen analyses ultimately emerges. Then it is up to the field team to find out whether or not they are relevant.

For the KAP survey in Kinshasa, the analysis plan was based on the objectives for the study and on indicators identified to assess the knowledge, attitudes and practices of girls.

The hypotheses were:

- → Street girls involved in prostitution are for the most part forced into it despite their young age, and their knowledge of how women's bodies grow is limited;
- → The level of their knowledge of reproductive health was not known, however, the field teams working with this population thought it was low;
- → There are probably incorrect beliefs about the methods of reproduction and contraception;
- → Young girls living on the street are particularly at risk vis-à-vis unwanted pregnancies and taking care of these unwanted children is not suited to their the reality of their lives;
- → There is probably a high prevalence of unwanted pregnancies and in fact a high prevalence of abortions or strategies for not keeping and taking care of these infants;
- → Knowledge of HIV/AIDS and STIs are relatively high, but this remains to be confirmed.

Example of indicators chosen:

- → Percentage of children in an open setting knowing how to prevent ABCD[15];
- → Percentage of street girls knowing at least 3 methods of contraception;
- → Percentage of street girls knowing at least 3 ways of protection from HIV/AIDS;
- → Number of street girls aware of the existence of a way to deal with sexual abuse;
- → Percentage of street girls using a condom with each sexual relation (including with those within a loving relationship);
- → Number of street girls who are minors accessing contraception;
- → Access of street girls below 18 years to HIV testing;
- → Rate of street girls followed up in pre-natal consultation.

A descriptive analysis of the study population was made on almost all variables to gain an overview of the beneficiary population at the MdM reception centre.

Knowledge scores were developed:

- → Score of knowledge of prevention methods of HIV/AIDS and STIs;
- → Score of knowledge about contraceptive methods.

Then a more detailed analysis of the questions was carried out by forming subgroups in order to differentiate between, for example:

- → Girls over and under 18 years of age;
- → Girls who have had an HIV test;
- → Pregnant girls and those using contraceptives;
- → The girls protecting themselves or not during sexual relations;
- → etc.

Some of these subgroups came to be identified during the course analysis with the field team, and had not initially been identified by the person analyzing the questionnaire.

15. A = Abstinence, B = Be faithful, C = Condom, D = Dépistage (Screening)

1E

APPROVAL BY AN ETHICS COMMITTEE

After the construction of the protocol, it is important to consider its approval by an ethics committee. Ethics committees are independent and multidisciplinary bodies that issue opinions on study protocols.

A favourable opinion from an ethics committee is designed to:

- → Ensure the **collection of quality data** by assessing the relevance and scientific integrity of the protocol;
- → Verify the **ethical aspects** of the study including the respect of the rights of the study participants.

This approval is required when considering publishing the results of the study.

The idea behind ethics committees and the establishment of these bodies are derived from an international framework based inter alia on the Helsinki Declaration[16] which states that the "interests of science and society should never take precedence over the well-being of the subject" and which is developed by each government within its own legislative framework. The ethical principles protected by the committees are essentially:

- → Informed consent of participants;
- → Taking into account the strengthening of protection of vulnerable persons (children, people with a mental handicap etc.);
- → Evaluation in terms of risks/benefits to participants;
- → The relevance of the study and the scientific quality of its results;
- → Disclosure of any conflicts of interest.

From a practical standpoint, this is an issue of finding out about the existence of an ethics committee in the country where the study is conducted and how it operates. Indeed, even if the principle of the ethics committee is internationally accepted, the ways these are organised and the terminology used differs from country to country. Currently, most governments have established ethics committees. However, in the absence of such a body, it is necessary to resort to the committee present in the country where the organisation it headquarted, in this case, France.

For example, concerning the type of studies described in this document, it is necessary, in France, to follow out the following steps:

- → Prepare a file with the CCTIRS (Advisory Committee on Information Processing for Research in the Field of Health), which gives an opinion on the research methodology, the need for the use of nominative data and the relevance of nominative data in relation to the research objective.
- → Request the agreement of the CNIL (French Data Protection Authority) whose primary mandate is to protect privacy and individual liberties.

The steps for submitting a study protocol and the deadline for obtaining a favourable opinion represent a long and time-consuming process that must be critically factored in as part of the planning for the study. It is advised at this point to seek the support of an expert who understands the process at the intervention country level.

TYPE OF PLAN FOR A SURVEY PROTOCOL

No matter the type of study, a survey protocol should include the following:

