Primary Health Care Management Advancement Programme

ASSESSING COMMUNITY HEALTH NEEDS AND COVERAGE

MODULE 2
USER'S GUIDE

THE AGA KHAN UNIVERSITY

AGA KHAN FOUNDATION

Primary Health Care Management Advancement Programme

ASSESSING COMMUNITY HEALTH NEEDS AND COVERAGE

Jack Reynolds
University Research Corporation

MODULE 2
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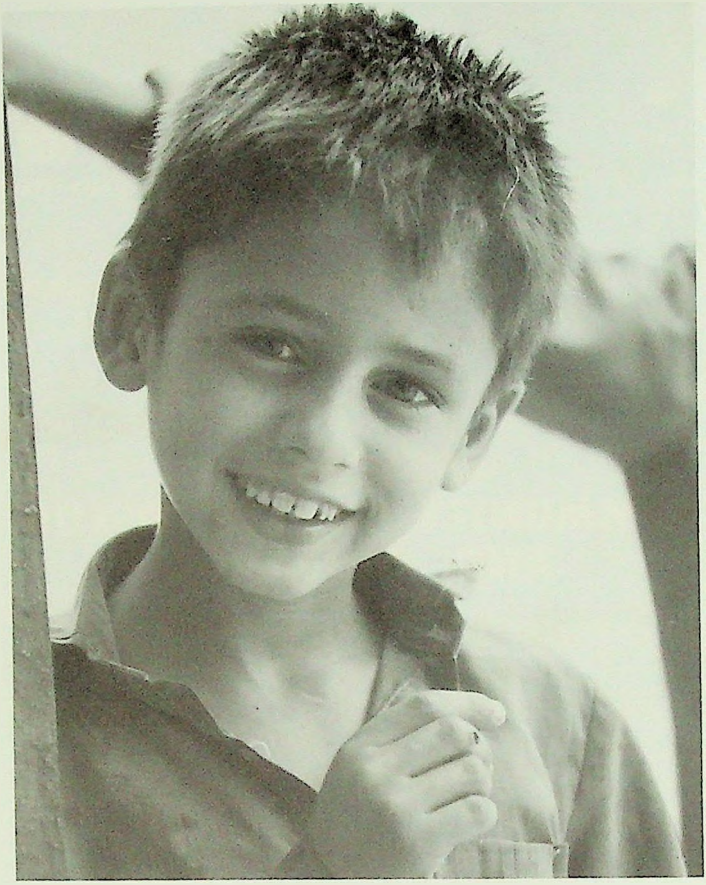
Aga Khan Health Services

University Research Corporation
Center for Human Services



Monitoring the health of children, such as this child in Portugal, helps to identify health needs and, later, assess coverage of children with priority services.

Photo by Jean-Luc Ray for AKF

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Dedicated to
Dr. Duane L. Smith (1939-1992),
Dr. William B. Steeler (1948-1992)
and all other health leaders, managers and workers
who follow their example in the effort to bring quality health
care to all in need.

Assessing the awareness of women about good nutrition and the treatment of common problems, such as diarrhoea, is important

Photo by Jean-Luc Ray for AKF

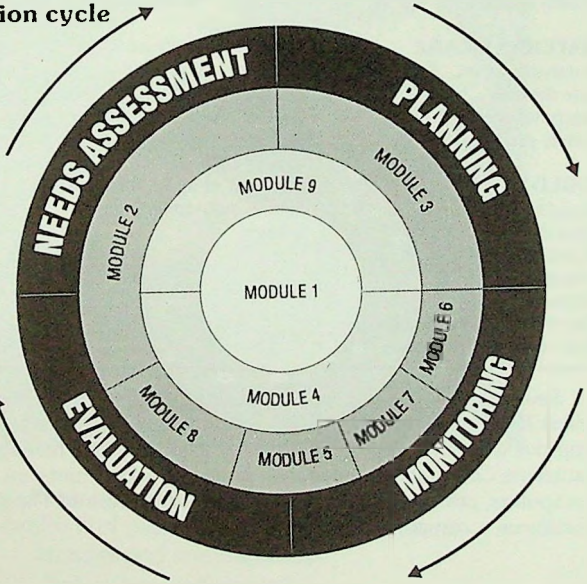
An overview of PHC MAP

The main purpose of the Primary Health Care Management Advancement Programme (PHC MAP) is to help PHC management teams collect, process and analyse useful management information.

Initiated by the Aga Khan Foundation, PHC MAP is a collaborative programme of the Aga Khan Health Network[1] and PRICOR.[2] An experienced design team and equally experienced PHC practitioner teams in several countries, including Bangladesh, Chile, Colombia, the Dominican Republic, Guatemala, Haiti, India, Indonesia, Kenya, Pakistan, Senegal, Thailand and Zaire, have worked together to develop, test and refine the PHC MAP materials to make sure that they are understandable, easy to use and helpful.

PHC MAP includes nine units called modules. These modules focus on essential information that is needed in the traditional management cycle of planning-doing-evaluating. The relationship between the modules and this cycle is illustrated below.

PHC MAP modules and the planning-evaluation cycle



PHC MAP MODULES

1. Information needs
2. Community needs
3. Work planning
4. Surveillance
5. Monitoring indicators
6. Service quality
7. Management quality
8. Cost analysis
9. Sustainability

1 The Aga Khan Health Network includes the Aga Khan Foundation, the Aga Khan Health Services, and the Aga Khan University, all of which are involved in the strengthening of primary health care

2 Primary Health Care Operations Research is a worldwide project of the Center for Human Services, funded by the United States Agency for International Development

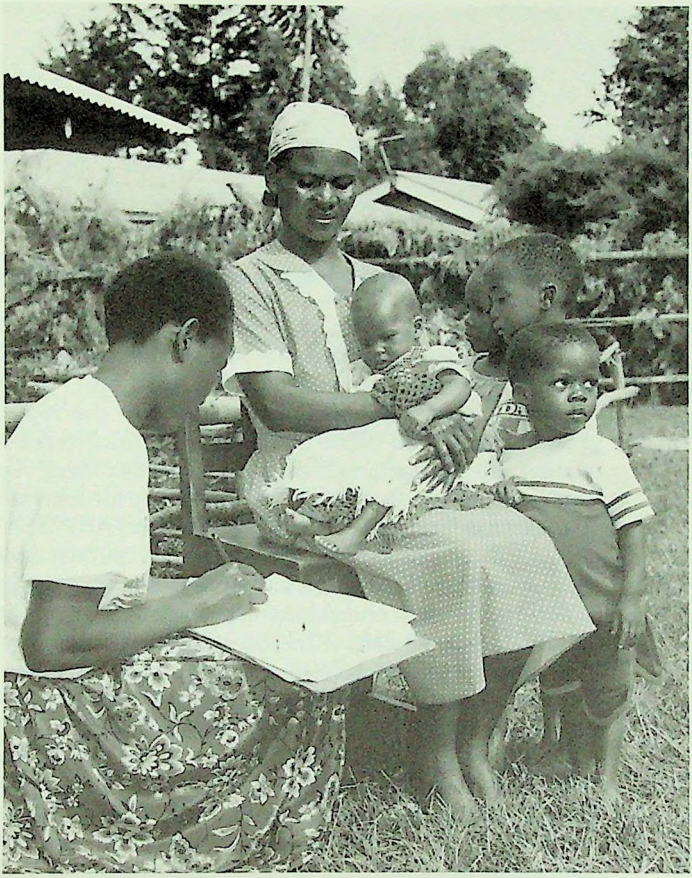
Managers can easily adapt these tools to fit local conditions. Both new and experienced programmers can use them. Government and NGO managers, management teams, and communities can all use the modules to gather information that fits their needs. Each module explains how to collect, process and interpret information that managers can use to improve planning and monitoring. The modules include User's guides, sample data collecting and data processing instruments, optional computer programs, and Facilitator's guides, for those who want to hold training workshops.

The health and management services included in PHC MAP are listed below.

Health and management services

HEALTH SERVICES		MANAGEMENT SERVICES
GENERAL	**OTHER HEALTH CARE**	Planning
PHC household visits	Water supply, hygiene and sanitation	Personnel management
Health education	School health	Training
MATERNAL CARE	Childhood disabilities	Supervision
Antenatal care	Accidents and injuries	Financial management
Safe delivery	Sexually transmitted diseases	Logistics management
Postnatal care	HIV/AIDS	Information management
Family planning	Malaria	Community organisation
	Tuberculosis	
CHILD CARE	Treatment of minor ailments	
Breastfeeding	Chronic, non-communicable diseases	
Growth monitoring		
Nutrition education		
Immunization		
Acute respiratory infection		
Diarrhoeal disease control		
Oral rehydration therapy		

Several Manager's guides supplement these modules. These are: *Better Management: 100 Tips*, a helpful hints book that describes effective ways to help managers improve what they do; *Problem-solving*, a guide to help managers deal with common problems; *Computers*, a guidebook providing useful hints on buying and operating computers, printers, other hardware and software; and *The computerised PRICOR thesaurus*, a compendium of PHC indicators.



Women carry the burden of most family chores and of promoting health and preventing disease within their families and communities

Photo by Jean Luc Ray for AKF

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Contents

Acknowledgements

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Thanks are due also to Pierre Clauquin of AKF for his suggestions on computer programs, and to Paul Richardson of URC/CHS for his advice on sampling.

The computerised version of this module is based on, *Epi Info, Version 5: A Word Processing, Database and Statistics System for Epidemiology on Microcomputers*, by A.G. Dean, J.A. Dean, A.H. Burton, and R.C. Dickers. *Epi Info* is a joint project of the Centers for Disease Control (CDC) and the World Health Organization (WHO). The *Epi Info* manual and computer program are in the public domain and may be freely copied. The program is "bundled" with this module to enable managers to use the computer version of the module.

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Quick start

How to use the prototype questionnaires - rapid surveys

Select a questionnaire

If you already know something about community surveys, you can use the questionnaires in this manual to carry out a PHC survey. Go to Appendix C and select a questionnaire. Modify it to fit your particular needs and situation. If you do not need to make any changes to the questionnaire, simply print out as many copies as you need, one per interview.

Draw your sample

You also need to draw your sample. The User's guide includes instructions for drawing a cluster sample (30 clusters by seven respondents each). This is normally a large enough sample for a rapid survey. These instructions show you how to do this manually. You do not need a computer. However, if you have a computer, see Appendix F for instructions. It describes how to use the enclosed computer program to draw your sample quickly.

Collect the data

We are assuming that you will interview seven eligible mothers in each of 30 clusters. It is best to send a two-person team to each cluster - one to conduct the interviews, the other to find the respondents and check the completed interviews. You only need to complete seven interviews in each cluster. See Step 7 in the User's guide if you need more information about selecting households.

Summarise the data

Assemble all of your questionnaires. Then calculate the totals for each question and enter them into a blank questionnaire. this will give you a summary of the entire survey on one sheet.

Analyse the data

Compute percentages for each "yes" answer, and summarise the results. Write out the major findings for each question. See the analysis section in the User's guide for analysis instructions.

Computerised surveys

If you would like to use a computer to conduct your survey, turn to Appendix A, which describes how to use *Epi Info* to design, collect, and analyse your survey data. A copy of the *Epi Info* manual and the *Epi Info* computer program is included in this module for your use.

In Bangladesh, the empowerment of women for social and economic development has yielded substantial improvements in the health status of their families

Photo by Jean-Luc Ray for AKF

Introduction

This module introduces and shows you how to use **rapid community surveys** to assess community PHC needs and to evaluate programme effects on PHC coverage.

What are "rapid community surveys"?

PHC managers need timely and useful information about the health status of their target populations so that they can do a better job of planning and monitoring PHC services. The traditional way to collect health information is through large surveys, done infrequently and generally on a national scale. This information is of little use to local managers.

The rapid survey is a new tool

"Local programme managers often totally lack data upon which to assess or evaluate the health problems in their area. It is usually not possible to interpolate the results of large general population surveys (for) local estimates."[1]

The "rapid survey" is a new tool for getting this kind of information quickly and inexpensively. It is especially useful for local PHC managers who need information about their local populations.

The "rapid survey" is an alternative to traditional large-scale sample surveys. It was originally developed to assess

1 Smith, G. S. "Development of rapid epidemiological assessment methods to evaluate health status and delivery of health services." *International journal of epidemiology* 18 (4 [Supplement]) S4, 1989.

immunization coverage[1] and has been adapted to other epidemiological areas by Frerichs.[2] Recently, some exploratory work has been undertaken to adapt the methodology to family planning and primary health care, with special emphasis on using rapid surveys to help managers improve planning and monitoring of services.[3]

A typical rapid survey

These surveys are designed to help PHC managers collect population-based information on **health status, behaviour**, and **knowledge**. The typical rapid survey can be carried out in two to three weeks, from design to final report. It involves 200-300 household interviews, drawn from 30 clusters of seven to ten respondents each. The interview schedule is short (20-30 items), and the questions are phrased in "yes"/"no" terms to permit statistical tests of significance. The surveys are often pre-coded so that the data can be entered into a local computer and immediately analysed. The analysis is simple.

Example

When they are done well, rapid surveys are very impressive. The author participated in his first rapid survey in Thailand in late 1987. Twenty two participants from three developing countries attended a one-week workshop where they learned the principles of rapid surveys in the first three days and designed questionnaires and developed the samples in the next two days for two simultaneous surveys - one on antenatal care, and one on family planning. In the second week they collected the data (three days), processed it (one day), and presented a report (one day) on the findings to the

1 Henderson, R. H. and T. Sunaresan, "Cluster sampling to assess immunization coverage: A review of experience with a simplified method." *Bulletin of the World Health Organization* 60 (2): 253-260, 1982.
2 Frerichs, R. R. and Tar Tar, K. "Computer-assisted rapid surveys in developing countries." *Public health reports* 104: 14-23, 1989.
3 Frerichs, R.R., et al. "Family planning survey and antenatal survey, Srisaket, Thailand," December, 1987 (unpublished paper, URC/CHS); "Institutionalizing the use of rapid surveys for family planning decision-making," an Operations Research Proposal, Gadja Mada University and University Research Corporation, November 1989; and "Primary Health Care Management Advancement Programme 1989-1992," a proposal of the Aga Khan Health Network and PRICOR, November, 1989.

provincial management team. Excerpts from the presentation are shown below.

The entire survey, including training, was conducted in only two weeks. This was not a survey of a small population. Six districts with an estimated combined population of 410,891 were sampled. The antenatal care (ANC) survey

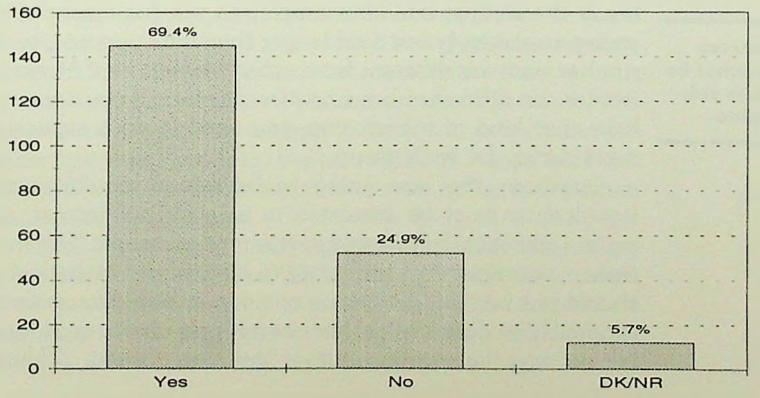
Table 1: Type of attendant at last delivery, N = 206

Type attendant	Number	Percent
Government health worker	114	55.3
Traditional birth attendant	89	43.2
Unattended	3	1.5
Total	206	100.0

Table 2: Received tetanus toxoid last pregnancy; N = 209

Received TT	Number	Percent
Yes	145	69.4
No	52	24.9
DK/NR	12	5.7
Total	209	100.0

Figure 1: Received tetanus toxoid last pregnancy, N= 209



targeted married women currently living in these six districts who had had a pregnancy outcome, live birth, stillbirth, miscarriage, or abortion, within the past 24 months. This population was estimated to be 24,653 women.

The total number of people interviewed in a rapid survey is typically 210, i.e., 30 clusters x 7 respondents each. Although this number appears small, it has been used extensively in the Expanded Programme for Immunization (EPI) and has been shown to produce unbiased estimates within the desired level of precision, that is, plus or minus 10 percent.