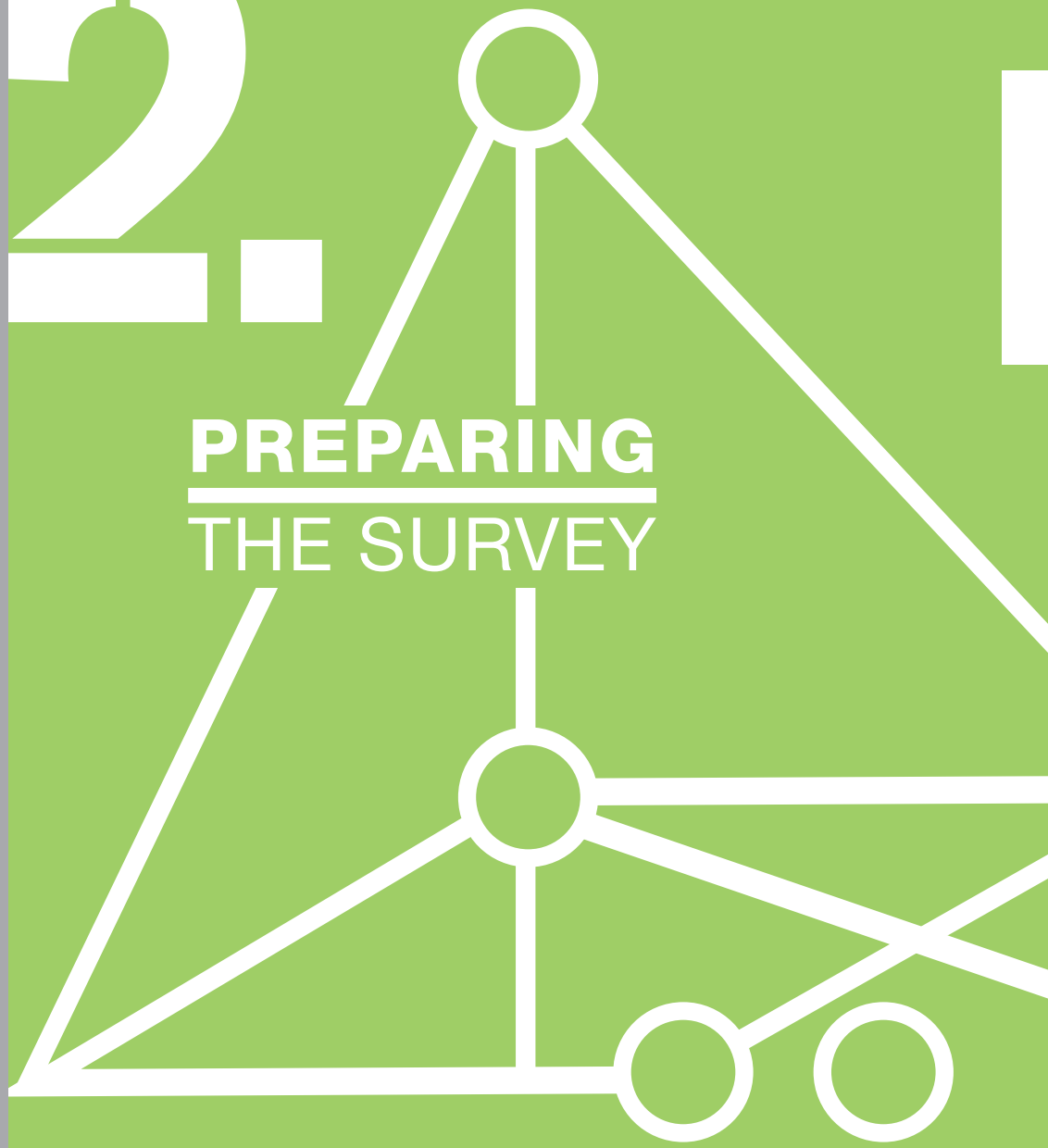
1. Background and justification for the study
2. Definition of the objectives/hypotheses
3. Methodology:
   - Definition of the study population
   - Method of sample selection
   - Analysis plan and analysis software
4. Major topics to be addressed in the questionnaire
5. Ethical Issues
6. Dissemination of results
7. Schedule
8. Budget

An example of a KAP survey protocol is appended.

16. The Helsinki Declaration (1964)[8] is an official document of the World Medical Association that is internationally recognised and which contains the fundamental ethical principles for research in the field of health.

[8]. Refer to page 72

2. PREPARING THE SURVEY



2A

RECRUITING AND TRAINING THE SURVEY TEAM

The KAP survey should be properly planned and prepared by the team in the field that mobilises the necessary resources and logistics upstream.

There are several possibilities for the recruitment of human resources responsible for implementing the KAP survey. The (MdM) field team can handle the entire survey or delegate some of its implementation to a private organisation and to an experienced survey team. In either case, the team will be composed of surveyors who conduct the interviews with respondents and supervisors who ensure the smooth conduct of the survey and provide assistance to surveyors with any problems encountered. This is to ensure that team members have understood the principles of survey, the importance of closely following the procedure and that they have the skills necessary to optimally conduct interviews.

1 / SELECTION OF SURVEYORS

The qualities expected of a surveyor are:

- → To be **educated enough** to understand and correctly fill in the questionnaire (the reading level must be sufficient, even if the writing level is lower, the number of open questions is very limited, a surveyor is not expected to demonstrate writing skills);
- → To **master the local language** in which the questions to respondents will be asked[17]. It is not necessary for all surveyors to master the "international" language used by the team (e.g. French, English, Spanish etc.), It should be noted however, that if surveyors do not speak the "international" language, supervising them becomes complicated. Priority should be given to selecting the most surveyors possible who speak both the local and the "international" language;
- → To have the **interpersonal skills** of diplomacy, respect, patience, etc. On this point, we must bear in mind that forms of respect and diplomacy vary greatly from one culture to another.

The make-up of the team of surveyors should be carefully balanced between men and women; it is advisable to form **mixed pairs**[18]: the men can negotiate consent with the heads of families (something a female surveyor would have more trouble obtaining), since the female surveyor will only have access to the women respondents after the head of the family has given his consent.

RECOMMENDATIONS FOR THE RECRUITMENT OF SURVEYORS:

- → **Be careful in recruiting persons of authority** (e.g.: professors, clerics etc.) who often have a higher level of education but may thereby intimidate the respondents and thus lead to a bias in the response data. It is sometimes better to be less demanding as to the level of education of surveyors in order to facilitate contact with the population surveyed. Similarly, while students may present many benefits, their young age may cause problems in certain contexts.
- → Ideally, **it is necessary that surveyors not be from the same community that will be interviewed.** They should share the sociocultural references of the respondents to facilitate their acceptance and the administration of the questionnaire, but they must not know the respondents personally, as this could inhibit the respondents, leading to a risk of response bias: How would tell your neighbour about your risky (sexual) behaviour? If surveyors from outside the community cannot be found, extra care should be taken in interpreting the answers.

During the KAP survey in Kinshasa the surveyors recruited were all female. Indeed, this choice seemed more relevant given the survey population.
The surveyors had previously worked on another survey with MdM. Moreover, they all held professional positions in connection with street children. Their profile facilitated contact with children both in their approach and in their language or attitude.

2 / SURVEYOR TRAINING

Training the surveyors is a crucial step[19]. This entails unpacking each of the questions and answers in the KAP questionnaire by various means such as slide shows, PowerPoint presentations, group discussions and practical workshops. The training lasts two to four days, depending on the complexity of the survey and questionnaire, and the experience level of surveyors recruited. It should allow surveyors to master the knowledge, skills, and expertise specific to the KAP survey and generally covers:

17. Sometimes there are several groups within a team of investigators, depending on the number of \local languages which will be used to administer the questionnaire, for example, in Niger, 2 major cultural areas, one where Hausa is the main language, the other is where it is Djerma.

18. In some societies, the mixed pairs can be misunderstood: a woman and a man must naturally be married in order to survey areas for an entire day together etc.