A number of improvements can be made in this methodology to reduce sampling error, increase the level of confidence, and gather more detailed information. These are described in this guide.

Some limitations of rapid surveys

Although rapid surveys are attractive alternatives to traditional large-scale sample surveys, there are trade-offs. The most obvious is that the number of questions must be limited. The manager cannot expect detailed findings or analysis. Another is that these surveys are designed to assess **levels** of health or service coverage, not to identify the determinants or **causes**. A rapid survey can tell you the proportion of women who breast feed their children, but it usually cannot tell you the differences between women who do and do not breast feed. This is because the sample is very small and provides a **single estimate**. You cannot break the sample into sub-samples to see, for example, if younger women breast feed longer than older women, or if rural women are different from urban woman, or if Moslem women are different from Christian women. If you want to have that kind of information, you need to do a separate rapid survey for each group.

Rapid survey samples cannot be broken into sub-samples

Questions that are going to be tested for statistical significance must be tabulated in a "yes"/"no" format, as certain statistical rules apply to this type of sample. For this reason, questions that are going to be analysed statistically should not be multiple choice or open-ended. However, it is possible to do statistical tests of multiple choice questions by recoding the questions into a "yes"/"no" format. (This is

explained in the text.) There is some value in using multiple choice and open-ended questions, even if their results cannot be analysed statistically. This is because they may produce useful descriptive information that can give you suggestions of possible explanations.

Typical problems in rapid surveys

Rapid surveys often rely on CHW's, health staff, or community members to conduct the interviews rather than on professional interviewers. Even with careful training, non-professionals are often tempted to take shortcuts, thus producing biased results. Typical problems include not contacting certain households or women because: they are too far away; the interviewer "knows" that some women are not eligible and therefore do not need to be contacted; and the interviewer knows the respondents so well that he or she answers the questions for them.

These problems are not unique to rapid surveys however, and can usually be controlled through training, close supervision, and spot checks, or re-interviews with a small sample of respondents. Appendix E provides some guidelines for dealing with this problem.

Sampling can be a problem if the WHO/EPI cluster sampling procedure isn't appropriate for a given survey. This technique seems to work better for EPI than some other PHC interventions. Immunizations are often carried out as campaigns where all of the children in a target village or urban block are immunized at one time. Thus, the villages tend to be "homogeneous," i.e., either most of the children are immunized, or most are not. This means that it is not overly important who is interviewed in a given cluster, since most children have the same characteristic (they are immunized or not). This is not so for some of the other PHC interventions, such as antenatal care. In such cases, this technique may produce biased results if households are skipped because eligible respondents are not at home when the survey is conducted.

Given the distances that might have to be travelled to get to a cluster, the standard WHO/EPI procedure is to interview only those women who are at home. This can produce significant bias, particularly during planting and harvest periods when many able-bodied women are away in the

fields. This problem can be largely avoided, by scheduling the survey during seasons when respondents are likely to be home, by visiting villages early in the morning or in the evening, by arranging the visit to coincide with a special event, or by making call-back visits. The trade-off is that this can increase the costs of and the time needed to conduct the survey.

Rapid survey results do not produce exact estimates of values. Rather, they produce confidence intervals, usually plus or minus 10 percent. For example, the ANC survey described previously showed that 69.4 percent of the respondents received tetanus toxoid immunization during their last pregnancy. It is more accurate to say that we are 95 percent confident that the true percentage lies somewhere between 59.4 and 79.4 percent. Another way to state this is that the estimate is 69.4 percent, plus or minus 10 percentage points.

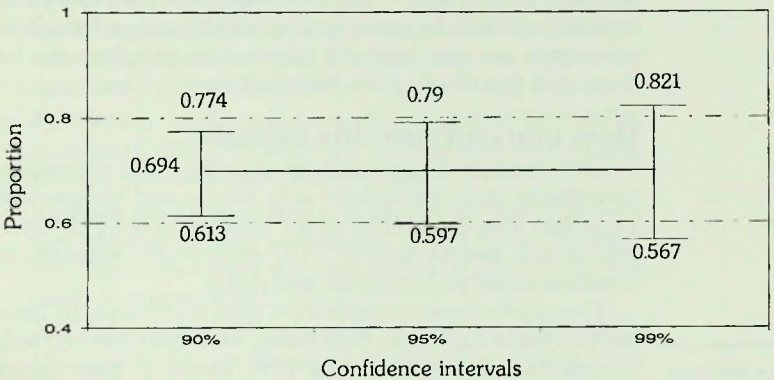
This is a large interval and may not be of much use to some managers, especially if they want to plot trends over time. All surveys have a potential sampling error, but it is usually much lower, around three to five percentage points. This problem can be dealt with, at least partially, in several ways: by increasing the sample size; by accepting a lower confidence interval (e.g., 90 percent, 80 percent); and by conducting a post-enumeration survey to validate and adjust the results, if necessary.

You can survey several target groups at the same time

You can survey several target groups at the same time, such as children under two years of age (for immunization), pregnant women (for antenatal care), and children under age five (for ORT). However, the overall sample for this type of study will usually be larger than 210 because you need 210 respondents from each target group. But many respondents fall into two or more categories. A typical example is a pregnant woman with a child under age five. She can respond to questions on antenatal care, ORT, immunization, growth monitoring, nutrition, ARI, water and sanitation, and other topics.

Figure 2: Proportion of married women who received TT

	90%	95%	99%
High	0.774	0.79	0.821
Mean	0.694	0.694	0.694
Low	0.613	0.597	0.567



Surveys of mortality and morbidity require much larger samples because the events are so rare. For example, if you want to assess infant mortality, you may need a sample of 2,000 mothers to identify enough infant deaths. For child and maternal mortality rates you may need 7,000 interviews. If the maternal mortality rate (MMR) is 250/100,000 live births, you would normally need to identify 1,000 women who had been pregnant just to find two to three maternal deaths.

Some **indirect** estimation techniques have been developed to get estimates with smaller samples. These are described in Appendix G.5. However, the samples are still relatively large and the analytical techniques are complex. You should probably get expert advice before trying to measure mortality rates.

Identifying broad disease patterns and health problems is probably more useful to PHC managers. This can be done

through the Vital Events questionnaire provided in this module. It may also be important to determine the causes of some of the more serious events, such as a maternal death or a case of polio. Module 4 (Surveillance) describes how to do that.

Finally, these surveys are completed most rapidly if computers (laptops or PCs) are used. The survey programs, including those provided in this module, can help you to calculate your sample in a matter of minutes. Data entry and analysis can also be done very quickly. Surveys for which computers are not used will take longer. But they can be done, and this User's guide describes how.

How you can use this module

This module is designed to provide PHC managers, consultants, and researchers with simple and inexpensive tools that they can readily adapt to assess quickly community health **needs** and/or PHC programme **effects** on health knowledge, behaviour, and status.

Common information gaps

The most common information gaps that managers have fall into these two areas. First, many managers have no way of determining what the real PHC needs of their target population are. What do people **know** about immunizable diseases? What do they **do** about diarrhoea? What is the health **condition** of their infants? And, second, they have no way of assessing the effects that their PHC programme activities are having on those needs: What have mothers **learned** about nutrition? What are they **doing** about sanitation? What improvements have been made in immunization **coverage**?

Module 2 is designed to help managers collect and analyse this kind of information and to do it quickly, simply, and inexpensively. It can be used by established and new PHC programmes. Public and private programmes can use it, as well as single (categorical) and comprehensive (integrated) programmes.

Although this module is part of a series, it can be used independently. You do not need to use any other module before or after this one. We hope that you will, however. That's the purpose of having a series, after all.

Module 2 is linked to Modules 3 (Work Planning), 4 (Surveillance), and 6 (Service Quality) in particular. Module 2 can provide broad findings which the other modules can be used to examine in more detail. In addition, the instruments in Module 2 can be used in Module 4 for surveillance of morbidity and mortality.

How the module is organised

This User's guide includes:

- **Basic instructions:** how to design and conduct a rapid survey by hand (without a computer); ten easy steps described in pages 15-50.
- ***Epi Info*** to design and carry out a rapid survey (with a computer): See Appendix A, 26 pages of instructions, and use the complete computer files.
- **Sample questionnaires** and "cluster registers" that you can adapt to fit your own needs. There is one for each PHC topic, pre-coded and ready to use or adapt to fit local needs in Appendices C and D.
- A simple **computer program** for drawing cluster samples quickly and accurately (Appendix F), and other tools for estimating sample sizes and drawing random samples (Appendix G).
- Other **guidelines and tools** that you may find useful: suggestions **for constructing questionnaires** (Appendix B); guidelines for **training and supervising interviewers** (Appendix E); survey **management** forms (Appendix H); and **tabulation and analysis** templates (Appendix I).

Sample rapid survey questionnaires have been included for each of the principal PHC services:

- Health education
- Antenatal care, safe delivery and postnatal care
- Family planning
- Breast feeding, growth monitoring, nutrition education
- Acute respiratory infections
- Breast feeding

- Diarrhoeal disease control/oral rehydration therapy
- Childhood disabilities
- Child immunization
- Growth monitoring/nutrition education
- Water supply, environmental hygiene and sanitation
- Accidents and injuries
- Chronic, non-communicable diseases
- Malaria
- Tuberculosis
- Sexually-transmitted diseases, HIV/AIDS

In addition, one questionnaire has been prepared for assessing multiple health needs/services and three others for morbidity and mortality.

- Community assessment of PHC services
- Vital events and health status
- Child morbidity and mortality
- Adult morbidity and mortality

There is also a Facilitator's guide that you can use if you wish to conduct a workshop or seminar on rapid surveys. Computer programs are also included on the disks that are included. One disk contains the complete *Epi Info* manual and program files.

Where to begin

If you already know something about surveys and computers, you may want to skip to Appendix A: How to use *Epi Info* to conduct rapid surveys. If not, you should start with the basic guidelines in the next section: Rapid survey procedures. These include worksheets that you can fill out as you follow the steps.

You may also want to have a facilitator help you, especially if a group is going to learn how to do rapid surveys.

The facilitator should have experience in surveys and computers. He or she need not be an expert trainer. The Facilitator's guide includes session plans and provides charts that can be photocopied for handouts or transparencies.

Adaptations

All of the tools, checklists, guidelines, computer programmes, and other material included in this module are illustrative. It is expected that they will need to be revised to fit local conditions, and you are encouraged to do so.

Adaptations encouraged

You may want to change the wording of questions in the prototype questionnaires; you may want to eliminate certain questions and add others; you may want to redesign the format, design your own instrument, use another computer programme (*SPSS* or *dBase*), draw your sample from your computerised household registration database, create other kinds of graphs, and so on. We want to make it very clear that this is encouraged. These tools are not presented as "standards" that should be used in all PHC programmes. Rather, they are designed to encourage and help managers to carry out community surveys by providing them with a starting point, general tools, and guidelines that they can adapt to fit their own situations.

Don't forget to include the target communities and your CHWs in the design, execution and analysis of the survey. There are several advantages to this:

- It increases awareness and knowledge about PHC in general;
- It increases awareness in the communities of their own health problems and needs; and
- It increases "ownership" of the survey, its results and recommendations.

Community representatives can also help you to phrase questions in local terms so that they are better understood. They can help you to identify common health problems to be included in your survey, help you to find eligible respondents, and help you to understand responses and hidden meanings.

The elderly need to be targeted with health messages so that their authority in the family helps support good health practices

Photo by Jean-Luc Ray for AKF

Rapid survey procedures

The steps in the design and conduct of rapid surveys are no different from those of larger, more traditional sample surveys. If a team is going to design the survey, field experience has shown that it may be faster to divide the tasks and have one group develop the data collection instrument (Steps 1-4) and another the sampling (Steps 5-6).

Step 1: Specify the objectives of the rapid survey
Step 2: Decide what indicators to use
Step 3: Develop an outline for the survey report
Step 4: Design the data collection instruments
Step 5: Develop the sampling procedures
Step 6: Schedule the survey
Step 7: Collect the data
Step 8: Enter, verify and tabulate the data
Step 9: Analyse, interpret and report the findings
Step 10: Develop an action plan

Step 1: Specify the objectives of the rapid survey

If you have gone through Module 1, you may already have determined the information you want about the health needs and PHC coverage of your target groups.

Module 1 asked you to summarise your programme's major health goals, target groups, the PHC services offered to each target group, and indicators of coverage for each PHC service. It also suggested that you include additional target groups or health services if you think your programme should be expanded. The point of going through these steps was to determine if you have enough information about coverage, and if not, the information that you need to collect.

A summary worksheet from Module 1 is reproduced below.

If you haven't already filled out a worksheet like this, it would be helpful to do so now. This should give you a summary of the coverage information you need to collect.

Target group (yrs)	Health services	Coverage indicators
Children < 2, < 5	Child immunization	% < 24 mos. fully immunized
	Growth monitoring	% < 5 yrs. weighed
	Oral rehydration	% using ORT last episode diarrhoea
	Nutrition education	% < 2 yrs low weight-for-age
Married women 15-49	Antenatal care & TT	% pregnant women enrolled in ANC
	Family planning	No. new acceptors

Summary worksheet from Module 1

Now you can be specific and state the objectives of your rapid survey. The following worksheet can help you to summarise them.

First, you need to identify the user or users of the information. This is critical, since each could have different interests. If there are multiple users (yourself, a donor, an evaluation team), you should find out exactly what each one wants.

You also need to clarify precisely why this information is needed. The two most common purposes are to assess health needs and to evaluate programme performance. These are quite different, and although Module 2 can address both, the design and analysis of your rapid survey will be slightly different depending on which purpose you have. For one thing, if you are interested in assessing **performance,** you would limit the survey to current PHC services. But if you want to assess **needs**, you would not.

WORKSHEET FOR SPECIFYING RAPID SURVEY OBJECTIVES

User
___Manager
___Board
___Donor
___Community
___Other:_____

Target groups
___Children
___Women
___Other:_____

Purpose
___Planning
___Health status/needs
___Service status/needs
___Evaluation
___Service coverage/effects
___Health status/impact

Start Date:_____

PHC service(s)
_____
_____
_____
_____
_____

Geographic area:
_____

End Date: _____

Next, you should decide which target population and which PHC component the user(s) wants to study. The summary worksheet from Module 1 is a place to start. But you may have listed several target groups and services. Do you want to study all of them or just one? You can study as many as you want, but keep in mind that you will have to draw a separate sample for each target group that you include. So if you decide to study ANC, immunization, and sanitation, you will have to do three rapid surveys: one of pregnant women, one of children 12-23 months, and one of households. These can all be done at one time, but each will require 30 clusters of seven respondents. In many cases, the clusters and respondents can be the same for each survey. So if you plan to do several rapid surveys, it would be economical to combine them.

This module describes how to do this in a relatively simple way, so do not be intimidated. If you need information on several target groups and services, then note who and what they are in the worksheet.

You also need to specify the geographic scope of the survey. Will it cover the entire catchment area or a part of it? Keep in mind that the survey results will only represent

the area covered. If you decide to limit the survey to five districts because they are close by, then the outlying areas will not be represented in the study. That means you cannot apply the results to the entire project, only to the five districts.

Lastly, it is helpful to determine immediately when the study will start and especially when the results will be needed. It does no good to provide rapid survey results after the deadline for making key decisions.

Measuring effects and impact

Module 2 can be used to measure:

Programme *effects* on target groups

- Knowledge
- Attitudes/motivation
- Behaviour/coverage

Programme *impact* on target groups

- Morbidity
- Mortality
- Disability
- Fertility

You can use Module 2 to attribute changes in knowledge, attitude, and practice (KAP) to your programme. To do this you should: conduct a baseline survey of the current KAP of your target groups; carry out your programme for a specified period, e.g., 1-2 years; and conduct a follow-up survey sometime later.

Use the computer program in Appendix G.2 (Hypothesis testing - two samples of equal size) to determine the sample sizes needed for a "before-after" comparison. Estimate the current level of your principal effect or impact measure, such as coverage. Enter this in the line that reads "Est. proportion with the attribute FIRST (or BEFORE) population." Decide the amount of change you wish to detect and enter that in the next line "Est. the proportion with the attribute in the SECOND (or AFTER) population." For example, if you want to measure changes in infant mortality, you would enter the

current figure (say .08) as the BEFORE proportion and .06 as the AFTER proportion. Thus you will be able to detect a drop in the IMR from 80/1,000 to 60/1,000. Enter the other information requested, and the programme will compute the sample sizes you will need for the baseline survey and the follow-up survey.