19. Refer to the MICS[4] manual for detailed explanations on the content of the training of surveyors and all other steps for preparing a survey. **[4].** Refer to page 72

Approaching respondents and interviewing principles

- → Knowing how to approach people, introduce oneself, present the objectives of the survey and start the interview;
- → Knowing how to convey the confidentiality of the survey (always trying to conduct the interview in a quiet place that ensures privacy);
- → Requiring informed consent (and respecting the free choice of individuals to accept or refuse to answer questions);
- → Knowing how to not be overwhelmed by cultural conventions regarding time and politeness (e.g.: taking tea before starting the interview) while respecting the basic customs;
- → Knowing how to conduct the interview with the greatest respect for the respondent (not to judge, to avoid reacting (positively or negatively) to the answers, or being too familiar or too formal etc.).
- → How to curb the urge to give the "right answers" to knowledge questions asked, even when respondents themselves ask for them (during the training, provide surveyors with a standard phrase that explains the refusal to answer and reiterates the objectives of the survey).

It is essential to stress that people identified as respondents are free to choose to answer a question or not, and it that this will not affect their medical care, their right to assistance, etc.

Description of the survey instruments (questionnaires and other KAP support instruments), their content and their use

- → Knowing the objectives of the KAP survey and understanding the health topics involved (modules);
- → Becoming familiar with the contents of the questionnaire, making sure that the wordings used no longer pose any difficulties;
- → Ensuring that there is clear consensus on the written translation of the questionnaire and that surveyors can express their disagreements during training rather than risk taking their own initiative to change the translation during the survey[20];
- → Learning how to handle the different sections of the questionnaire: understanding the instructions and skip patterns and being familiar with the format and use the questionnaire[21] in order to conduct interviews smoothly and to avoid drifting attention and loss of time;
- → Understanding that in the field any changes in question order or in the contents of the statements, no matter how slight, can have a significant influence on the responses;
- → Knowing how to use the survey support instruments: especially the calendar of local events. This schedule captures the major events that have occurred in the study area and, using a data transfer system, makes it possible to find the age of household children when parents are unable to give a date of birth. Consider laminating these supporting materials.

20. It is good that these discussions take place in the presence of translators who have the legitimacy to justify the translation choices made or, where appropriate, validate any changes.
21. The first page of the questionnaire should also summarise explanations regarding the handling of the questionnaire and the surveyor's social skills base.

Survey methodology

- → Learning to choose individuals or households who answer the survey at each site according to the principles of random selection;
- → Learning to identify household composition and address the question modules to the proper respondent profile .

It is also advisable for each mission to create a small **manual for surveyors** that a) summarises the key points of the training, b) reviews how to handle the questionnaire and c) specifies the reasons and meaning of specific potentially problematic questions.

It is advisable to include a higher number of surveyors that was calculated to conduct the survey in the raining, this way you can:

- → **Select the best (especially in regard to social skills that are more difficult to identify during recruitment interviews), the others remaining on the waiting list in case of withdrawals;**
- → **Quickly replace sick surveyors after the survey has started without having to rearrange the schedule for the survey to address this unforeseen event;**
- → **Prepare for the possible withdrawal of surveyors in cases of economic or social obligations.**

During the KAP survey in Kinshasa, a day was devoted to the presentation of the "Street Girls" programme and of the centre where the collection was to be done. Then the survey protocol was discussed with its objectives, hypotheses and methodology.

The presentation of the questionnaire and role-playing on filling it out were held at the end in the day.

A second day was devoted to the scenario in the centre, to the confrontation with the girls. Following this simulation survey, minor adjustments were made after discussion between the manager and the surveyors.

Two days were regarded as sufficient because the surveyors had identified all previously participated in previous collections of data with MdM and knew how to fill out questionnaires, knowing the principle of question skip patterns.

3 / SELECTION AND TRAINING OF SUPERVISORS

The qualities expected of a supervisor are:

- → To be **well-educated** and be disciplined and organised;
- → To master the local language and the "international" language;
- → To have the **interpersonal skills** for team management and the ability to make decisions where the random selection methodology is called into question, or in case of unforeseen circumstances. The supervisor must also be recognised as legitimate by his/her team (legitimate in terms of social status, age or ethnicity). This speaks to his/her "natural" authority, which will need to be checked;
- → To have experience with surveys, or humanitarian programmes, which will facilitate dialogue with the sponsor (MdM) survey team.

RECOMMENDATIONS FOR THE SELECTION OF SUPERVISORS:

There are several possibilities for selecting supervisors:

- → Choosing from among the **national staff of MdM or operational partners** if they can be posted elsewhere to assume this position (and provided they have the qualities expected). However, it is nevertheless imperative that there are no foreseeable difficulties with the sociocultural hierarchy between identified supervisors and recruited surveyors, a discord in the teams that could endanger the proper conduct of the survey;
- → A second possibility is to select from among those surveyors who demonstrated the best skills after the training period (which may represent an significant motivation for the participants and increase their involvement). Supervisors selected nevertheless receive additional training specific to their role as supervisor to enable them to deepen their understanding of the survey and questionnaire in order to prevent difficulties and to better assist surveyors in their work. If this selection process is chosen, it must be clearly explained to participants ahead of the training, and the selection criteria must be transparent.

A good supervisor is not necessarily the best surveyor!

The role of the supervisors is essential, because they are the ones who ensure the validity of the process of data collection. It is they who, in particular, check each completed questionnaire for the presence of the surveyor's name and of the ID code of the survey sites and of the respondents (which must appear on each sheet). They verify that a response has been recorded for each question and no aberrant response has been recorded by the surveyor (e.g. date of birth in 1770. They are also the guarantors of the accuracy of the results and ensure that, whoever the person asking the question and whatever place and time this question is asked, the same respondents would certainly answer the same. It is also advisable to create a **supervisors manual.**

In Liberia, eight people from the Community Health Committees acted as supervisors in addition to the MdM manager. Their training, unlike those of the surveyors, was held on a half-day, for convenience and so as to not keep them from their usual activities. However, this amount of time proved too short and they could not support the surveyors when they encountered difficulties in filling the part on participant eligibility. Ultimately they only provided small ad hoc help rather than genuine supervision.

2 3

MATERIAL RESOURCES AND LOGISTICS

1 / MATERIAL RESOURCES[22]

The first think to plan for are **compensations and per diems** that will affect human resources, namely, the surveyors, supervisors, the consultant who may be mobilised for the sampling and analysis of data, the data entry clerks and drivers, and also plan for their per diems for meals and accommodation in case overnight stays in the field are necessary.

It is important to straightaway explain to the members of the survey team what compensation they will receive for their work and whether or not they will be have their expenses covered during the training period and Survey (per diem). It is also important to specify whether they are responsible for buying their own food for the survey period.

In the KAP survey Liberia, surveyors were paid for the duration of their training and of the survey (4 and 6 days, respectively). Surveyors were unhappy that MdM had not provided meals during the training days.

It is also necessary to allocate the material resources necessary for:

- → Training of the survey team (room rental, overhead projector, purchase of equipment);
- → Printing the questionnaire and/or copying (a small part before the pre-test and then in sufficient numbers after the survey pilot test and questionnaire finalisation);
- → Conducting the survey in the field (pens, pencils, bags, torches and all materials for interviews, trunks to transport questionnaires);
- → Accommodation and food for teams in the field (tents, blankets, mosquito nets, water containers, gas stoves, hurricane lamps, kettles, pharmacy kits, etc.)
- → Renting cars to travel, fuel jerry cans, tarpaulins and ropes to tie the material to the roof racks of the vehicles;
- → Renting or purchasing mobile phones or HF/VHF radios, chargers and lighters etc.

22. See sample budget attached.

2 / LOGISTICS

It is important to plan the logistics and overall survey organisation upstream, so that (surveyors and supervisors) can focus solely and fully on the work of data collection. This requires anticipating and mobilising material resources (above), but also trying to know and factor in any elements of the field playing a role in the smooth conduct of the survey. It is advisable for example, where possible, to make a summary site visit to address any possible difficulties, such as poor road access, and ensure that all security conditions are met . You must similarly, wherever possible, **bring along topographical maps** (rivers, roads, hills, etc.) as detailed as possible, by contacting the mapping services of government for example.

It is important to **identify the time of day most conducive** to approaching people, i.e. times when they are available to answer the questionnaire and have no further obligations, to reduce the risk that they may break off the interview in the middle or refuse to participate in order to attend to their occupations. Surveyors and supervisors must try to identify the key times of the day or night, when they can contact the largest number of respondents. People might for example be out of the house during their working hours; similarly, the time just before mealtimes might be avoided if one is looking to interview women, who are usually in charge of kitchen tasks, whereas the mealtime itself can be conducive because it is often a break in the pace of the workday (for both men and women). Often the interviews have to be conducted in the evenings or at night, when respondents are back from work or from the fields, for example.

In the village of Gboikpala, Liberia, one person stopped after Part B of the questionnaire, since she had to go back to work the fields. Throughout the survey, surveyors had to contend with the absence of most of the villagers, who left for the fields early in the morning and returned late at night.

It is advisable to **not plan on more than five or six hours of interviewing per day per interviewer:** this allows you to take into account the travel time from one village to another, and to also take into account the time that is sometimes needed to find a respondent at random who is not at home when the surveyor arrives. Above all, it helps to leave a few hours of availability to the interviewer at the end of the day for him/her to return the questionnaires of the day to calmly verify that they have been completed properly and that there are no omissions, inconsistencies or errors.

2C SCHEDULE

The time required to conduct a KAP survey depends on the objectives of the survey, the target population, the geographical and topographical constraints and logistical access to randomly selected units. All stages of the survey need to be planned out.

However, to give a sense of scale, you can estimate that a KAP survey takes an average of six to twelve weeks:

- Two to four weeks for preparation (development of sampling protocol, preparing the questionnaire, team training and survey pilot test);
- One to three weeks for the field collection phase;
- One to three weeks for data entry;
- Two to three weeks for additional analysis and writing the survey report.

It is extremely important that the time allotted for field data collection not exceed two to three weeks: in essence, beyond that, there is the chance that contextual changes, even very small ones, may occur (e.g. slight rise water levels, slight drop in food stocks, etc.), which then introduce a bias, i.e., differences between interviews conducted at the start of the survey and those conducted at the end. To avoid too great a period of time for the actual survey, it is sometimes necessary to increase the number of surveyor teams in order to interview the same number of respondents in less time.

The KAP survey in Kinshasa took 10 weeks broken out as follows:

- 5 weeks for preparation (development of sampling protocol, preparing the questionnaire, team training and survey pilot test);
- 2 weeks for the field collection phase;
- 1 week for data entry;
- 2 weeks for analysis and writing the survey report.

2D

SURVEY PILOT TEST

Much larger than the pre-test questionnaire (see section 1.C.6), the survey pilot test is a **simulation under real conditions.** This is a “life-size” test that identifies potential problems.

To be true to how the field survey will be conducted, it requires the **participation of all members of the investigative team** (surveyors, supervisors, drivers). The questionnaire is then administered to a population identical to the study population, but one you know will not be selected in the sample (e.g. a village not selected during the sampling process). The survey pilot test is therefore needs to be done in areas that were not selected for the “real” survey.

The teams conduct 3 to 5 interviews each. The pilot test lasts half a day or a day.

The scenario can check:

- That everyone understands their respective role and remit;
- That the procedures for selection of households and/or respondents are well understood and the next steps in case of absence or needed replacement;
- That the recommendations for administration of the questionnaire are well respected (introduction, information, consent, time management);
- That the questionnaires are filled out correctly and the annotations clearly legible;
- That the team dynamics mesh well and that it is not necessary to change the composition of teams.

It is preferable to carry out the pilot test two to three days before the scheduled start of the survey, so that any adjustments or revisions can be made (this also allows teams to prepare for departure to the field). This is the last step that allows the team to improve the overall quality of the survey. Respondents are asked what they thought the questionnaire and their contact with surveyors and similarly the returning teams are asked whether they felt sufficiently equipped to carry out the survey or if they had any problems.

During the KAP survey in Kinshasa because of the special nature of the population surveyed, it was not possible to conduct the pilot test in a different place than the “real” survey. This pilot test was done at the drop-in centre for the street girls.

The surveyors explained to the girls at the centre the reasons for them to come and the importance of the girls’ participation. Each of the female surveyors interviewed the girls by explaining the purpose of the questionnaire in greater detail and by gathering their informed consent.

The survey manager was on hand to assess possible operational difficulties related to the female interviewers or others.

This pilot test was conducted two days before the start of the survey. The test day enabled surveyors to experience actual conditions (environment, population, estimated time for the questionnaire). The next day was used by the survey manager and surveyors to adjust malfunctions.

3.

COURSE OF THE KAP SURVEY IN THE FIELD

COURSE OF THE KAP SURVEY IN THE FIELD

Properly preparing the questionnaire, following the survey protocol, conducting follow-ups and setting in place any possible resources inherent in the collection of KAP information are the main factors that guarantee the validity of the survey; that the supervisors and MdM team also ensure the smooth running of the latter in the field and the validity of data collected by the surveyors.