Your evaluation will be even better if you include a control area which is similar to your project area but which does not get PHC services. Conduct baseline and follow-up surveys there at the same time. The design of this kind of study is summarised below, in which O indicates an observation (baseline and follow-up surveys) and X indicates the PHC programme intervention.

	Study design		
	Baseline	Intervention	Follow-up
Programme area	O_1	X	O_2
Control area	O_1		O_2

Note: Impact evaluations are easy to conceptualise, but difficult to carry out. Seek professional advice before you start.

Step 2: Decide what indicators to use[1]

This module focuses on **outcome** indicators, especially **coverage**.

These are the best indicators for assessing health **needs** and the **effects** of the PHC programme on health.

Other modules deal with **input** and **process** indicators: the performance of health workers (Module 3), short-term assessment of PHC activities (Module 5), the quality of PHC services (Module 6), and the effectiveness and efficiency of PHC management (Module 7). You can include any of these indicators in a rapid survey, of course, as long as they are community-based. Rapid surveys gather information about populations, not about health centres or staff.

Thus, the manager (or team) needs to decide which **outcome** indicators to examine. In most cases these will deal with **coverage.** In general, coverage indicators tell you the proportion of the target population that is protected by

1 See Module 1 for a discussion of types of indicators and Module 5 for lists of indicators.

your programme. Examples of coverage indicators (taken from Module 1) are shown below.

Examples of PHC coverage indicators

Service	Coverage indicator
Antenatal care	% made 3 or more ANC visits
Tetanus toxoid immunization	% received TT immunization
Safe delivery	% delivered by trained attendant
Family planning	% current users of FP services
Breast feeding	% breast feeding to 18 months
Growth monitoring	% 2 yrs weighed last quarter
Child immunization	% 12-23 mos. fully immunized
Acute respiratory infection	% ARI cases treated
Diarrhoea disease control	No. children < 5 yrs with diarrhoea/1,000
Oral rehydration therapy	% used ORT last episode diarrhoea
Water, sanitation, hygiene	% households with safe water/latrine
Vitamin A	% 6-12 mo. received Vit. A
Tuberculosis	% cases followed to cure
Malaria	% cases treated
Sexually transmitted diseases/HIV	% target group infected/treated
Disability	% 5 yrs disabled
Health education at home	% schools receiving or participating in health education activities
Drug supply	% communities with adequate supplies
Accidents and injuries	No. accidents + injuries/1,000 population
Chronic, non-communicable diseases	% target group with hypertension, chronic heart disease, anaemia, diabetes
Treatment of minor ailments	% episodes treated
Nutrition education	% low weight-for-age

You may also be interested in finding out what people **know** about a service or health problem, the **skills** they have in diagnosing and treating health problems, or people's **opinions** about your health workers and programme. You may also want to assess health **status** and the **impact** of the programme on health. These are all legitimate interests and can be included in a rapid survey.

Module 5 includes lists of recommended indicators for each PHC and management service. It also includes separate lists of morbidity and mortality indicators. These lists can be helpful guides in designing a questionnaire.

Make a list of the key indicators you want to measure. It shouldn't be a long list. Start with the desired outcome. Select one or two indicators for that. Then work backwards

(as described in the "If-then" sequence and Worksheet A in Module 1) to determine what needs to happen for this outcome to be achieved. Select one or more key indicators for that outcome, and so on.

This is a good time to involve the staff, community representatives, and others who are part of the programme. They can articulate the perspectives of the community, and they often have valuable insights as to what is important, and feasible, to measure.

In addition to performance indicators, three other types of data are usually needed in a rapid survey:

- **Descriptors**: respondent name, village name, address of household, etc;
- **Characteristics of respondent**: age, sex, parity, education, literacy, income, caste, race, ethnic group, etc; and
- **Survey management data**: interviewer name, supervisor, date of interview, etc.

The descriptors and management data are needed to identify the respondent and, in particular, to make a call-back visit and to correct possible errors.

Characteristics of group surveyed

The characteristics are used to describe the surveyed group. If several surveys are done, then the characteristics can be useful for making comparisons between one kind of respondent and another. The manager may want, for example, to know if there is any difference between the health behaviour of people in one district and another, or between one ethnic group and another. Separate surveys would be required to do this, of course. Remember that each rapid survey is designed only to provide information about a **single** population.

Step 3: Develop an outline for the survey report

Most researchers don't do this, but it will be very helpful at this point to outline a report so that you and your colleagues know what information will be produced. That will make construction of the questionnaire, data analysis, and especially interpretation much easier. If this is not done, you may get a lot of information that you don't want, such

as 10 pages of tables describing the characteristics of the survey population. Step 10 includes a generic outline for getting started.

This is also a good time to check with outside users to make sure that the report will meet their expectations.

Most managers aren't interested in background, methodology, qualifications, descriptions of the survey process, descriptions of the survey population, etc. They want results. So write your report outline to suit the user's needs. The other information should be presented, but not necessarily first. Many managers want the "bottom line" first and will ask about the sample, data collection procedures, and other methodological issues later.

Managers want results

Construct a list of "dummy tables" (blank tables -- without data) and identify the kinds of frequency distributions and cross-tabulations the user(s) wants. Don't forget to include graphs (pie charts, histograms). Appendix I includes an illustrative list of frequency distributions and cross-tabulations. This type of list will be needed so that the analyst knows which tables and graphs to produce. Obviously, it can be modified later, but it can help your planning to start it now.

List questions and issues that you think should be addressed in the report. Typical questions are:

- What percentage of the target group is covered?
- What are the major reasons some people aren't covered?
- Where do people go for services?
- What are the major reasons they don't utilise available services?

Finally, make an outline, and set a page limit. Put more emphasis on visual presentation through handouts, transparencies, slides, etc. These attract managers' attention more than written text. Remember KISS - "Keep It Straightforward and Simple".

Step 4: Design the data collection instruments

The following checklist summarises your main options and the substeps that you will need to follow.

Checklist for designing questionnaires

Type survey instrument:

- ___ Questionnaire
- ___ Register
- ___ Other

Target group(s):

- ___ Children
- ___ Women
- ___ Other

Types of questions/fields:

- ___ Yes/No
- ___ Multiple choice
- ___ Open-ended
- ___ Dates
- ___ Ranges (e.g., 1-4 years)

Coding:

- ___ Uncoded
- ___ Pre-coded
- ___ Numerical
- ___ Alphabetical
- ___ NA: Not applicable
- ___ DK: Don't know
- ___ NR: No response

Questionnaire or register

First you need to decide if you want to use a **questionnaire** or a "**cluster register**."

Questionnaires usually provide more information, including instructions for the interviewer, the exact phrasing of each question, and pre-coded responses. But you have to have one questionnaire for each of the 210 respondents. That is, a minimum of 210 pages, 420 if its a two-page questionnaire.

Cluster registers allow the interviewer to record the responses of all seven or eight respondents from one cluster on the same page. This means you will need only 30 pages, one for each cluster.

But the number of items ("questions") is limited by the size of the paper. Instructions and question phrasing have to be provided elsewhere, or learned beforehand. Excerpts of both are shown on the next pages.

Exhibit 1: Excerpt from rapid survey questionnaire on antenatal care, safe delivery, and postnatal care

Complete for all women currently living in the household who have had a pregnancy outcome during the past 24 months. The outcome may be a live birth, stillbirth, or abortion. If the woman has had more than one pregnancy, ask about the most recent pregnancy outcome.

IDENTIFICATION

1. Study no ____ 2. Province no. ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no. ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. How many live births have you had so far? Number of live births: ____
   ____(99) DK/NR
10. Did you receive antenatal care during your last pregnancy?
    ____(1) Yes ____(0) No, go to Q14 ____(9) DK/NR, go to Q14
11. How many times did you get antenatal care? _____ times
    (If DK/NR, enter 99)
12. How many months had you been pregnant before you got antenatal care?
    ____(1) 3 mo. (first trimester)
    ____(2) 4-6 mo. (second trimester)
    ____(3) 7-9 mo. (third trimester)
    ____(9) DK/NR
13. Which is the principal place you received antenatal care?
    ____(1) Hospital
    ____(2) Health centre/clinic
    ____(3) Private hospital/clinic
    ____(4) Local TBA/healer
    ____(5) Other site of care specify: _____
    ____(9) DK/NR
14. Did anyone advise you to get antenatal care? ____ (0) No
    Yes:
    ____(1) Physician, nurse ____(5) Mother, relative
    ____(2) Community nurse/midwife ____(6) Friend, neighbour
    ____(3) CHW/volunteer ____(7) Other: _____
    ____(4) Traditional birth attendant ____(9) DK/NR
15. Did you receive a tetanus vaccination during your last pregnancy?
    ____(1) Yes ____(0) No, go to Q17 ____(9) DK/NR, go to Q17
16. How many vaccinations did you receive?
    ____(1) One ____(2) Two ____(3) Three or more ____(9)DK/NR, go to Q17

Questionnaire continues for four months

Exhibit 2: Excerpt from cluster form on antenatal care, safe delivery and postnatal care

(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer	N A M E									
(5) Respondent No.		1	2	3	4	5	6	7	8	9	10
(6) Date / /											
(7) Age											
(8) Sex											
(9) How many live births have you had so far?											
(10) Did you receive antenatal care during your last pregnancy?											
(11) How many times did you get antenatal care?											
(12) How many months had you been pregnant before you got antenatal care?											
(13) Which is the principal place you received antenatal care?											
(14) Did anyone advise you to get antenatal care?											
(15) Did you receive a tetanus vaccination during your last pregnancy?											
(16) How many vaccinations did you receive?											
(17) During your pregnancy, did you take iron pills to keep you strong?											
(18) What was the outcome of your most recent pregnancy?											
(19) Where did the delivery take place?											
(20) Who was the main person attending the delivery?											
(21) What is the name of the local CHW?											
(22) Has the CHW visited/contacted you during the last three months?											

Key (12)

1) three mo. (first trimester)
2) 4-6 mo. (second trimester)
3) 7-9 mo. (third trimester)
9) DK/NR

(18)

1) live birth
2) stillbirth
3) abortion/miscarriage
4) DK/NR

For larger clusters, 15 or more respondents, you may want to switch the rows and columns. That is, put the questions in the top row and the respondents in the left column. Here's a partial example. See Appendix I for an example of how to set up a register like this on a spreadsheet so that all 210 respondents can be recorded and analysed on one (long) page or spreadsheet.

Respondent no. name house	Age	Rec'd ANC	No. visits	Source of service			Rec'd TT	No. doses	Pregnancy outcome	
				Hosp	Hlth. Cntr.	TBA			Live	Still
1										
2										
3										
4										
5										
6										
7										
8										

One target group or several

Many managers will want to include several topics and target groups in the same survey. This will not be a problem as far as instrument design is concerned. Generally, you have three choices. First, you could use the sample Community assessment of PHC questionnaire in Appendix C. This instrument includes 4-5 key questions on each of several PHC topics:

Availability of health care
Antenatal care and childbirth
Family planning/child spacing
Breast feeding and growth monitoring
Immunization
Diarrhoea and ORT
Water and environmental sanitation
Malaria
Child disabilities
Tuberculosis
Sexually-transmitted diseases

Second, you could combine several questionnaires from Appendix C into a single instrument. Third, you could pick out questions you are interested in from other questionnaires and construct your own instrument.

However, be aware that combined questionnaires usually require information about different target groups. If that is the case, you will have to draw separate samples for each target group. This will be explained more fully in the discussion of the sampling step.

Multi-target group surveys

When doing a multi-target group survey, it is best to prepare the questionnaire in modular form. Combine all of the questions for one target group and put them in one section. Develop a separate section for each target group. Be sure to include descriptor information in each module so you can identify the respondent.

Design the data collection instrument(s)

The sample instruments in Appendices C (questionnaires) and D (cluster registers) can be photocopied and used as is. They can also be revised, new ones can be compiled, etc. The questions should be designed to collect the indicators you identified in Step 2.

The sample instruments show how most questions can be structured in a "Yes/No," precoded format. This is important for those questions that you want to analyse statistically. When multiple choice and continuous variable questions are needed, make sure they can be recoded later to be analysed as "yes"/"no" (dichotomous) questions. Some examples:

Multiple choice	→	**Recoded as dichotomous (Yes/No)**
Received care from :		Received care from:
1 Provincial hospital	→	1 Provincial hospital
2 District hospital		2 Other
3 Health centre		
5 Traditional birth att.		
6 Private clinic		
7 Other (name: _____)		
9 Don't know/No response	→	9 Don't know/No response

You can repeat this procedure for each response. That is, you can recode the question as District vs. Other; Health centre vs. Other, and so forth. You can recode the question for a different age group: under 25 years vs. 25 years and over.

Continuous variables can be recoded as shown in the following example.

Continuous ⟶	**Recoded as dichotomous (Yes/No)**
Age of respondent___ yrs. (Enter completed years or 99 if DK/NR)	Age of respondent 1 ___ Under 30 years 2 ___ 30 years and over 9 ___ Don't know/no response

Most rapid survey questions allow only one response per question. If you include questions that allow multiple responses, you can do one of two things. First, you can ask the respondent for the **most important** (principal, major, etc.) single response, and code only this response. For example:

Q.8. Where did you **first** hear about ORT? (Check the first source mentioned)

(1) _____ Friend or relative
(2) _____ CHW
(3) _____ Doctor/nurse
(4) _____ Television
(5) _____ Radio

Or, you can record each response as a separate question.

Where did you hear about ORT? (List all mentioned)

Q.8 _____ Friend or relative (Y/N)
Q.9 _____ CHW (Y/N)
Q.10 _____ Doctor/nurse (Y/N)
Q.11 _____ Television (Y/N)
Q.12 _____ Radio (Y/N)

Appendix B includes some other suggestions for designing questionnaires.

Pre-test the instrument

If the questionnaire has to be translated into a local language, this should be done after it is drafted, but **before** it is pre-tested. Do not leave it to each interviewer to do his or her own translation. This can cause confusion and misinterpretation. It is best to translate the instrument into the local language and then have someone else translate it back to make sure the questions are clear.

When the instrument has been drafted, it should be pre-tested with a small sample (five to ten women) to make sure that the questions are understandable, the pre-coded responses are realistic, and the sequence of questions is logical. Then the instrument should be revised as appropriate.

Involve interviewers in pre-testing

Ideally, the interviewers should be involved in the pre-testing, perhaps as part of their training. Their feedback can be very helpful in making revisions. It is also important that they follow the sampling procedures for selecting households and respondents. They may have questions and suggestions about those procedures, as well.

Pre-testing is very important and should be done carefully with the **intended target group** as respondents. Pre-tests with office colleagues or PHC staff are of very limited value, since they do not represent the target groups. A worksheet should be devised for summarising feedback. Or notes could be written on the instruments to identify problems with comprehension (interviewer and respondent), coding, and logical sequence.

Estimate the data collection requirements

The pre-tests should give you an idea of the amount of time it will take to find a respondent, and complete an interview. With this information you can estimate the number of interviewers you will need and the number of days it will take to complete data collection.

Usually you will want a two-person team to complete at least one cluster per day, seven or eight interviews. You will also need several supervisors, the number of which will depend on the number of interviewer teams you have and

the distance the supervisors will need to travel between clusters.

If the questionnaire is short, the respondents are easy to find, and distances between clusters are short, then a team should be able to complete two or three clusters each day. Use the following formula to make a quick estimate:

$$\frac{30 \text{ clusters}}{\text{complete } 2 \text{ clusters/day}} = 15 \text{ "team days"}$$

If you have five teams (ten persons) the data collection could be completed in three days. Or three teams would require five days. Fifteen teams could finish in one day!

Develop a code book

This can be very useful, especially when the questionnaire is long or in modular form. Code books can be important during analysis, especially if tables are produced with codes instead of labels.

Code books generally include the following: *variable number, name, label, value codes, and value labels.* An example is included in Appendix B.