It is advisable when developing the schedules for the teams to start the survey route for each team with the sites furthest from the MdM base (or with those most difficult to get to):

- → this allows for adjustment of the schedules if logistical difficulties appear and to limit the risk of delays in the survey (e.g. to return a car in case it breaks down);
- → furthermore, during the course of the survey, the motivation of teams falls off the more fatigue increases, so it is best to plan the most difficult and/or distant sites early in the survey.

3A

MOBILISING THE SURVEY TEAM

1 / SURVEYORS

Trained surveyors are enlisted for the time dedicated to conducting the survey, that is, between one to two weeks (maximum three) depending on the number of respondents sought and the number of surveyors recruited.

When the KAP survey is conducted at several remote sites, they must be equipped with **itineraries** with a roadmap, the names of villages or sites to visit, the number of questionnaires for each of these sites, suggested routes, where to sleep and possibly where to eat, and a list of phone numbers and information that might be useful.

Demonstration equipment can be provided to surveyors depending on the topics The KAP addresses. This helps respondents to visually identify what the interviewer is talking about: for example, for a module of questions on family planning, boxes of pills can be shown to respondents, so that they identify more easily with products they know, but to which they could give a different name.

Additionally, daily debriefings arranged by the supervisors, a break day can be planned at midterm: this gives surveyors some time to unwind and to share any concerns with the rest of the team. This mid-term debriefing can also be an opportunity to rethink the composition of the teams if some are progressing more slowly than others and need some help, or if tensions arise.

In Liberia, the surveyors, 14 all told and grouped into 7 pairs, were mobilised for six days of surveying. They had received their equipment and their per diems prior to departure. Brought along for spending several nights in the field, was a small basic kit they had also been provided (torch, batteries, rainwear, MdM vests, pencils) and they subsequently complained of trouble in finding accommodation in some areas and of a lack of mosquito nets.

It is advisable to not send surveyors within their own community, so as to not increase the risk of bias and the potential influence on respondents and questions-answers (since interviewer and

interviewee can influence the one another). Exception is made when the sample population is difficult to reach, such as drug users or professional sex workers, and surveyors are “peer” members of the target group.

2 / SUPERVISORS

The number of supervisors is directly dependent on the number of surveyors, which is determined by the size of the survey (number of respondents to reach) and the means available. To determine the number of supervisors required, the principle is that each supervisor should have daily face-to-face contact with each of the surveyors that he/she supervises. For ten to fifteen surveyors, for example, a pair of supervisors works quite well.

Their role is to move between teams of surveyors to help with any difficulties encountered; guarantors of the survey process, they check that the surveyors are following the correct respondent profiles and filling out the questionnaires properly. Supervisors also ensure that the number of questionnaires is reached for each site surveyed. Finally, equipped with monitoring forms, they are the link between the survey team and the programme team during the entire collection of field data.

ROLE OF THE FIELD SUPERVISOR

- → Divide the work between surveyors;
- → Identify households to survey if surveyors do not do so themselves;
- → Answer questions the surveyors are asked, identify problems and round out the training of those who are not doing their job properly;
- → Ensure that interviews remain confidential (that surveyors do not discuss the results of questionnaires amongst themselves or with others);
- → Keep tally sheets and ensure proper execution of tasks;
- → After an initial audit by the surveyors themselves, to audit the data incorporating all the questionnaires **before leaving each site** to ensure they are properly filled and do not contain inconsistent or incongruous data;
- → Check that the expected number of completed questionnaires is reached for each site before leaving, and the identification of the site sponsors and surveyors is recorded on each supporting sheet.

In the KAP survey in Kinshasa, the supervisor was also the survey manager. Her role was to gather up the surveyors’ questionnaires every evening, and go through them to ensure that the data entered were understandable at the time it was input. This step was also an opportunity to correct incongruous data or to request additional information for each questionnaire.

This review by the supervisor, done every night, facilitated corrections/ explanations by the surveyors. In fact, they had an easier time remembering the interviews with the girls when they were had been done the same day.

3B

INFORMED CONSENT OF RESPONDENTS AND CONFIDENTIALITY OF INTERVIEWS

When surveyors approach respondents, it is important that they make a good impression by presenting themselves and the principles of the survey in a positive and respectful way. They must straightaway stress the **confidentiality** of the responses and explain to people they meet that they will not be asked for their name and remind them what the gathered information will be used for. To ensure the confidentiality of the interview, interviewers should ask respondents what is the place that seems the most quiet and where they can answer the questionnaire in private, without being disturbed or spied upon. A private tête à tête interview will encourage respondents to be much freer with their answers.

Once confidentiality is guaranteed, surveyors obtain **informed consent** from the interviewees, meaning, a consent given in full knowledge of what the principles and objectives of the survey are and what information will be collected. The information given must be honest and the surveyor must ensure that the person understands, for example by asking him/her to put it into his/her own words.

The free and informed consent is proof that the person agrees to participate in the survey[23]. It must be collected early in the survey and allows the inclusion in the research. Some difficulties can arise at this step. For instance, if people are unable to write or are physically or mentally disabled. In this case an X as a signature may serve as consent. For anyone with mental disabilities, you must refer to the legal guardian or appeal to the ethics committee of the country to find possible solutions.

23. Note that this consent does not necessarily have to be written. For more details on this topic, see the guide "For Ethics in the field. Sensitive personal data management (Health-Life stories)" MdM, 2010, available on the MdM intranet in French, English and Spanish, or on request at s2ap@medecinsdumonde.net.

It should be noted **that parental consent is required for persons under 18 years living under the roof of their parents.** However, in different countries and populations, young people are considered adults at earlier ages and the issue deserves further study in relation to each cultural context (e.g. when girls are mothers at 16, when young couples live together, etc.). In cases where the survey relates to minors, you should then contact the authorities and/or the ethics committee.

During the KAP survey in Kinshasa, the target population were street girls from broken homes. Many of them were minors and without parental or guardian referent. It was therefore impossible to ask for parental consent, however, informed consent was accepted by all the girls.
The choice of interviewing therefore remained under the responsibility of MdM. As the NGO was competent and involved with the target population for years, authorities did not intervene.

In order to identify the questionnaires, the numbers assigned to each girl as they came through (their names were not requested) and a surveyor code were marked on each questionnaire.

E.g.: Questionnaire ID number:
ı___ı ı___ı___ı___ı

E.g.: Number filled in:
ı_1_ı ı_1_ı_3_ı_4_ı

surveyor no. 1 surveyor no. 134

3C

"MARKING" RESPONDENTS INTERVIEWED

Once the respondents interviewed, it is important to "mark" households or individuals in order to recognise them and to avoid interviewing them multiple times. You could, for example, draw an X in chalk on the doors of the houses surveyed, or mark the hands of individuals who have already responded to the questionnaire with a stamp.

This marking should become automatic when respondents to the KAP survey are compensated for time spent on interviews. The possible compensation of respondents only happens in cases of non-random selection of respondents, where targeted respondents belong to the hard to reach, or difficult to locate categories of people. The appeal of such compensation, whether financial or in offered goods, may lead some people to want to respond to the questionnaire several times to get compensated several times, which could jeopardise the representativeness of data collected.

During the KAP survey conducted in Burma, the respondents were all drug users. Compensation was provided for all interviews to motivate these people to give their time answering the questionnaire. To prevent abuses and ensure that the IDUs did not go multiple times to different surveyors, the team put a red dot on the shoes of all respondents who had completed an interview. This allowed surveyors to know whether a person had been interviewed or not, even when they had not themselves conducted the interview.

One of the issues raised by marking participants is the **respect of anonymity** when participating in a study and the risk of **stigmatisation** (in the case of surveys of persons living with HIV, sex workers, IDUs etc.).

However, the marking may prove to be necessary. The decision whether or not to mark participants, and the type of marking used is therefore something that needs to be evaluated for each study. It is the responsibility of the field team and the S2AP to assess if there are any risks to using marking.

3. Consent of respondents and confidentiality of the survey

→ Always remember the confidentiality of responses and collect the informed consent of respondents;
→ Seek parental permission to interview minors.

4. Recognise the respondents interviewed

→ Develop a marking system to more easily recognise the respondents already interviewed, especially when the KAP interviews are compensated.

SUMMARY: RUNNING A KAP SURVEY

1. Mobilising surveyors and supervisors

Surveyors:

→ Organised into teams and recruited for a period appropriate to the implementation of the survey;
→ provided with their per diems, a detailed roadmap and the necessary equipment.

Supervisors:

→ Divided between the different teams of surveyors;
→ provided with "tally sheets" to keep track of the progress of the survey.

2. Select respondents who will participate in the survey

→ Identify as many respondents as possible by random selection and always repeat the same mode of selection (households and individuals);
→ For household surveys: interviewers evaluate household composition in terms of eligibility criteria in order to interview the "right kind of respondent" and to complete the modules.

4 **DATA ANALYSIS** AND PRESENTATION OF THE SURVEY REPORT

4A

DATA ENTRY AND CLEANING

This field team is responsible for analyzing and presenting the data. If it has used a consultant during the sampling phase of the population, it may call upon that consultant again at this point.

1 / DATA ENTRY

It is the responsibility of the field team to organise the entry of the data from the KAP questionnaires.
As discussed before, the data entry form is developed once the questionnaire is finally validated. This step must be done before the initial questionnaires can be done.

The process of data entry can be a long and tedious one requiring discipline, patience and organisation. It is therefore preferable to have one or more persons appointed or assigned exclusively to this task, to have a computer provided for this express purpose, and a room for filing the questionnaires and to protect potentially sensitive data.

Whatever the solution adopted for data entry, it is necessary to arrange time for training to go over the question and answer choices one by one, specifying the types of responses that are possible and those that are not (to use the previous example, date of birth 1770).

Ideally, **the entry clerk can start entering data simultaneously to the work of field collection, as the questionnaires back ground.** This will identify any errors or annotation filling and power immediately to participate in survey teams, which sometimes can turn up on their mistakes.

It is advisable to conduct a **double entry** of questionnaires to identify typos or identify systematic errors or the error rate per staff input. This double entry must include at least 10% of questionnaires selected randomly.
It furthermore saves the time that will be necessary for data cleaning: it may prove more efficient to pay for another data entry clerk rather than using the coordinator for data cleaning.

To capture data from the KAP survey Liberia, the initial plan was to only have one data entry clerk, but given the arduous tedium of data entry work, and the risk of demotivation and reduced attentiveness, the data entry clerk was given support with a second person.

RECOMMENDATIONS FOR DATA ENTRY:

- → Hire or assign a person to this task, computer and book a workroom;
- → Provide training for the data entry clerk;
- → Choose data entry software that has quality control mechanisms (e.g.: allowed values; inconsistency alerts) such as Sphinx, Epi Info or Epi Data;
- → Start data entry as soon as possible (even before the end of the survey).
- → Make a double entry of questionnaires, at least 10% of questionnaires;
- → Provide for the daily backup questionnaires already entered.

2 / DATA CLEANING PROCESS

Verification and validation of data is an important step in a survey's quality control. The survey coordinator or one of the supervisors are responsible for the data cleaning process. It is imperative that this person have a perfect grasp of the questionnaire, its modules and their format. This third party, someone other than the data entry clerk, reviews the data, tries to spot entry errors, verifies **extreme data** and **incongruous data**. The data, once verified and validated, are saved and reserved for analytical work.

In the KAP survey in Kinshasa data cleaning was done by the survey manager and focused on finding missing and/or incongruous data in the database.

Examples of incongruous data:

- → An age of 250 years;
- → A confirmed abortion where, according to the entry, the person had never been pregnant;
- → Answers entered for places were injectable drugs are bought, but according the question skip patterns, the person claims to never have taken drugs.

Some errors occurred during input, it was then necessary to go back to the questionnaires to correct the errors. Data cleaning was also done at the start of the analysis. In fact, it sometimes happens that some incongruous data are not caught in the preceding step. This is the case for example of input errors with question skip patterns. It was then only at the analysis stage that it becomes clear that there are still bad data. In this case, it was necessary to go back to the paper questionnaires and check the answers, then repeat the analysis.

This cleaning took two days. This step is necessary before data analysis.

3 / DATA ANALYSIS

Data analysis depends on the objectives, hypotheses and analysis plan. These three elements define how data are analyzed. The expert or resource person who has been employed to prepare the sample may again be asked to help the data analysis. Depending on the degree of scientific rigour required for the survey, it will be necessary to conduct statistical analysis of data expressed as confidence intervals and p-values.