Step 5: Develop the sampling procedures

Target groups, attributes and sample sizes

These instructions are for **manually** drawing a cluster sample of 30 clusters with seven respondents each.[1]

You may skip this step if:

- *You have a complete household listing of your survey area so that you can draw a random sample. See Appendix G*
- *You plan to use a computer to draw your sample. See Appendix F which describes how to use a spreadsheet*

1 This module emphasizes cluster samples. If you can draw a simple random sample, you are encouraged to do so. See Appendix G for instructions. Stratified samples can be even more effective, but they are also more complex. You should seek expert advice for this kind of sample. Stratified samples are not described in this module.

program (Cluster Identification Worksheet) to draw a cluster sample

First we will describe the basic procedures for drawing a sample of 30 **clusters**. Then we will discuss some variations of those procedures that you may have to apply. The selection of the seven **respondents** from each cluster is described in Step 7.

Determine the size of the clusters

Although most people think of clusters as natural groupings of people (villages, census tracts, urban blocks), clusters have a different meaning in sampling. In cluster sampling you will divide your total survey population into 30 **equal** groups. Each of those groups will be a "cluster." Then you will identify seven respondents in each of those clusters. This second step will be discussed in Step 7: Collect the data.

You need to know the total population of your survey population to determine the size of each cluster. Simply divide the total population by 30. For example, if your catchment area has 45,000 people, each cluster will include 1,500 people (45,000/30 = 1,500).

It doesn't matter if there are fewer or more than 30 villages or districts, since you will define the clusters by dividing the total population into 30 groups of equal size.

Population size estimates

It also doesn't matter if the population is scattered over a large area. People can even be on islands or in remote areas and still be included in the sample. If you want your sample to represent all of your target population, then do not leave any "natural clusters" out. However, if it is not feasible to include some areas, then leave them out. BUT, remember, your sample will not represent those who are left out. If you limit your sample to people within one kilometre of a health centre, for example, then that is all it represents.

You must have population size estimates of the sub-units of your sample. List these sub-units, villages, census tracts, voting precincts, towns, in Columns A and B of a Cluster identification worksheet(see Exhibit 3).

Record the population of each sub-unit in Column C. This figure does not have to be exact. The relative size of each

Exhibit 3: Cluster Identification Worksheet — Cluster.WQ1

Number of Clusters		30	(Enter Number Desired)
Sample Population Size		29,481	(Enter total from Column C)
Cluster Size (sampling interval)		983	
Random Start Number		491	
INPUT DATA			OUTPUT DATA

Enter	Preset	Enter	Computer	Preset	Computer	Sample Sites
A	B	C	D	E	F	G
Community Name	Community Number	Estimated Population	Cumulative Population	Selected Cluster	Start Number	Community Name
Pagai	1	548	548	1	491	Pagai
Santai	2	730	1,278	2	1,474	Serina
Serina	3	686	1,964	3	2,457	Fanta
Mulrose	4	280	2,244	4	3,440	Fanta
Fanta	5	1,256	3,500	5	4,423	Rostan
Bagia	6	684	4,184	6	5,406	Mt. Sil
Rostan	7	919	5,103	7	6,389	Mt. Sil
Mt. Sil	8	1,374	6,477	8	7,372	Livton
Livton	9	1,133	7,610	9	8,355	Pulau
Farry	10	544	8,154	10	9,338	Pingra
Tunis	11	193	8,347	11	10,321	Pingra
Pulau	12	375	8,722	12	11,304	Pingra
Sasarota	13	333	9,055	13	12,287	Pingra
Pingra	14	3,504	12,559	14	13,270	Srivish
Kanata	15	336	12,895	15	14,253	Srivish
Sirvish	16	2,115	15,010	16	15,236	Balding
Balding	17	258	15,268	17	16,219	Manalopa
Rescuut	18	678	15,946	18	17,202	Manalooa
Krista	19	207	16,153	19	18,185	Masraf
Manalopa	20	1,162	17,315	20	19,168	Abrama
Garafa	21	408	17,723	21	20,151	Singri
Spiltar	22	455	18,178	22	21,134	Chitoma
Masraf	23	978	19,156	23	22,117	St. Kitt
Abrama	24	335	19,491	24	23,100	Nevis
Junagadh	25	541	20,032	25	24,083	Mt. Carans
Singri	26	725	20,757	26	25,066	Charga
Kalarata	27	355	21,112	27	26,049	Fosterville
Ichitoma	28	498	21,610	28	27,032	Maryoak
Chaplar	29	347	21,957	29	28,015	Slipfern
St. Kitt	30	186	22,143	30	28,998	Punjak
Nevis	31	1,341	23,484			
Mt. Carans	32	670	24,154			
Betul	33	321	24,475			
Charga	34	672	25,147			
Rio Negra	35	705	25,852			
Fostervill	36	444	26,296			
Maryoak	37	781	27,077			
Slipfern	38	959	28,036			
Tinggi	39	305	28,341			
Punjak	40	763	28,104			
Capital	41	377	29,481			
TOTAL			29,481		28,998	

To add more rows see Appendix I.2, "Adjusting the Spreadsheet."

Press <CTRL + W> to widen columns.

sub-units is what is important. Thus, you can even use data which are a few years old. In Column D, add the cumulative population. For example, add the population of the second district (730) to that of the first (548) to get the cumulative population of the first two districts (1,278). Add the population of the third district (686) to that total (1,278) to get the next cumulative figure (1,964).

The total size of this population is 29,481. If your addition is correct, this should be the figure you end up with at the bottom of Columns C and D. Divide that total by the number of clusters (30) to get the cluster size (both numbers are entered at the top of the form).

29,481/30 = 982.7, rounded off to 983

This figure is also called the sampling interval, which means the interval between one cluster and the next.

You are now going to select randomly a number in the first cluster. That will be a number between 1 and 983. Theoretically this number represents the first person in the cluster that you will interview.

Use the random number table in Appendix G or take a three-digit number from any currency note. In our example, the random number turned out to be 491. Enter this at the top of the form. This is the "start number" for your first cluster. Now add 983 to that number to get the start number of the second cluster (491+983 = 1,474). Add 983 to that total to get the third start number (2,456), and so on. Repeat this process until you have 30 start numbers. These are listed in the table in Column F.

The last step

The last step is to identify the communities where those start numbers are located. Compare the first number (491) with the cumulative figures. Find the first number in Column D that is greater than 491. This is 548 (Pagai). Thus, the first start number is in Pagai. Put a 1 in Column A to identify Pagai as the location of the start number for the first cluster or list the names of the selected sites in Column G. Do the same thing with the second start number in Column E (1,474). The first number in Column D that is greater than 1,474 is 1,964 (Serina). Put a 2 in Column E to identify Serina or write the name in Column G. Continue until you

have identified all 30 communities where your start numbers are located.

Look at the data collection estimate

Communities that have large populations (such as #14 and #16, Pingra and Srivish) are likely to have more than one start number. This is because their populations are two or three times larger than the cluster size (983). Therefore, two or three of your clusters may be in one community.

Now that you know where you have to go, you should look at the data collection estimate that you made at the end of Step 4. Will travel time to the clusters increase or decrease the amount of time it will take to collect the data? Do you need to revise your estimates? Do not draw another sample to make data collection easier!

This procedure may seem complicated at first, but try it a few times and you will quickly get the hang of it. You can also run the computerized version of this worksheet, which is even easier. See Appendix F.

Variations

- **If your sample population is very large**, say 300,000, you can still follow this procedure by doing it twice. First, list the large sub-units, districts for example. Follow this same procedure to identify the districts where the 30 clusters are located. Then list the smaller sub-units in each of those districts. Make the computations again to find the village where each start number occurs. As you will learn, it is better to start with a large number of sub-units. If you only have 30-35 sub-units, almost all will be selected and you will have to do a lot of listing for the next selection. It would be better to start with 100-200 sub-units.

- **If your population is very small**, say 15,000 or less, you should make sure that there will be enough respondents in each cluster to interview. For example, WHO estimates that the target group for EPI surveys of children 12-23 months of age, averages three percent of the population in developing countries. Thus, you would need clusters of at least 250 people to find seven children in this age group. To take account of those who are away, ineligible, etc., WHO suggests doubling that number to

500. For 30 clusters, therefore, you would need a minimum of 15,000 people to do a survey of that target group.

- **If there are fewer than 30 "natural clusters," then what?** For example, what should you do if there are only 24 villages, or 13 districts. Remember that these administrative units are not the sampling clusters. Follow the same procedures described above to fill in the Cluster identification worksheet (Exhibit 3). You will simply select more clusters per administrative unit. Try this with Exhibit 3. Take the first 20 communities listed and follow the same procedures. The total population will be 17,315 and the cluster size (sampling interval) will be 577. After you draw a random start number you will add 577 to it to select the first cluster; then add 577 again to select the second, and so on. You will still get 30 clusters and 30 start numbers, but there will be several communities that will have more than one cluster. If you can, it would be best to divide your communities into smaller administrative units first, say into sub-communities. In this way you can avoid having several sampling clusters in the same community.
- **If you are looking for a rare event,** say an infant death or a pregnant woman who received two TT shots, then you may have to have much larger clusters in order to find them. To estimate the cluster size for rare events, you need to know: the percentage of the target group in the sample population (e.g., women who were pregnant last year); and the percentage of that target group that has the **attribute** you are looking for (e.g., two TT shots).

- **An attribute is similar to an outcome indicator.** For each PHC component there are usually one to three important attributes that a manager is likely to want to measure. These would have been identified in Step 2 and would be included in the data collection instrument. Some examples are listed below as well as included in the next worksheet:

Example: Let us assume that the survey is of antenatal care (ANC) and that the target group consists of women who

had a pregnancy outcome within the past 12 months. Local figures may show that approximately 4 percent of the total population is pregnant in a year. The survey wants to determine how many of those women: 1) received at least one tetanus toxoid immunization during their pregnancy; and, 2) were delivered by a trained attendant. The rough estimates, which might be based on service records or prior experience, show that 33 percent probably received TT, and 15 percent were delivered by a trained attendant.

For the first indicator the survey needs to be able to find seven women in each cluster who were pregnant in the last 12 months. That is estimated as 4 percent of the population. Thus, the minimal cluster and sample size would be:

$$\frac{7 \ respondents}{.04} = 175 \text{ cluster size} * 30 \text{ clusters}$$
$$= 5{,}250 \text{ population}$$

However, this is a minimum size. You would probably want to double it to make sure that there would be at least 15 people in each cluster from which to draw. Thus, the clusters should be at least 350 population each.

The second indicator requires finding seven women in each cluster who were pregnant **and** were delivered by a trained attendant. Only 15 percent of the women who were pregnant were delivered by a trained attendant. Thus, the minimal cluster size would be

$$\frac{7 \ respondents}{.04 * .15} = 1{,}167 \text{ cluster size} * 30 \text{ clusters}$$
$$= 35{,}000 \text{ population}$$

If doubled to be safe, that would require clusters of 2,334 and a total sample population of 70,000.

See Appendix G for a computer program (Target.WK1) that will help you make the estimates of various target groups.

Increasing the number of clusters and the number of respondents per cluster may help you get more accurate results. Of course, that will also increase the cost.

WORKSHEET FOR IDENTIFYING ATTRIBUTES AND ESTIMATES

PHC component	Target population	Percent of total pop.	Minimum cluster size No. eligible in cluster		Size of sample population (# respondents * # clusters)	
			7	15	7 * 30	15 * 30
Antenatal	Pregnant last 12 months	4%	175	375	5,250	11,250
	Delivered by trained attend.	15%	1,167	2,334	35,000	70,000
Family plan.	Married women 15-44	20%	35	75	1,050	2,250
Growth mon.	Child < 2	8%	88	188	2,640	5,640
ORT	Child < 5	14%	50	107	1,050	3,210
Immunisation	Child 12-23 mo.	3%	233	500	6,990	15,000

Whether it is worth doing depends partly on how homogeneous the clusters are. **Homogeneous** means that all of the respondents in a cluster are the same with respect to the attribute you are studying. As mentioned previously, this is often the case in immunization programmes. In any given cluster either most of the children have been immunized or most have not been. **Heterogeneous** is the opposite. It means that the respondents are different. For example, some children would be fully immunized, some would have had one shot, others two, others three, and some none at all.

The rule of thumb is: if the clusters are **homogeneous**, reduce sampling error by increasing the number of **clusters** (since all of the respondents are similar, increasing the number of respondents will not help); and if the clusters are **heterogeneous**, reduce sampling error by increasing the number of **respondents** per cluster.

The number of clusters should not be reduced below 30. This is the minimum number that is required to produce relatively valid results. Do not succumb to the temptation to double the number of respondents in order to cut the

clusters in half. You can increase the number of clusters, but there must be at least 30.

Generally, it is easier and less costly to increase the number of respondents in a cluster, since the interviewers are already there, than to add more clusters, which means travelling to another site. If you can reduce the sampling error from plus or minus 10 percent to plus or minus 6 percent by increasing the number of respondents in a cluster, it may be well worth the extra cost.

See Appendix G for a computer program that can help you estimate the required sizes for clusters and respondents.

Multiple target groups

In Step 4 we noted that many managers will want to include several PHC topics and target groups in the rapid survey. If the target groups for all of the topics are the same, then there will be no effect on the sample. For example, if the survey covers growth monitoring, immunization, and use of ORT, and the target group for all three services is children under two years old, then only one sample needs to be drawn.

However, if the target group for immunization is children 12-23 months of age, then you will not be able to get information on those under 12 months of age for the immunization portion of your survey. Thus, you will need to contact an additional number of people to find seven eligible respondents.

The previous worksheet can help you to determine the cluster sizes you will need for each target group. From this you can also estimate the number of households you will probably have to visit to find your quotas for each part of the survey.

"For the same overall total sample size, however, a survey in which a large number of clusters is selected and a few households visited in each, will give more precise results than a survey in which a larger number of households is visited in each of a smaller number of clusters."[1]

A rough rule of thumb is: find the target group in your survey with the lowest percentage of the target population,

and calculate the minimal cluster size for that group. Use that as the minimal size for your survey. Then examine the ratios between the size of that cluster and the size of the clusters needed for your other target groups. That ratio will tell you roughly how many more households you must contact to complete the survey. For example

PHC service	Target group	Minimum cluster size
ORT	Children < 5 years	107
Immunization	Children 12-23 months	500
		Ratio 500:107 = 4.7

You will have to contact about five times as many households to complete your immunization questions as your ORT questions. If you get all your ORT data from the first 10 households contacted, you will probably have to contact 40 more to complete the immunization questions.[1]

Again, if you want to find only 20-30 people with the attribute, you will only have to find one or two per cluster, not all seven. Again, see the TARGET program in Appendix G for help in making these estimates.

The last step (selecting the households) will be described in Step 7.

Sampling for mortality estimates

If you want to measure infant, child, or maternal mortality **rates** or **ratios**, you will have to modify these procedures. As mentioned earlier, you will probably need samples of 2,000 eligible respondents for an infant mortality survey and 7,000 for child and maternal mortality surveys. You can conduct a mortality survey at the same time as a conventional cluster survey, but you will have to interview all eligible women in each household, and you will have to visit

7 Bennett, et al. op cit.

1 This assumes that you follow the EPI "next nearest front door" approach. If you have a complete household listing, you will be able to identify seven eligible respondents for each part of your survey from this listing.

an additional number of households to find the 2,000 to 7,000 eligible women. Use the SIZE.WK1 worksheet in Appendix G to estimate the size of the sample you will need. Use the Vital Events questionnaire in Appendix C to collect your mortality data.

A recent UNICEF publication describes how to conduct **childhood** mortality surveys.[1] This handbook contains complete information for formulating questionnaires, drawing samples, collecting and analysing data, and preparing reports. One of the questionnaires from this handbook is included in Appendix C, Childhood Mortality. The instructions for drawing a sample for this questionnaire are in Appendix G. The calculation and analysis procedures for **direct** estimations are straightforward, but the **indirect** estimation techniques described in the handbook are complicated. You should call on a trained demographer if you wish to make indirect estimates.

To measure **maternal** mortality you will need to find even more eligible respondents. One approach, called the sisterhood method,[2] involves interviewing all adults in the household — or even in the village or block — to identify everyone who had an adult sister who had been pregnant. This method produces indirect estimates of the probability of dying. It is relatively simple, and since all adults are interviewed, you may find enough eligible respondents in 1,000 to 2,000 households. But, this is still a large number of households to contact. In addition, the method is controversial.[3]

Again, we recommend that you get expert advice before designing a mortality survey.