This analysis is more accurate in **describing the sample and variables present in the sample.** It should clearly describe the profiles of people encountered and return characteristics (variables) that differ from one respondent to another (e.g. age, sex) or from one situation to another (e.g. the number of children in a family). These are the data that express the characteristics of the sample and make it possible to identify certain shared or divergent traits.

4 3 WRITING THE SURVEY REPORT

The field team is responsible for writing the survey report. Even if an outside consultant has been brought in, it is important that the survey report be written in tandem with the field team. Indeed, it is the complementarity of the two sections that will make the recommendations and conclusions relevant to the topic addressed.

The survey report aims to highlight the key information collected by KAP questionnaires in the field and must also return all the points developed in data analysis. His presentation follows the following framework:

1. **Introduction** (background to the survey, brief description of activities MdM if necessary, existing literature on the subject etc.

2. **Objective(s)** of the KAP survey and relevance for the MdM programme (summary).

3. **Survey methodology** (KAP): to take all steps in the preparation of the survey (location and time of survey and sampling protocol, selection process of households surveyed, questionnaire content and pre-test selection and training of surveyors and supervisors; limitations, problems encountered and possible bias, etc.). All these factors combine to enable the reader to judge the soundness of the survey (reliability and validity of results, scientific rigour). They also allow the reproducibility of similar surveys by other organisations.

4. **Presentation of the results** of the KAP survey: be careful not to confuse the analysis results (next section) and the presentation of results; here the point is to present the essential results of the survey in their raw form, statistics for each subsection and each questionnaire topic. This part is mainly quantified, and data are typically organised into tables, graphs, charts or curves. It does not contain commentary on these results, except for a narrative explaining the contents of each table, graph, etc. This part usually has **a) a description of the target population** (size, number of respondents, demographic characteristics) and **b) the main results in related to the objective of the KAP survey.** It is imperative to always remember to specify the number of respondents “n” on which you are basing the given information (n=xx), particularly when using percentages (%). Comparisons should all be supported by measuring the “p-value”, that is to say, the probability level that will ensure the significance of the results and establish that the comparisons

are statistically valid (the limit of significance is set at 0.05 or 5% and the p-value must always remain below it).

5. Discussion: here the greatest and most significant results should be highlighted and made intelligible. This part makes it possible to present the hypotheses to which the results refer, possibly illustrating them with explanatory diagrams. In presenting these results it is important to bear in mind the limitations of the study (choice of the population, methodology, choice of questions, problems related to translation and back-translation etc.) in order to support the remarks made at the conclusion of the study. **This interpretation of the results must always be done in a contextualised manner, i.e. with regard to the situation in the field.** If it is the consultant who is responsible for writing the survey report, he/she must have an extremely good knowledge of the local level and field staff must in any event be involved in all phases of the analysis, otherwise the explanations and the resulting recommendations may not be realistic or relevant to the field mission. The CAP results can also be compared to other more general issues such as population surveys, national and international statistics and other relevant publications.

6. Recommendations and conclusion: In this last part, the report finally presents the most significant and important information possible from the data analysis, which can be used to confirm or to direct the activities of the field programme. Ideally, this information should be verified and deepened by using qualitative methods (focus group interviews, observation etc.) to better define on what knowledge, attitudes and practices the mission should focus more attention or implement activities. These recommendations point the way forward so the information gathering of the KAP of a population can have an impact on how to advance the mission and improve future interventions.

7. References

8. Appendix(es): in the appendix are presented, in their entirely, the survey/ sampling protocol; the questionnaire, the analysis plan; an area map; supporting documents (e.g.: calendar of local events); this could also be a place to suggest going back into detail on some results.

For the KAP survey in Kinshasa, the survey manager which was responsible for writing the assessment report taking into account the imperatives of the field team. The program manager in the country and the medical officer then made several re-readings of the document to request further or correct it. This complementarity is essential because it can produce a document understandable to the ground, and used mainly by the latter, which can be used to redirect the program for example.

4C

SUMMARY AND DISSEMINATION OF SURVEY RESULTS

The report of the KAP survey should not be considered an internal document and the results are disseminated to all stakeholders involved in health and access to healthcare for the people who will probably reap the benefits of information collected.

In developing the survey protocol, restitution to various national and international partners, and among respondents must be considered. **It is important that survey results are shared** in order to discuss new policies and/ or new positions and/or operational decisions. Moreover, information gathered round the international knowledge on the study population.

This summary must be adapted to different partners with which it is addressed. Indeed, test results and recommendations may not be shared with everyone.

During the KAP survey in Kinshasa, a pre-return was done with the National Adolescent Health and the National Program of Reproductive Health to present the main findings and recommendations for future cooperation desired by MdM. This presentation explained the methodology and the choice of the population. The limits of the survey were also discussed.

Another summary was carried out with the local partner. In this summary, the choice was made to present only those health findings and recommendations directly related to their daily work. In addressing a different audience, it seemed important to convey a message relevant to their activities, their positioning and their actions in health.

5

APPENDIX

CONCLUSION, REFERENCES AND ABBREVIATIONS

5A CONCLUSION

In conducting a survey on the knowledge, attitudes and practices of a population, the team mobilised on a programme sets a baseline that helps to suggest health interventions or education activities in a local context. The information collected helps to improve the efficiency of these activities and to foresee certain obstacles.

It is critical to **not to underestimate the magnitude of resources and time necessary for the implementation of KAP surveys**, these are a costly and time-consuming undertakings. For the KAP survey to be reliable and probative, it must meet a number of methodological steps, which in fact require time and resources be allocated to it. If these different steps are essentially handled by the field team, finalising the survey questionnaire, the sampling procedure and analysis of collected data are usually supervised by an expert (usually an external consultant).

Relying upon a probability sampling method, behaviour and behavioural changes can become indicators that can be measured at set intervals. Presented at the beginning and end of a programme to the same population groups, KAP questionnaires can be supports for evaluating the activities of health education, making it possible to observe the effect of the various aspects built on the knowledge, expertise and social skills of this population.

The KAP survey does, however, only shed light on a limited level of information, since people are only answering questions whose answers are already formatted. Moreover, it is sometimes more instructive to know the relative importance given to the choice of answers or an explanation of this choice. Similarly, some sensitive questions regarding sexuality or risk practices are difficult to identify by not relying on the “declarative”. Therefore it is highly relevant to establish workshops for individual expression (interviews) or group expression (focus groups) and observations to find the gap between what is said and what is done, including when questions are raised concerning attitudes and practices, which are always the most difficult understand.