1 David, P. H., et al. *Measuring childhood mortality: A guide for simple surveys.* Unicef, Regional Office of the Middle East and North Africa, Amman, Jordan, 1990.

2 Graham, W. et. al. Estimating maternal mortality; The sisterhood method. *Studies in Family Planning,* Vol. 20, No. 3, May/June, 1989, pp. 125-135.

3 Trussell, J. & Rodriguez, G. A note on the sisterhood estimator of maternal mortality. *Studies in Family Planning,* Volume 21, Number 6, November/December, 1990, pp 344-346.

Step 6: Schedule the survey

The three most important things to do at this point are: finalise the data collection schedule; prepare the survey management forms; and recruit and train the interviewers.

At the end of Step 5 you made some estimates of the "data collection requirements," meaning the number of interviewers and supervisors you would need and the number of days required to collect the data. You should finalise the data collection schedule now and prepare an overall schedule for all other aspects of the study. This includes the recruitment and training of data collection staff; the production of the questionnaires; logistical arrangements to get the interviewers to the clusters; procedures for checking and verifying the completed questionnaires, data entry, and analysis; and report preparation.

Survey management forms are important for keeping track of the numbers of households contacted, the number of call-back visits made, interviews completed, and so forth. Appendix H includes illustrative sample survey management forms for single and multiple target groups.

Appendix E includes some guidelines for training and supervising field interviewers. You should prepare written instructions for the interviewers that describe exactly how they should select households, how to identify eligible respondents, which respondents to interview, when and how often to make call-back visits, how to check the completed form before leaving the household, and what to do if a mistake is made.

Step 7: Collect the data

Selecting households

The selection of the starting household must be made from within the cluster. The first house must be selected at random. It would be best to select all seven households at random.

This may be possible if there is an **up-to-date household** listing of the community. The listing must be up to date, otherwise the sample will be biased toward old-timers. Use currency notes or the random number table in Appen-

dix G to select your seven households. To be safe, select ten, just in case there are refusals, ineligible respondents, or people have recently moved away.

If there is no list but the community is small, it would be best to do a quick enumeration of all households and then select the sample at random.

If that is not possible, the next best approach is the EPI method. The typical approach that WHO uses is to select the first household at random in each cluster, interview an eligible woman, if there is one at home, and then go to the **next nearest** household to find the next respondent. Respondents who are not home are skipped, even if they are eligible. This search continues until the required number of interviews, usually seven, has been completed.

The starting household is usually selected by choosing some central point in the community, such as a market; spinning a bottle to select a direction at random; walking in that direction, counting, mapping, and numbering the households you pass as you walk from the central point to the edge of the community; and finally selecting one of these houses at random. This house is the starting point.

There are several improvements on this approach that have been suggested:

"It would be better to choose, say, the fifth nearest household..."

"In large communities it would be a good idea to spread the sample around by having more than one starting point in different parts of the community."

"Any method which achieves a random or near-random selection of households, preferably spread wide apart over the community, would be acceptable as long as it is clear and unambiguous, and does not give the field worker the opportunity to make personal choices which may introduce bias."[1]

1 Bennett, et al. op cit.

Multiple target groups

If you draw a random sample, remember to draw a separate one for each target group. If a household that you draw includes respondents for two or more of your target groups, it is quite alright to collect data from that household for as many of your survey modules as possible.

If you follow the EPI approach, or the variations suggested above, you would just keep going from house to house until you completed all parts of your questionnaire.

Call-backs

The EPI method replaces respondents who aren't at home with the next available respondent. It is much better to try at least two revisits to collect data from the household originally selected. This maintains the integrity of the sample, whereas replacement introduces bias. People who stay at home may be very different from those who are away at work.

Step 8: Enter, verify, and tabulate the data

You may skip this step if:

- *You are going to use the Epi Info computer program Appendix A contains complete instructions for entering, tabulating, and producing tables and graphs*
- *You plan to use another computer program for data entry, verification, and tabulation*

This step describes manual procedures for: 1) summarising the data that have been collected; and 2) producing some simple tables. Suggestions for using standard spreadsheet programs are described in Appendix I.

Manual data entry

If you have been collecting data in cluster registers, you only need to take the summary tabulations from each of the 30 registers and compile them on a summary form. In the following example, the sample cluster register shown in Step 4 is reproduced with some illustrative data. The interviewer (or supervisor) will tally the totals in the right column, as shown. For simple "yes"/"no" questions count the number

of "yes" responses. For example, five of the seven women received ANC during their last pregnancy. One received care from a hospital, two from a health centre, and two from TBAs.

For continuous variables, age, number of visits, add the numbers and also show the number of respondents. For example, the ages of all seven respondents totals 190 years. The total column shows 190/7. Later, when the data from all of the clusters are summarised, these figures can be used to compute average age. Averages should not be calculated for each cluster. The number of ANC visits made by the five women who received ANC is shown as 10/5.

The summaries from each cluster can then be transferred to a master sheet, such as that shown below. This form would have 30 columns, one (1) for the data from each cluster, and a column to summarise the totals.

The data from the above form for cluster No. 1 are shown in the second column from the left marked "1." For example, age is shown as 190/7, Rec'd ANC is 5, and so forth. The data from each cluster register would be entered this way and then the totals produced at the end.

Data collected on questionnaires can be summarised in a similar manner. This can be done in two steps or one. The two-step process would be the same as that shown above. Each interviewer or supervisor would summarise the data from a cluster on a form similar to the cluster register. That would then be summarised on a cluster summary form and tabulated.

The one-step alternative is to develop a large summary form with 210 columns, or as many as there are interviews.

This is especially easy to do on a spreadsheet. Appendix I includes two computerised forms that are designed for this purpose.

Verifying and cleaning the data

The data need to be "**verified**" to make sure that no mistakes were made in summarising the totals and transferring them to the summary sheets.

This can be done by having two separate teams independently summarise and transfer all of the data to summary tables. The results are then compared. Discrepancies can be checked and corrected fairly easily this way.

Cleaning the data involves correcting mistakes in the original interview forms and summary sheets. Although the supervisors probably checked each questionnaire and cluster register, mistakes can still happen. Typical mistakes include using the wrong code, leaving a question blank, misinterpreting a written code (e.g., 0 for 8), skipping to the wrong question, and entering an answer in the wrong space.

Some of these mistakes will be caught by the supervisor, others by the verification process, and some won't be noticed until the preliminary analysis is done. To find the source of the error, you will usually have to go step-by-step back through the data entry process: first to the summary sheets, then the cluster forms, then the original questionnaires or registers.

Tabulation

Manual tabulation will usually be limited to summarising counts, computing a few averages, and preparing some frequency distributions. If you are using a computer, you can do much more. See Appendix I for examples of simple computerised tabulation procedures that use a spreadsheet program.

For manual tabulation, you will already have totals summarised in the Summary Form. Use these and the report outline that you prepared in Step 3 to decide what to prepare.

Interviewer name: B. Rangka			Date : 03/04/92		Book no. 1				
Cluster: 1			Area: So. Bajju		Supervisor: Sonia Barang				
Respondent no.	1	2	3	4	5	6	7	8	Total
Name	JB	KH	TD	MJ	NKT	TR	JN		
House no.	13	25	37	38	42	54	65		
Age	23	25	22	34	42	18	26		190/7
Rec'd ANC last pregnancy	Y	Y	N	Y	Y	N	Y		5
No. ANC visits	2	2		1	3		2		10/5
Source of service:									
Hospital	Y								1
Health centre		Y		Y					2
Local TBA					Y		Y		2
Other:									

Summary cluster form									
Date of first interviewer: 03/04/92					Date of last interview: 03/21/92				
Area: Baiju	Prepared by : Sonia Barang				Checked by: Marcus Stefensen				
Cluster No.	1	2	3	4	5		29	30	Total
Age	190/7	185/7	210/8	175/7	197/7		180/8	180/7	5715/214
Received ANC last pregnancy	5	4	6	3	4		5	5	156
No. ANC visits	10/5	10/4	13/6	9/3	10/4		12/5	10/5	314/156
Source of service:									
Hospital	1		1				1		15
Health Centre	2	1	2	1			1	2	47
Local TBA	2	3	3	2	4		3	3	94
Other:									

At that time you also prepared some dummy tables. Prepare the data needed to fill them in. Appendix I includes an illustrative list of frequency distributions and cross-tabulations.

Averages: Let's start with computing averages. All of the data that are continuous variables were entered in the summary table as two numbers: the total years, visits, and events divided by the total number of those who responded to that item. Examples are age and number of ANC visits. Just perform this division to compute the average (mean):

> 5715/214 = 26.7 years (the average age of your sample)
> No. ANC Visits 314/156 = 2.01 visits (the average number of visits made by women who received ANC during their last pregnancy)

Please note that the denominators (the number of respondents) is different in these examples. A common mistake is to use the wrong denominator, for example, dividing the total number of ANC visits by 214, the total sample. Be careful to use the correct denominator.

Coverage percentages: Your most important data will probably be coverage data. This is computed by counting the number of people covered and dividing it by the number of eligible respondents. Examples from the Summary Form

are the number who received ANC. The sheet shows that 156 women out of 214 received ANC. To compute the coverage percentage, divide 156/214 and multiply by 100.

Received ANC last pregnancy: 156/214 = .72897 * 100 = 72.9% (the percent of eligible women covered)

Frequency distributions: This information will also be important for determining the numbers and percentages of people who use different services, use different providers, have different reasons for accepting a service, and so forth. The Summary Form shows that there were three sources of service for the 156 women who received ANC. To compute the frequency distribution, divide the counts of each of these by 156 and multiply by 100.

You should go through your Summary Form and compute these three types of statistics for your report. It is possible to do more sophisticated tables by hand, such as cross-tabulations of ANC use by age and computation of tests of significance, but these are tedious when done manually. If you need this information, it would be best to use a computer programme or find someone who has a computer and can do it for you. They may want to use the programmes included in Appendix I for tabulation and statistical analysis. Appendix I.3 also includes examples of a programme developed by Ralph Frerichs for computing confidence intervals for selected indicators (ANC.WK1).

Step 9: Analyse, interpret and report the findings

Consult your report outline again to make sure that you know the user's most important indicators, questions, and issues. You have already produced some of these in Step 8: coverage data and frequency distributions of key variables, for example.

Analysis and interpretation

When you have your tables completed, examine them to make sure that you understand what they mean. Think in terms of different kinds of interpretations:

- **Descriptions:** This is the most basic level of analysis. Simply present the facts: X number of women were served; Y percent covered.
- **Performance:** This requires comparing the descriptive data with performance expectations or standards. Is 73 percent coverage adequate, excellent, below expectations? Where is the programme performing well? Where is it not?
- **Explanations:** Some of your frequency distributions can provide explanations. Where did women go for service? What reasons did they give for not coming back? Rapid surveys usually do not get into much detail in this category, but the results can stimulate staff discussion and result in insightful explanations. For example, why don't women come to the hospital? Why are so many going to TBAs? Modules 6 and 7 can help you get some explanatory data.
- **Implications:** This involves going beyond the data to think of implications for the future. If coverage is low, what does that mean for the future? Can it be increased? Is it feasible? How could it be done? Should the programme try to get more women to come to hospitals and health centres for ANC? Or should we train TBAs to provide better services?
- **Issues needing further study:** Most studies raise questions, as well as answer them. Rapid surveys are no different. Identify questions that cannot be answered with the available data. Some of those might be investigated with a second survey or through one of the other modules that look at the quality of services (Module 6), short-term monitoring of an activity (Module 5), identifying high-risk women (Module 3), etc.

Remember that you can only do an analysis of the entire sample. You cannot divide the sample into sub-samples to compare groups. This requires separate rapid surveys for each group.

Source of service	Number served	Percentage
Hospital	15	(15/156)*100 = 9.6%
Health centre	47	(47/156)*100 = 30.1%
TBA	94	(94/156)*100 = 60.3%
Total	156	100.0%

Reporting

The easiest way to prepare a report is to present the findings from each question in the sequence followed in the questionnaire. Another is to present the major findings first, since this is what most managers want to know. Most rapid survey reports are presented orally at first and include a few tables and graphs of key findings. The final written report may include additional tables at the manager's request.

A typical formal outline of a research report is shown below:

- **Title, authors, date, acknowledgements, table of contents**
- **Executive summary** (key findings, implications, brief description of the study design)
- Statement of the research problem (the **background and problems** to be investigated)
- Study **objectives** (purpose of the study, expected outcomes)
- **Methodology** (brief description of the key indicators, sample, instruments used, analysis procedures, timetable)
- **Findings** (summary of findings, divided into sections, formatted to address questions and issues the user wants answered — should include tables and graphs of key points)
- **Discussion** (interpretation of the findings, discussion of implications for the future, identification of other issues needing study or analysis)
- **Recommendations** (suggested courses of action to take for policy, planning, services, management, further research)
- **Appendices** (detailed data tables, questionnaire or register used, reference materials)

The formal report does not have to be long. Some of the sections listed above can be covered in a paragraph, others in a page. The longest sections are likely to be the findings. Keep the audience in mind when preparing the report. Managers, in particular, are not likely to read long reports. That's why the executive summary is so important. That may be all that they read.

Step 10: Develop an action plan

The Implications and Recommendations sections of the formal report may not necessarily lead to action. That is why it is important to make development of an action plan a separate step and to introduce it as part of the study objectives. The managers and other users should be expecting to take action on the study results. Make that a stated expectation from the beginning and reinforce it throughout the study.

The best time to begin preparing an action plan is during the oral presentation of the study results. The plan does not have to be detailed, but it should include:

- **WHAT**: the action(s) to be taken should be specified (e.g., provide ANC training to TBAs, or brainstorm what can be done to enrol high-risk women in ANC).
- **WHO**: the specific people who will be responsible for each action should be identified (by name or position).
- **WHEN**: the dates for starting and/or completing the actions.

In some cases it may be important to include **WHERE**, to specify the sites or locations where the actions will take place, **HOW**, to outline the procedures that will be followed, and the **RESOURCES** that will be made available to carry out the actions.

Specific details may need to be worked out later, and even some of the above elements may have to wait until the formal report is ready and can be studied more carefully. If so, then they should be incorporated into the preliminary action plan.

Worksheet for developing action plans

ACTION TO TAKE (What)	RESPONSIBLE (Who)	DATES (When)	OTHER (Where)

Appendices: Templates, tools, guidelines, and computer programs

A. How to use *Epi Info* to conduct rapid surveys

B. Questionnaire design guidelines

C. Rapid survey instruments

Community assessment of PHC (overall)
Health education
Antenatal care, safe delivery and postnatal care
Family planning
Acute respiratory infection
Breast feeding
Diarrhoeal disease control/oral rehydration therapy
Childhood disabilities
Child immunization
Growth monitoring/nutrition education
Water supply, hygiene and sanitation
Accidents and injuries
Chronic, non-communicable diseases
Tuberculosis
Malaria
Sexually-transmitted diseases, HIV/AIDS
Vital events and health status
Child morbidity and mortality assessment
Adult morbidity and mortality assessment

D. Cluster survey registers

Health education
Antenatal care, safe delivery and postnatal care
Family planning
Acute respiratory infection
Breast feeding
Diarrhoeal disease control/oral rehydration therapy
Childhood disabilities
Child immunization
Growth monitoring/nutrition education
Water supply, environmental hygiene and sanitation
Accidents and injuries
Sexually-transmitted diseases, HIV/AIDS

Sample files that you can use to illustrate the instructions:

RAPIDFP.QES (a family planning questionnaire)
RAPIDFP.REC (a data entry file)
RAPIDFP.CHK (a file for including range checks and other instructions for data entry)
RAPIDFP.PGM (a file of analysis instructions to produce tables and graphs)
FPTEST.WK1 (a *Lotus 1-2-3* spreadsheet file with sample data)
FPTEST1.REC (a data entry file constructed from FPTEST.WK1)

Use the sample files that come with these instructions in conjunction with the *Epi Info* computer program to learn how to use *Epi Info* in conducting rapid surveys in family planning and primary health care. You can also read and print out sections or all of the *Epi Info* User's guide from the enclosed diskette.

Installing *EPI info* and using the tutorials

Installation: *Epi Info* is very easy to install. Follow the instructions in the README file on the first PHC MAP diskette. It will tell you how to extract *Epi Info* and other files. When you have extracted the *Epi Info* files and put them on separate diskettes you can install *Epi Info* onto your computer. Place Disk 1 of the *Epi Info* System in one of your floppy drives, say drive A. At the A prompt type **INSTALL**. Then just follow the directions on the screen. See Chapter 4 of the *Epi Info* User's guide for more details.

Notations: These instructions use the same notations as the *Epi Info* User's guide (see p. 7 of the guide). Keys on the computer's keyboard are indicated by < >. Examples : < F1 > (means press the F1 key), < Ctrl + S > (means hold down the Control key and press the S key). The material that you should type is shown in boldface. Example: type **EPI** and press <Enter>.

Tutorials: *Epi Info* includes a tutorial program in a file called EPIAID. First get into the EPI5 directory. Then type EPI to load EPI5. The main menu should appear. Move the cursor to EPED and press <Enter> to load it. Then press <F3>. Next move the cursor to EPIAID and press <Enter>. Choose one of the tutorial programs —Word processing, Make *Epi Info* Questionnaire — and press <Enter>.

There are also two analysis tutorials. Load EPI5 as before. Move the cursor to ANALYSIS on the menu and press <Enter>. Then type **RUN**

TUTOR1 and <Enter> for basic analysis procedures or **RUN TUTOR2** for developing an analysis program.

The User's guide also includes Tutorial Instructions at the beginning of Chapters 4 (Installation), 5 (Starting *Epi Info*), 8 (Entering Data), and 10 (the *CHECK* program). It also includes a number of tutorials for advanced work with *Epi Info*.

The following summarises the basic tutorial programs included in *Epi Info*:

Tutorials	Source
1. Installation	Chapter 4 (page 1)
2. Starting	*Epi Info* Chapter 5
3. Word processing	EPIAID: Word processing
4. Designing questionnaires	EPIAID: Make EPI info questionnaire
5. Data entry	Chapter 8
6. Data entry instructions	Chapter 10
7. Analysis	ANALYSIS: RUN TUTOR1
8. Analysis programs	ANALYSIS: RUN TUTOR2

These instructions are based on *Epi Info, Version 5: A wordprocessing, database, and statistics system for epidemiology on microcomputers*, by A.G. Dean, J.A. Dean, A.H. Burton, and R.C. Dickers. *Epi Info* is a joint project of the Centers for Disease Control (CDC) and the World Health Organization (WHO).

The User's guide and the computer programs are in the public domain and may be freely copied, as can these instructions. The program and User's guide can be purchased for $35 from USD Incorporated, 2075A West Park Place, Stone Mountain, GA 30087. The User's guide is also available from several countries, often through Departments of Epidemiology in local schools of public health.

How to develop a questionnaire in *Epi Info*

You may construct a questionnaire directly in *Epi Info* or import one that you developed on a word processor. We recommend that you develop (or revise/edit) your questionnaire on your word processor first. It will be easier for you to work on a word processor with which you are already familiar. *Epi Info* uses a simple word processor based on *WordStar*. It may take some time to get used to *Epi Info*'s wordprocessing commands. We strongly recommend that you read Chapters 6 and 7 of the *Epi Info* User's guide for

instructions. Also, run the EPIAID tutorials on Word processing and make the *Epi Info* Questionnaire.

The following instructions first tell you how to prepare a questionnaire on your word processor (A). This is followed by instructions for preparing one within *Epi Info* (B).

How to prepare a questionnaire that will be imported to *Epi Info*

1. Prepare your questionnaire on your word processor.

Use one of the draft questionnaires in Appendix C as a guide. Also see the sample Family Planning questionnaire that follows. You may load these questionnaires into your word processor and revise them by adding, deleting, or editing the questions. List the most likely responses and give each a code number. Make sure to include 9 or 99 for "Don't Know/No" response (DK/NR). Example:

8. Are you using a method now? Yes (1), No (0), DK/NR (9)

When you are finished, save the questionnaire twice. Save it first as a regular document, for example *RAPIDFP.DOC*. You will use this version for your interviewers.

Save it a second time as an unformatted file (ASCII). You will use this version to set up a data entry programme in *Epi Info*. When you save it, add QES as the extension. Example: *RAPIDFP.QES*

2. Enter the Fields.

Now you will enter "fields" in the *.QES version of the questionnaire. You should still be working in your word processor.

Types of fields. A "field" is an area in the questionnaire where you will enter data. After each question you will insert symbols for an appropriate field. These are examples of questionnaire items followed by different kinds of fields:

Today's date: </mm/yy> Interviewer name _____
2. How old are you? ## 3. Are you married? <Y>

The first is a "date" field. You would enter two numerals each for the day, month, and year. The second, to the right, is called a "string" field. You can enter up to 80 characters in a string field. The third, following, "How old are you/," is a "numeric" field. The # symbol represents a numeral, in this case, a two-digit number. The last is a field for entering "yes"/"no" responses.

Symbols. The following list summarises the major symbols you can used for your fields. Usually, each question will have one field for the

response, and you will decide which type of field is appropriate and where to place it. The numeric and string fields require a symbol for each digit or character in the response. For example, if you record the respondent's age, you need to allow space for two digits, so enter ##. If you want to record the person's name, you might allow space for 20 or 30 characters. Type one underline character for each space : _____ . (This is a 20-space string.)

#	For numbers: ## (26) ###.# (26.4) .###(.264)
<Y>	For Yes/No responses: Y = Yes, N = No, (Accepts Y, N, and space (missing value. Does not allow DK/NR codes.)
<dd/mm/yy>	For dates: 23/04/92
_____	For written responses (especially for open-ended questions) maximum length is 80 characters.
<IDNUM>	For the case number: 0231

Instructions. Type in the appropriate symbols in the second (*.QES) version of your questionnaire. Put them where you want the data to be entered. Later you will use this questionnaire to construct a file for entering data into the computer. The computer program will display this questionnaire, and the cursor will skip from one field to the next to allow you to enter data. Thus, it is important where you place the symbols. In the sample questionnaire, we have placed all of the symbols in the right margin. You may also place them at the end of the questions, below them, inside them, wherever you wish. For example:

Are you using a method now? # Yes (1), No (0) DK/NR (9)
Are you using a method now? Yes (1), No (0) DK/NR (9) #
Are you using a method now? Yes (1), No (0) DK/NR (9)

Remove any symbols that you don't want to be read as fields by the computer. Underlines ____, chevrons <2>, pound signs #3, will all be read as fields. In the following examples you would remove all of these symbols except the one # sign at the end, which is the field you want.

Are you using a method now? Yes ___(1), No ___(0), DK/NR ___(9) #
Are you using a method now? Yes <1>, No <0>, DK/NR <9>#
Are you using a method now? Yes (#1), No (#0), DK/NR (#9) #

Rapid survey questionnaire: Family planning

Complete for all married women aged 15-44 years who are currently living in the household.

CASE NO: IDENTIFICATION	Office Use
	<ID number>
1. {Study} No	1.##
2. {Province} No	2.##
3. {Interviewer}	3.##
4. {Date} of Interview	4. <dd/mm/yy>
5. ID Number (4 digits) : {Cluster No}. {Woman No}. in Cluster {NAME} OF RESPONDENT:	5.##
6. How {old} are you? (Probe) years (if DK/NR, enter 99)	6.##
7. How many living {children} do you have? (if DK/NR, enter 99)	7.##
8. Are you or your husband currently using any family planning {method}? Yes (1) No (0) Go to Q 13 DK/NR (9) Go to Q13	8.#
9. Which method are you/your husband using now (select principal {method only})?	9.##
Tubectomy (1) NORPLANT (6)	
Vasectomy (2) Condom (7)	<dd/mm/yy>
IUD (3) Foam, emco, jelly, cream, diaphragm (8)	
Oral pill (4) Safe period, withdrawal, abstain (9)	
Injection (5) Other: (10)	
DK/NR (99)	
10. {How long} have you been continually using this method?	10.#
0-3 months (1) 1-2 years (4)	
4-6 months (2) 3-4 years (5)	
7-12 months (3) 5 years or more (6)	
DK/NR (9)	
11. For how long have you been practising family planning, i.e., continuously using one method or another without {interruption}?	11.#
0-3 months (1) 1-2 years (4)	
4-6 months (2) 3-4 years (5)	
7-12 months (3) 5 years or more (6)	
DK/NR (9)	

12. What is the main source of your family planning service or (supplies)? 12.##

Govt. hospital/clinic	(1)	Private hospital/clinic	(6)
Govt. field worker	(2)	NGO clinic	(7)
Social marketing prog.	(3)	NGO field worker	(8)
Private physician	(4)	Other: _____	(9)
Pharmacy	(5)	DK/NR	(99)

Go to Q17

13. If you are not using family planning now, have you or your (husband ever) used any method in the past? 13.#

Yes (1)	(1)	No	(0) Go to Q15
DK/NR	(9)		

14 Which method did you/your husband use most recently (select (latest method) only)? 14.##

Tubectomy	(1)	NORPLANT	(6)
Vasectomy	(2)	Condom	(7)
IUD	(3)	Foam, emco, jelly, cream, diaphragm	(8)
Oral pill	(4)	Safe period, withdrawal, abstain	(9)
Injection	(5)	Other	(10)
DK/NR	(99)		

15. Do you/your husband intend to practice family planning in the (future)? 15.#

Yes	(1)	No	(0)
DK/NR	(9)		

16. What is the most important reason you are not using family (planning now)? 16.##

Want more children	(1)	Method/service unavailable	(6)
Husband objects	(2)	Sterilily	(7)
Health reasons	(3)	Breast feeding	(8)
Religious reasons	(4)	Pregnant	(9)
Fear side effects	(5)	Other	(10)
DK/NR	(99)		

17. What is the name of the local (Community) Health Worker? 17.#

Knows (said name)	(1)	Does not know	(0)
No response	(9)		

18. Has the Community Health Worker visited or contacted you during the (last three months)? 18.#

Yes	(1)	No	(0)
DK/NR	(9)		

This concludes the interview. Thank you for taking the time to participate in this survey.

In this version the data are entered in a column on the right; many researchers prefer this format. However, it is important for only the data entry version of the questionnaire. The interviewers can enter responses anywhere on the paper. That is why you should save one version of the questionnaire for your interviewers and this second one for the data entry program.

3. Enter names for each field by placing { } around key words in each question.

You should still be working in your word processor on the *.QES version of your questionnaire.

Next you must give each field a name so that you can analyse the data later. Examples:

How {old} are you? Field name = OLD
Which {method} are you using {now}? Field name = METHOD NOW
{A.1} Which method are you using now? Field name = A.1

If your question is longer than one line, the field name must be in the last line. For example:

8. Are you or your husband currently using any family planning {methods}?

Actually, you do not need to enter field names. This is an optional step, because *Epi Info* will create field names automatically if you do not specify a name. It selects the first 10 non-punctuation characters before each field. See page 53 of the *Epi Info* User's guide for more detail. The major advantage to entering your own field names is that they will be immediately recognisable to you.

When finished, save the file in ASCII format with a QES extension.
Example: save the file as RAPIDFP.QES

How to prepare a questionnaire within *EPI info.*

1. Load EPI5. At the C prompt type <EPI> and press <Enter>.

2. Open EPED. In the main menu move the cursor to EPED and press <Enter>.

3. Type the questionnaire onto the screen.

Type the questions, instructions, codes, etc., directly onto the screen, using the program's wordprocessing commands to tab, backspace, delete, indent, etc. Use the Help (F1) key if you need instructions about the word processor.

If you have a questionnaire on your disk that you want to use or edit, load the file by pressing <F2>. Enter the file location and name, e.g., b:**RAPIDFP.QES.** Press <Enter>. Then make your corrections, additions, etc.

4. Enter the fields and field names, and remove unwanted symbols.

You can enter the field symbols directly, as described above. You can also call up a menu of field symbols by pressing <CTRL + Q>, then <Q> again. To insert one of these in your questionnaire, first make sure the cursor is where you want to make the insertion. Then press <CTRL + Q>, Q, then highlight the symbol you want and press <Enter>. If you know what the symbols are, it is easier to type them in directly.

You may skip this step if you don't want to insert any data entry instructions

5. When finished, save the file. Press <F9>, then <F10> to exit.

Inserting data entry instructions in *Epi Info*

(See Chapter 10 of the *Epi Info* User's guide)

You can insert codes into your basic questionnaire to check for errors, to do automatic coding of some entries, and to skip over inappropriate questions. The instructions describe in this section how to insert the following into your questionnaire:

Range Checks: Specify the range of values that can be entered; e.g., 1-5. The programme will reject all numbers outside the range, e.g., Q, 6, 8 etc.

Legal Values: Specify individual values that can be entered; e.g., 2, 8, 9. The program will reject all other numbers (e.g., 1,3,4, N, etc.).

Must Enter: Specify that an entry must be made in the field, it cannot be left blank or skipped. The program will not move to the next field until an entry is made. However, you can override this by pressing the <Down Arrow> or <Page Down. >

Repeat: Specify that the same value entered into a field will be repeated in all subsequent records until it is changed. For example, enter Q 3 for province, which will be entered automatically on all subsequent questionnaires until you change it.

Skips: Specify which questions will be skipped, depending on the previous answer. For example, "If No, go to Q16."

1. Create a data file.

Before you can enter these instructions, you must have a data file in which to insert them. This is a file with a *.REC extension. You can create one as part of this step or as part of the data entry step.

Load EPI5 by typing **EPI** and pressing <Enter>. At the main menu, move the cursor to ENTER and press <Enter>.

At the prompt type in the name of the questionnaire file you just prepared, e.g., RAPIDFP, but leave off the extension. Don't forget to include the path name. Example: **b:\RAPID** and press <Enter>.

Follow the commands. Press <ESC>. Enter the name of your questionnaire file, e.g., b:\RAPIDFP.QES and <Enter>.

Inspect the file, especially to make sure that all of the fields are included and are in the correct places. Then press <F10> to exit. If you need to make corrections, go back to the EPED programme to edit your file.

2. Load the CHECK programme from the main *Epi Info* menu.

Load EPI5 by typing **EPI** and pressing <Enter>. At the main menu, move the cursor to CHECK and press <Enter>.

3. Load your questionnaire.

You should load the data entry version of your questionnaire. That is the one with the *.QES extension. At the prompt, enter the path and name of your questionnaire (e.g., b:\RAPIDFP.QES) and answer <Y> to the question "Are you ready?" Press <Enter>.

4. Enter the appropriate check codes in the appropriate fields.

Place the cursor in the first field to be changed and make the appropriate entry; see the menu at the bottom of the screen. Move to each field to be changed until finished.

Range check: Enter the minimum number that will be accepted, press <F1>, then enter the maximum number that will be accepted, press <F2>.

Example: Age 15-44. Put the cursor on the field symbol in the age question, type: <15> <F1> <45> <F2> and <Enter>. To remove a range, see "6. Editing the commands," below.

Legal Values: Enter the letter(s) and/or number(s) that will be accepted, press <F6>.

Example: Male=M, Female=F. Put the cursor on the field symbol, type: <M> <F6> <F> <F6>, and <Enter>.

Example: Male=1, Female=2, Unknown=9; Type:
<1> <F6> <2> <F6> <9> <F6> and <Enter>.

Press <SHIFT + F6> to display all legal values for the field.

To remove a legal value, enter it into the field and press <CTRL + F6>.

Must enter data in this field: Place the cursor in the field and press <F4>. Press <F4> again to remove the command.

Repeat entry made in this field in subsequent records: Move the cursor to the field symbol, enter the number or characters you want repeated, and press <F3>. Example: Study No <6> <F3>. Press <F3> again to remove the command.

Skip: Place the cursor in the field. Enter the value that triggers the skip, press <F7>, move to the question to be skipped to, press <F7>.

Example: Q 8 says "If 'No', go to Q13." Place the cursor on the field symbol in Q8. Type: <N>, press <F7>, (move the cursor to the field symbol in Q13, press <F7>.

You can have several different skips for the same question. For example, in addition to the skip above, you might have: "If Yes, go to Q15." Place the cursor on the field symbol in Q8 again, type <Y>, press <F7>, move the cursor to the field symbol in Q15, type <F7>. The program will now skip to Q13 if the response is "no" and to Q15 if it is "yes."