Summary table of steps in conducting a KAP survey

This table summarises the main steps in conducting a KAP survey and highlights the importance of teamwork, involving a variety of skills. It is often useful and necessary to seek an external review during these stages.

	Field team	S2AP	External support
1. DEVELOPMENT OF SURVEY PROTOCOL (2 TO 4 WEEKS)			
Definition of the objectives of the survey	√	√	
Identification of the target population	√		
Calculation of sample size			√
Choice of sampling methods for the target population (several possible methods by levels: selection of villages, households and respondents)			√
Selection of the questions	√	√	
Adaptation of the answers	√		
Preparation of the analysis plan	√	√	√
{0Translation/back-translation of the questionnaire	√		
Pre-test questionnaire	√		
Construction of the data entry form	√		√
Validation of questionnaire		√	√
Validation of the survey protocol		√	√
2. PREPARATION OF THE SURVEY (1 TO 3 WEEKS)			
Featured resource sites/gathering places/communities	√		
Choice of survey schedule	√		
Prediction of material resources and logistical needs	√		
Prediction of human resources needed	√		
Recruitment and training of surveyors and supervisors	√		
Survey pilot test	√		
Sending of official mailings	√		
3. COURSE OF THE SURVEY (1 TO 3 WEEKS)			
Mobilisation of teams	√		
Obtaining approvals and consents	√		
Marking of respondents interviewed	√		
Checking the completed questionnaires	√		
General supervision of the survey	√		√
4. DATA ANALYSIS (2 TO 3 WEEKS)			
Data entry and data cleaning	√		
Data analysis	√		√
Writing the survey report	√		√
Summary of the survey and dissemination	√		√

5B REFERENCES

[1] **MdM-S2AP,** HIV KAP Questionnaire (in FR & EN), available on the MdM intranet

[2] **MdM-S2AP,** PHC KAP Questionnaire (in FR & EN), available on the MdM intranet

[3] **FHI,** Guide for repeated behavioural surveillance surveys in populations exposed to HIV, USAID/DFID, Available online at: http://www.fhi.org/NR/rdonlyres/ezscxathgcvhxzmwxjlfgkl4mezcmep6ogzqty3lbyf5ighmb6k2swbgar32xup6yh5sykj6ii2kwp/bssguidelinesfullenhv.pdf

[4] ORC Macro, Model "A" Questionnaire with commentary for high contraceptive prevalence countries, MEASURE DHS+ basic documentation no. 1, USA, 2001, available online at: http://www.measuredhs.com/pubs/pdf/DHSQ4/DHS-IV-Model-A.pdf.pdf

[5] **UNICEF,** Multiple indicator cluster surveys / MICS 3, available online at: http://www.childinfo.org/mics3_questionnaire.html

[6] **MdM,** *Guide "Data collection >> Qualitative Methods",* 2009, available on the MdM intranet

[7] **MdM,** *Health Education >> A practical guide for health care projects,* 2010, available on the MdM intranet

[8] **World Medical Association,** Helsinki Declaration. Ethical principles applicable to medical research on human subjects. Adopted by the 18th General Assembly, Helsinki, June 1964, available online at: http://www.wma.net/en/30publications/10policies/b3/17c.pdf

A critical approach with examples, available in french at: http://apad.revues.org/document1982.html#tocto6

Handicap International, Knowledge, attitudes and practices in risk education: carrying out KAP surveys, 2009, available online at: http://www.handicap-international.org.uk/Resources/Handicap%20International/PDF%20Documents/HI%20Associations/KAPRiskEducation_2009.pdf

UNAIDS, USAID, Meeting the behavioural Data Collection Needs of National HIV/AIDS and STD Programmes, 1998, available at: http://www.fhi.org/NR/rdonlyres/ealylf6huilftby2nxrllsob4hxe475g62sjbyhhf7cxc3bdaucrfk6b5eitsqxvvsyz5csxp5na7h/bevariordatacollectionneeds.pdf

WHO, Advocacy, communication and social control for TB control. A guide to developing knowledge, attitude and practice surveys, 2008, available online at: http://www.stoptb.org/assets/documents/resources/publications/acsm/ACSM_KAP%20GUIDE.pdf

5C ABBREVIATIONS

BCC: Behaviour Change Communication
BSS: Behavioural Surveillance Survey
DHS: Demographic & Health Survey
HIV: Human Immunodeficiency Virus
IDU: Injecting Drug Users
IEC: Information, Education, Communication
KAP: Knowledge, Attitudes, Practice
MdM: Médecins du Monde
MICS: Multiple Indicators Cluster Survey
MSM: Men Who Have Sex With Men
PHC: Primary Healthcare
PSW: Professional sex workers
S2AP: Service d'analyse, appui et plaidoyer*
SRS: Simple random sampling
STAO: Service technique d'appui aux opérations (former name of the S2AP)

* Analysis, Support and Advocacy Service

APPENDIXES OFFERED ON THE CD-ROM

– **Sample survey protocol:** Zimbabwe 2009

– **Sample consent form:** Kinshasa 2009 and Zimbabwe 2009

– **Sample KAP questionnaire:** Kinshasa 2009 and Zimbabwe 2009

– **Sample supervisors manual:** Zimbabwe 2009 and Niger 2008

– **Sample surveyors manual:** Niger 2008

– **Sample surveyors itinerary:** Zimbabwe 2009

– **Sample individual report for each interviewee:** Kinshasa 2009

– **Sample daily log report:** Kinshasa 2009

– **Model** HIV and PHC questionnaire

– **Model** chronogram for a KAP survey

– **Model** budget for a KAP survey

The CD-Rom will be regularly updated and ultimately offer other samples and models than those shown above.

Document drafted by Sybille Gumucio, S2AP **with the contribution of** Melody Merica, Niklas Luhmann, Guillaume Fauvel, Simona Zompi, Axelle Ronsse, Amélie Courcaud, Magali Bouchon, Coralie Trehin, Sophie Schapman, Olivier Cheminat, Helena Ranchal, Sandrine Simon, Médecins du Monde, January 2011. / **Graphic design:** Polysemique.fr / **Translated from French to English, corrections:** Michael Hariton / **Photographies:** Benoit Guénot (pp. 1-2), Lâm Duc Hiên (pp. 9-33), Julie Béis (p. 55) / **Printing:** IGC Communigraphie