If you want to skip to another question regardless of the response, place the cursor on the field symbol and press <F7> when the field is blank. Move to the field symbol in Q15 and press <F7> again. To display all current skips for a field, place the cursor on the field symbol and press <SHIFT + F7>.

To remove a skip use <CTRL + F7>.

5. Save your changes.

Press <F10> when finished to save. "Write Data to Disk [Y/N]?" appears. Press <Y.>

6. Editing the commands.

Place the cursor in a field you wish to change and press <F9>. The commands for that field will be displayed in an indented hierarchy. You can edit, add, delete commands directly. Example: To change the Male and Female codes from M and F to 1 and 2, simply press <F9>, move the cursor to M and replace with 1, move to F and replace with 2.

How to enter data into EPI info

(Chapters 8 and 17 of the *Epi Info* User's guide)

There are two ways to enter data into *Epi Info*. The first is to enter the data from one questionnaire at a time directly into the *Epi Info* data file. The second, is to import all of the survey data from a spreadsheet, *dBase* or ASCII file.

How to enter data from questionnaires (see Chapter 8)

1. Load ENTER from the main menu.

Load EPI5 by typing **EPI** at the C prompt and pressing <Enter>. At the main menu move the cursor to highlight ENTER and press <Enter>. If you are creating a new data file, type in the path and name of the questionnaire file that you want to use, but leave off the extension, e.g., **a:\RAPIDFP** and press <Enter>. The program will create a data file and give it a *.REC extension, such as RAPIDFP.REC. If you are loading a data file that has already been created, follow the same steps. When you type the name of the data file (RAPIDFP), the program will find RAPID.REC and load it. Or you can type in the path, e.g., b:\ and press <F1> to display a list of REC files. Move the cursor to the one you want to load and press <Enter>.

2. Enter the data from each completed questionnaire.

The case identification number <idnum> is entered automatically, and the number increases by 1 for each record. The cursor will move to the first field that you specified to receive data. In the sample Family Planning questionnaire, this field is "Study No" Type in the number (e.g., 6) and then press <F3>. Since the study number is the same for all questionnaires, you need to enter that only once. The <F3> key turns the "Repeat" function on and off. When you turn it on, you will not have to enter the same number for each questionnaire. The Province number is also the same. The interviewer number will be the same for 7 or more cases, as will the date of the interview and cluster number. When the number changes, e.g., from 6 to 7, just type in 7 and it will repeat until you type in a new number.

In most cases, after you enter data in a field, the cursor will automatically move to the next field. If it does not, press <Enter> to move to the next field. This happens when the spaces in the field are larger than the number entered. For example: "How many living children do you have?" Allow 2 spaces for a two-digit number (12, 15, 10). When you enter two digits, the cursor goes to the next variable. If you entered one digit (2, 3, 1), you would also need to press <Enter> to move to the next question.

If you have installed range checks and legal numbers, the program will only accept the numbers you indicated. "How old are you?" will accept any number between 15 and 45. If you enter 13 or 54, the program will not accept the entry. For a "yes"/"no" question, the program will accept Y, N, or blank. If you enter Q by mistake, it will not be accepted. Dates must be entered in the correct order: dd/mm/yy. The first entry (day) cannot exceed 31, the second (month) cannot exceed 12.

The program will skip questions that do not apply (identified on the questionnaire as "Go to QXX"). You cannot enter data in fields that are to be skipped.

Some fields are designated as "Must enter." The program will beep if you try to skip by pressing <Enter>. If the data item is missing on the questionnaire, you can leave the field blank by pressing the down arrow or <Page Down>.

3. Make corrections, as needed.

If you make a mistake, use the up or down arrows, the <Home>, <End>, <PgDn>, and <Pg Up> keys to move the cursor to the error and re-enter the correct data.

When you have finished a form, the message, "Write data to disk (Y/N)" will appear at the bottom of the screen. Type <Y> to save the data. The program will go to the top of the screen so that you can enter the next record. Notice that the Case ID has increased by one.

You can go back or forward to look at each completed questionnaire by pressing <F7> or <F8>. You can also make changes at that time, if necessary.

When you are finished, press <F10> to exit.

How to import data from other files (see Chapter 17)

Epi Info can import four kinds of files: ASCII fixed-length records, comma-delimited records, *Lotus 1-2-3* *.WKS and *.WK1 files, and *dBase II* files. The following instructions cover the *Lotus* and *dBase* files only. Consult the *Epi Info* User's guide for instructions on importing the other kinds of records.

1. Prepare the file to be imported.

dBase files do not need any special preparation. They can be imported directly. ***Lotus 1-2-3*** files should contain **variable field names on the first line (and only the first line)**. Data items should not be on the first line, since *Epi Info* will read whatever is on this line as variable names.

The variable names can be of any length and can be different from those used in the original data set. That is, you can use new, short names for the variables. An example is shown below:

Age	Sex	V1	V2	V3	V4	variable names
23	M	1	0	2	3	
25	F	2	0	3	2	
32	M	1	1	9	2	

Save the file with a:*.WK1 or *.WKS extension.

2. Load IMPORT.

Before you import your data, you need to create a *.REC file into which you can put the data.

First load EP15 by typing **EPI** at the C prompt and pressing <Enter>. Then at the main menu move the cursor to highlight **IMPORT**. Press <Enter>. Type in the destination and name for the .REC file you will create, (e.g., a:\FAMPLAN).

On the next line type the path and name of the *dBase* or *Lotus* file to be imported (e.g., **a:\BALIFP.WKS**). Type the appropriate number, 3 or 4, for the format of the imported file, 3 for *Lotus*, 4 for *dBase*. Press <F4> when you are ready to continue.

The program will return to the main menu when finished. It will have created and saved a file with a *.REC extension. For example, FAMPLAN.REC. You can now load the ANALYSIS program to analyse the data.

How to analyse data with EPI info

(See Chapter 9 of the *Epi Info* User's guide)

1. Load the data file.

First load EP15 by typing **EPI** at the c: prompt and pressing <Enter>. Before you can analyse the data, you need to load the *.REC data file into ANALYSIS and then read it. At the main menu, highlight **ANALYSIS** and press <Enter>. The **ANALYSIS** screen will appear. The cursor will appear at the bottom left of the screen after EPI >. Type **READ** and the location and name of the desired data file. Example: EPI > **READ b:\FAMIPLAN.REC** Press <Enter>.

If you are loading a *dBase* file, just type its name and the DBF extension. For example: EPI > **READ b:\FAPLAN.DBF** <Enter>.

If the file has been read correctly, you will see at the top left of the screen the file name and the number of records that have been read.

2. Select and run the analysis commands.

After you have read a data file, you can enter analysis commands one at a time or create a small program to run several commands at once. These programs can be prepared on your own word processor and saved as an ASCII file with a *.PGM extension. Example: RAPIDFP.PGM.

A short program is shown below. This file summarises the major ANALYSIS commands:

```
READ b:\FP\FPTEST1
FREQ METHOD METHODONLY HOWLONG1 SUPPLIES FUTURE
SET PERCENTS=ON
ROUTE PRINTER
TABLES CHILDREN METHOD
TABLES SUPPLIES METHOD
ROUTE SCREEN
PIE METHOD
HISTOGRAM METHOD
```

This program instructs *Epi Info* to read a data file called FPTEST1. Then it produces frequency distributions for five variables. The SET PERCENTS=ON command instructs *Epi Info* to display percentage distributions as well as counts for the tables that follow. The ROUTE PRINTER command tells the program to send the tables that follow to the printer. Two cross-tabulations are then produced: contraceptive method concurrently used by number of living children, and method used by source of method. The program instructs *Epi Info* to send the next commands to the computer screen instead of the printer. The first graph is a pie chart showing the distribution for family planning users and non-users. The second is a histogram of the distribution of contraceptive methods used.

Examples of the lists, frequency distributions, cross-tabulations, and statistics produced are shown on the following pages.

ANALYSIS TABLE. The following are examples of tables that *Epi Info* produces:

1 LIST Produces a list of all variables in the data set
2 FREQ Produces a frequency distribution of a single variable
3 TABLES Produces a cross-tabulation of two discrete variables
4 MEANS Produces a table of continuous variables

TABLES and MEANS can be produced with and without percentages by typing SET PERCENTS ON or SET PERCENTS OFF before typing the calculation command. See the *.PGM files for example.

Mann-Whitney or Wilcoxon Two-sample test (Kruskai-Wallis for two groups)		
Kruskai-Wallis H (equivalent to chi square)	=	17.397
Degrees of freedom	=	1
p value	=	0.000030

1 LIST

This is a partial listing of the data file, showing all of the values in the top row and the data for each case in the succeeding rows

This listing was produced by typing **LIST*** and pressing <Enter>.

Rec	Case	Study	Prov	Interv	Date	ID	Old	Childrn	Mthd
1	1	12	3	4	33333	101	23	1	1
2	2	12	3	4	33333	102	24	3	1
3	3	12	3	4	33333	103	31	1	1
4	4	12	3	4	33333	104	45	2	1
5	5	12	3	4	33333	105	32	1	0
6	6	12	3	4	33333	106	17	1	0
7	7	12	3	4	33333	107	27	4	1
8	8	12	3	4	33333	111	29	1	1
9	9	12	3	4	33333	112	32	2	1
10	10	12	3	4	33333	113	37	1	0

2 FREQUENCY

This is a frequency distribution of age with percents on.

This table was produced by typing **FREQ AGE** and pressing <Enter>.

AGE	Freq	Percent	Cum.
1	23	10.5%	10.5%
2	57	26.0%	36.5%
3	42	19.2%	55.7%
4	36	16.4%	72.1%
5	29	13.2%	85.4%
6	32	14.6%	100.0%
Total	219	100.0%	
Sum	= 744.00		
Mean	= 3.40		
Standard deviation	= 1.59		

This shows the distribution of respondents by age group where
1 = 15 - 19 years,
2 = 20 - 24 years, etc.

These statistics are produced automatically by the program.

3 CROSS-TABS: TABLES

This is a cross-tabulation of age and contraceptive method with the percent off.

This table was produced by typing **TABLES AGE METHOD** and pressing <Enter>.

	METHOD			
AGE	0	1	Total	
1	14	9	23	These are also 5-year age groups.
2	15	42	57	
3	12	30	42	
4	15	21	36	
5	12	17	29	
6	6	26	32	
Total	74	145	219	These statistics are also produced automatically.
Chi square	=	14.45		
Degrees of freedom	=	5		
p value	=	0.012970389		

This is the same cross-tab table with percent set to on.

AGE	0	1	Total	This row shows that 14 is 60.9% of 23 (15-19 yrs).
1	14 60.9% 18.9%	9 39.1% 6.2%	23 10.5%	
2	15 26.3% 20.3%	42 73.7% 29.0%	57 26.0%	This row shows that 15 is 20.3% of all 0s (74 using no method in column 2).
3	12 28.6% 16.2%	30 71.4% 20.7%	42 19.2%	
4	15 41.7% 20.3%	21 58.6% 14.5%	36 16.4%	
5	12 41.4% 16.2%	17 58.6% 11.7%	29 13.2%	
6	6 18.8% 8.1%	26 81.3%	32 14.6% 17.9%	
Total	74 33.8%	145 66.2%	219	This is a row that shows 33.8% do not use a FP method, 66.2% do.
Chi square	=	14.45		
Degrees of freedom	=	5		
p value	=	0.012970389		

4 MEANS TABLES

This is a means table comparing number of children (continuous variable) with method (discrete variable) with percents OFF and statistics OFF

This table was produced by typing **MEANS CHILDREN METHOD** and pressing <Enter>

	METHOD		
CHILDREN	0	1	Total
0	4	5	9
1	44	35	79
2	0	29	29
3	20	45	65
4	6	25	31
5	0	6	6
Total	74	145	219

This is the same cross-tab table with percents on and statistics on.

	METHOD			
CHILDREN	0	1	Total	
1	4 44.4% 5.4%	5 55.6% 3.4%	9 4.1%	This row shows that 4 is 44.4% of 9 (no of children).
2	44 55.7% 59.5%	35 44.3% 24.1%	79 36.1%	This row shows that 44 is 59.5% of all 0s (74 13.2% using no method).
3	0 0.04 0.04	29 100.0% 20.0%	29 13.2%	
4	20 30.8% 27.0%	45 69.2% 31.0%	65 29.7%	
5	6 19.4% 8.1%	25 80.6% 17.2%	31 14.2%	
6	0 0.0%	6 100.0% 4.1%	6 2.7%	
Total	74 33.8%	145 66.2%	219	

Method	Obs	Total	Mean	Variance	Std Dev
0	74	128	1.730	1.351	1.162
1	145	358	2.469	1.542	1.242
Difference			-0.739		
Method Min.	25%ile	Median	79%ile	Maximum	Mode
0 0.000	1.000	1.000	3.000	4.000	1.000
1 0.000	1.000	3.000	3.000	5.000	3.000

ANOVA

(For normally distributed data only). The p value is equivalent to that for the Student's T Test, since there are only 2 samples.

	SS	df	MS	F statistic	p-value
Variation	26.775	1	26.775	18.117	.000135
Between	320.705	217	1.478		
Within	347.479	218			
Total					

Bartlett's test for homogeneity of variance

Bartlett's chi square=0.419 deg freedom=1 p-value=0.517657

The variances are homogeneous with 95% confidence. If samples are also normally distributed, ANOVA results can be used.

3. Basic analysis commands.

When you are in ANALYSIS, you can view a list of the ANALYSIS commands by pressing <F2>. Press <Esc.> and then <F3> to see a list of the **variables** in your data set. Press <Esc> and then <F4> to see the data set itself. HELP <F1> provides a handy explanation of each of the analysis commands.

The following instructions cover only commands to produce frequency distributions, tables, averages (means), and cross-tabulations. To enter a command, find the EPI > prompt at the lower left of the screen and type the command. Example: EPI > **LIST OLD SEX** and press <Enter>.

LIST This produces a listing of records. Type **LIST *** to list all of the variables or to select the variables you want to list. Example: type **LIST OLD SEX METHOD**. Press <Enter> to start the listing.

FREQ This produces a list of the frequency, percentage distribution, and cumulative percentage of each variable listed. For numeric fields, the program also produces a sum, mean, and standard deviation. Type **FREQ *** to produce frequencies for all variables or to select the variables you want. Example: type **FREQ OLD METHOD CHILDREN**. Press <Enter>.

TABLES This is used for variables that can be counted, like sex [male or female] and use [yes or no]. This produces a cross-tabulation table of two variables to determine if there is a relationship between the two, such as contraceptive use and number of living children. The results also produce several statistical tests. Type **TABLES** and then the names of the two variables. Example: **TABLES CHILDREN METHOD**. Press <Enter>.

MEANS For continuous variables, e.g., age, months of use. This displays continuous data grouped into selected categories, such as age by current use of contraception. This will give the mean (average) age of people who do and do not use contraception. It also provides a number of statistical tests. Type **MEANS OLD METHOD** and press <Enter>. Type the continuous variable first.

4. Select and run graphs.

Epi Info makes histograms, scatter plots, pie charts, and bar line graphs drawn directly from the data files. To create a graph, enter the type of graph desired followed by the variable(s). Examples: **HISTOGRAM METHOD; PIE CHILDREN; BAR REASON; LINE OLD; SCATTER OLD HOW-LONG1**.

5. Print the results.

Press <F5> to turn the printer on, and <F5> again to turn it off.

There are two ways to print results. The first is to turn the printer on and enter the desired analysis command. Example: <F5> EPI > **FREQ** OLD METHOD <Enter>, then press to turn the printer off. If you leave the printer on, all subsequent commands will be printed.

The second way is to use the up arrow (when the cursor is at EPI in the lower part of the screen). Turn <F5> on, move the up arrow to the command you want to print, edit if so desired, and then press <Enter> to send it to the printer. Press again to turn the printer off.

6. Save the results to a file.

Press <F6> instead of <F5> if you want to save your calculations in a file rather than print them. The first time you press <F6>, you will be asked to provide a filename. Don't forget to include the path (e.g., c:\DATA\FPRESULT.DOC). After that, when you press <F6> your last calculations will be added to that file. You can also reload a file and add new calculations to it. To stop adding to a file, press <F6> again.

7. Some other useful ANALYSIS commands.

ROUTE	This command sends the subsequent out put to the computer screen (ROUTE SCREEN) or printer (ROUTE PRINTER).
SET PERCENT ON/OFF	This command produces percentages with the tables when it is on and without them when it is off.
SET STATISTICS ON/OFF	Similarly, this produces statistical results when on and suppresses them when off.
DEFINE	Use this command to create a new variable and its field. For example, DEFINE AGE# creates a variable named AGE with a one-digit numeric field.
RECODE	Often used together with DEFINE to create new codes for new variables. Often used together with DEFINE to create new codes for new variables. Example: RECODE OLD TO AGE 15-19=1 20-24=2 25-29=3 30-34=4 35-39=5 40-44=6 ELSE=6. This changes the codes for the variables named "OLD" to new codes for the new variable named "AGE." The new codes create 5-year age groups.

Regrouping. DEFINE and RECODE can be used to regroup age and other continuous variables in another way. First define the new variable and give it a "string" field. Then recode by whatever grouping you want (5, 10, 15 years, etc.) using the word BY. In the example, the instruction specifies a 5-year grouping.

```
DEFINE AGE STRING
RECODE OLD TO AGE BY 5
```

Labels. DEFINE AND RECODE can also be used to change numeric codes into labels. This can help you to avoid having to look up the codes to interpret the tables. In the following example, the codes for contraceptives are grouped and given labels of "MODERN" and "TRADITIONAL."

```
DEFINE CURRENTUSE STRING
RECODE METHOD TO CURRENTUSE 0=NONE 1-7= MODERN
8-9=TRADITIONAL 99=DK/NR ELSE=OTHER
```

If your string includes spaces, you need to put quotation marks around it. Otherwise, the program will conclude that the first word is the new label. For example: 1-7="NEW METHODS."

Finally, the labels can be no longer than the variable. If the variable is six letters in length the tables will allow only 6 characters for the labels. Thus, you should make your variables as long as needed, up to the maximum of ten characters.

ILLUSTRATIVE DATA ANALYSIS PROGRAMS

The computer files include an automated data analysis and printing program in a file called RAPIDFP.PGM. You can edit this programme on your word processor or in EPED. You can also write your own program.

Super short version

Although RAPIDFP.PGM includes instructions, identified by * in the first column, and quite a few recodes designed to change numbers to labels, you might want to try something simpler. Just type the following commands into the ANALYSIS program at the EPI > prompt. Don't forget to READ your data file first.

```
DEFINE AGE #
RECODE OLD TO AGE 15-19=1  20-24=2  25-29=3  30-34=4  35-
39=5  ELSE=6
FREQ METHOD METHODONLY HOWLONG1 SUPPLIES FUTURE
PLANNING NOW LASTTHREM
SET PERCENTS=ON
ROUTE PRINTER
TABLES AGE METHOD
TABLES CHILD METHOD
TABLES SUPPLIES METHOD
TABLES LASTTHREM METHOD
ROUTE SCREEN
PIE METHOD
HISTOGRAM METHODONLY
```

Data analysis program

The computerised analysis program is reproduced on the next two pages. It can be run by typing the following at the EPI prompt in the ANALYSIS window:

EPI> READ (filename) <Enter> #
EPI > RUN RAPIDFP.PGM <Enter>

RAPIDFP.PGM Version 1.2, 21 November, 1991,
Revised 18 March, 1992
Load EP15, open the **ANALYSIS** programme
At the EPI> prompt type **READ (filename)** and press <Enter>
At the EPI> prompt type **RUN** RAPIDFP2.PGM and press <Enter>
To print, press <F5> to turn the printer on before running this file
Type SET PERCENTS=ON if you want the crosstabs to show percentages
The program will pause if a table is not completely displayed and show <more>. Press <Enter> to continue

```
*QUESTION #6
DEFINE AGE STRING
RECODE OLD TO AGE BY 5

*QUESTION #7
DEFINE CHILD #
RECODE CHILDREN TO CHILD 0=0 1=1 2=2 ELSE=3

*QUESTION #8
DEFINE USINGFP STRING
RECODE METHOD TO USINGFP 1=YES 0=NO 9=DK/NR

*QUESTION #9
DEFINE METHOD_NOW STRING
RECODE METHOD_ONLY TO METHOD_NOW 1=1.TUBE 2=2.VAS
3=3.IUD 4=4.PILL 5=5.INJECT 6=6.NORPLANT 99=99.DK/NR
ELSE=OTHER

*QUESTION #10
DEFINE TIME_USED STRING
RECODE HOWLONG1 TO TIME_USED 1="1. 0-3 MO" 2="2. 4-6 MO"
3="3. -12 MO" 4="4. 1-2 YR" 5="5. 3-4 YR" 6="6. 5+ YR" 9="9. DK/NR"

*QUESTION #11
DEFINE CONTINUAL STRING
RECODE INTERRUPTI TO CONTINUAL 1="1. 0-3 MO" 2="2. 4-6 MO"
3="3. 7-12 MO" 4="4. 1-2 YR" 5="5. 3-4 YR" 6="6. 5+ YR" 9="9. DK/NR"
```

```
*QUESTION #12
DEFINE SPLYSOURCE STRING
RECODE SUPPLIES TO SPLYSOURCE 1="1.GOV HOSP" 2="2.GOV
FW" 3="3.SOC  MKT" 4="4.PRIV MD" 5="5.PHARMACY" 6="6.PRIV
HOS" 7="7.NGO CLIN" 8="8.NGO FW" 9=OTHER 99=DK/NR
*QUESTION #13
DEFINE EVERUSE_FP STRING
RECODE HUSBANDEVE TO EVERUSE_FP 1=YES 0=NO 9=DK/NR

*QUESTION #14
DEFINE LASTMETHOD STRING
RECODE LATESTMETH TO LASTMETHOD 1=1.TUBE 2=2.VAS
3=3.IUD 4=4.PILL  5=5.INJECT 6=6.NORPLANT 99=99.DK/NR
ELSE=OTHER

*QUESTION #15
DEFINE FUTURE_USE STRING
RECODE FUTURE TO FUTURE_USE 1=YES 0=NO 9=DK/NR

*QUESTION #16
DEFINE WHYNOT_USE STRING
RECODE PLANNINGNO TO WHYNOT_USE 1="1.WANT KID" 2="2.
HUSBN NO" 3="3.HEALTH" 4="4.RELIG RZ" 5="5.SIDE EFF"
6="6.NOTAVAIL" 7="7.STERIL" 8="8.BRESTFEED" 9="9.PREGNANT"
10="10.OTHER" 99="99.DK/NR"
*QUESTION #17
DEFINE CHWNAME STRING
RECODE COMMUNITY TO CHWNAME 1=YES 0=NO 9=DK/NR

*QUESTION #18
DEFINE CHWVISIT STRING
```

The following frequency distributions will be computed

```
RECODE LASTTHREEM TO CHWVISIT 1=YES 0=NO 9=DK/NR
FREQ AGE CHILD USINGFP METHOD_NOW TIME_USED CON
```

The following cross tabulations will be computed

```
TINUAL SPLYSOURCE EVERUSE_FP
FREQ LASTMETHOD FUTURE_USE WHYNOT_USE CHWNAME
CHWVISIT
SET PERCENTS=ON
TABLES AGE USINGFP
```

The following graphs will be prepared

```
TABLES CHILD USINGFP
TABLES SPLYSOURCE USINGFP
TABLES CHWNAME USINGFP
TABLES CHWVISIT USINGFP
PIE USINGFP
PIE METHOD_NOW
HISTOGRAM TIME__USED
HISTOGRAM SPLYSOURCE
```


Appendix B: Questionnaire design guidelines

General guidelines for designing questionnaires can be found in any standard textbook on survey research methods. The following are a few suggestions specifically related to rapid survey instrument design for PHC.

Physical layout

The way that the questionnaire is laid out on the page is important for both the interviewer and the coder. The questions should be clearly separated from one another. The response categories should be next to or directly beneath the questions so that they are easy to locate. The response categories should be clearly printed, separated from one another, and easy to distinguish. Instructions to the interviewer should be easily distinguishable from the questions so that the interviewer knows which items to read to the respondent. If some questions may be skipped, depending on the response, the next question should be clearly identified.

The type size used in the questionnaire should be easy to read. Questions and pages should be numbered so that the interviewer does not get lost.

Although all of the model questionnaires are presented the same way, there are other ways to lay them out. One of the easiest to use is the "matrix" format for the cluster registers, which allows 7-30 interviews to be entered on a single page. A variation of this is to have one questionnaire for the interviewer to read and one matrix-like tally sheet on which to record all the responses.

Question construction

Most rapid survey questions are constructed to permit "yes"/"no" responses. With a little thought, almost any question can be phrased this way. For example, instead of asking "What do you think about ORT," ask "Do you believe ORT is effective?"

Multiple choice questions can be **analysed** as "yes"/"no" questions if they can be recoded, as explained in Step 4.

Some of the model questions are phrased to test whether the respondent knows something, can do something, or has some PHC item on hand. This type of question may require some probing by the interviewer as well as an assessment of the appropriate response. For example, in the case of "Do you know what is meant by diarrhoea?" the interviewer would need to know the correct response and would then record it as "yes," meaning the

respondent **does know** what it means), or "no," **does not know** what it means.

Responses should be mutually exclusive. That is, there should be no overlap between responses, to avoid confusion. Be especially careful with age and multiple choice questions. A common mistake is to list overlapping categories for age, e.g., 1-5 yrs, 5-10, 10-15; rather than 1-4, 5-9, 10-14. Multiple choice questions often include several appropriate responses. For example, "What is the reason you don't attend the clinic?" could have several responses, e.g., too far away, too expensive, poor service. To avoid this, ask for the **major** reason and instruct the interviewer to code only one response.

Screening questions. Sometimes it is necessary to include questions that are not going to be analysed but which are necessary in order to determine if a respondent should be asked the next series of questions. An example: "What are the names of your children and how old are they?" This question is designed to provide the interviewer with the information needed to decide which child to gather information about, but the response would not be coded or analysed. Therefore, this type of question will usually not be precoded.

Marking responses. The model instruments provide spaces that the interviewer checks to indicate the response. Options include circling the code of the response, using an X to cross it out, and writing in the code.

Sequence of questions

Questionnaires are usually designed with an opening statement to be read by the interviewer to the respondent. This statement usually explains what the survey is about, who is sponsoring it, why it is being conducted, how the respondent was chosen to be interviewed, how long the interview will take, assurance that the responses will be confidential, and a request for permission to begin asking the questions. This statement can be written on each questionnaire or on a separate card that the interviewer carries.

The opening questions are usually factual and non-threatening to set a comfortable tone (age, number of children, etc.). The questions should follow a logical sequence. When the subject is changed it helps to have an explanatory statement for the interviewer to read. For example, "Now I am going to ask a few questions about your experience with the local CHW."

Many questionnaires are designed to get to the most important questions early in order to maintain the interest of the respondent. Demographic and other descriptive data are left for last. However, the rapid surveys are so short that this may not be an important strategy to incorporate.

Sometimes you need to skip some questions if they are not applicable to a respondent. Include instructions on the questionnaire that tell the interviewer when to skip and where to go next. For example:

Q 12. Has anyone in this household been sick during the last month?
___Yes (1) ___ No (2), go to Q22 ___ DK/NR (9), go to Q22

Precoding

The variables that are to be examined, e.g., age, sex, use of ORT, should be given a code number. In the model instruments, this number is the same as the question number. Sometimes a question includes more than one variable. In that case the response may include a code for each response, as in the Breast feeding, Growth monitoring and Immunization rapid survey instruments. For example:

Optional weighing to determine current nutritional status					
Name	Sex	Age (mo)	Wt. (kg)	Height	Remark
	(24)	(25)	(26)	(27)	

In this example four variables are coded in one item.

The responses should also be precoded. The convention used in the model questionnaires is to use 1 to mean "yes", 0 to mean "no" and 9 to mean "don't know" or "no response." Obviously, any other codes could be used. The important thing is to be consistent so that the interviewers will not become confused.

Some questions ask whether the respondent knows something in particular. In these cases a "no" means that he or she does not know, and would be coded 0. A code of 9 should not include "don't know," as that would be confusing. In the models, 9 means "no response."

Identification items

Questionnaires will need to include certain identifying information so that they can be sorted, classified, followed up, etc. The model questionnaires that follow include five standard identification items: 1) the number of the study, which is optional, unless a large number of studies will be carried out; 2) province number, which is also optional, unless the study is to be done in several provinces; but you can then substitute district, sub-district, village as appropriate; 3) interviewer name or code; 4) date of interview; and 5) respondent identification number. In this case a 3-4 digit

code is used, made up of the cluster number and the respondent's number, e.g., 01-01, 1009.

Other identification items that might be needed for special studies are: time of interview, address of household, telephone number, and national identification number (or social security number).

Code books

You can usually conduct a rapid survey without needing a code book, because these types of surveys are so short. But code books are very useful if your questionnaire isn't precoded, if it is long and complex, if many questions are multiple-choice, if the responses are to be coded by someone other than the interviewer, or if the survey is large. Most code books are useful in checking for errors, preparing analysis plans, and recoding.

Code books summarise the responses and their codes for each question. They also include the name of the variable and sometimes other useful information, such as the variable's length and format.

Variable name	Question number	Length	Variable value	Variable label
ADVICE	117	12	Where sought advice/treatment	
			Value	Label
			1	Government hospital
			2	Private hospital
			3	Health centre
			4	Private clinic
			5	Health post
			6	Private doctor
			7	Nurse/midwife
			8	Community health worker
			9	Traditional healer
			10	Pharmacy/drugstore
			11	Shop
			12	Other
			99	DK/NR
			BLANK	Not applicable
TREAT	129	1	Anything to treat diarrhoea	
			Value	Label
			1	Yes
			2	No
			8	DK/NR
			9	Missing value
			BLANK	Not applicable
TREATMENT	130	6	Given to treat diarrhoea	
			Value	Label
			1	Capsule
			2	Pill
			3	Syrup
			4	ORS sachet
			5	ORS home made
			6	Cereal
			7	Other
			9	DK/NR
			BLANK	Not applicable

Appendix C: Rapid survey questionnaires

GENERAL PHC
Community assessment of primary health care /health education

MATERNAL CARE
Antenatal care, safe delivery, and postnatal care
Family planning

CHILD CARE
Acute respiratory infections
Breast feeding
Diarrhoeal disease control/oral rehydration therapy
Childhood disabilities
Child immunization
Growth monitoring/nutrition education

COMMUNITY HEALTH
Water supply, hygiene, and sanitation

OTHER HEALTH CARE
Accidents and injuries
Chronic, non-communicable diseases
Malaria
Tuberculosis
Sexually-transmitted diseases, HIV/AIDS

MORBIDITY, MORTALITY AND FERTILITY
Vital events and health status
Child morbidity and mortality assessment
Adult morbidity and mortality assessment

The following instruments have been designed to collect the most important indicators of health knowledge, behaviour and status for each PHC service. The first instrument, Community assessment of PHC, covers the most common PHC services, plus some data on household composition, parity, drug supply, and service availability.

The instruments can be used as presented or modified as appropriate to any given situation. You are encouraged to "mix and match" questions and sections from the various questionnaires, add, delete, revise, and combine to adapt the instruments to your situation and needs.

The vital events, morbidity and mortality questionnaires can be added to other rapid surveys such as child immunization, family planning, etc. However, they will usually require much larger sample sizes. See the User's guide for guidelines.

The rapid surveys are designed for cluster samples, typically, 30 clusters of 7-10 respondents each. The responses should be "yes"/"no", or otherwise classifiable into dichotomous variables. Please note that these are only the instruments. Examples of how they can be modified and used with different sampling techniques are described in the User's guide.

Rapid survey questionnaire
Community assessment of primary health care

Complete ALL SECTIONS for each currently married woman aged 15-49. For women with a child under age two years (24 months), collect information for SECTIONS 2, 4, 5, 6, 8, and 9. If the woman has a second child under age two years, collect the information for the oldest child. If she has no children under age five years, SKIP SECTIONS 2, 4, 5, 6, 8, 9.

IDENTIFICATION

101. Study no ____ 102. Province no ____ 103. Cluster no ____
104. Interviewer no ____ 105. Respondent no ____ 106. Date of interview / /
107. Respondent age ____ 108. Respondent sex ____

NAME OF RESPONDENT _____

109. How many people live in this household: _____(total)
Married women of reproductive age (15-49): _____(in household)
Currently pregnant women: _____(in household)
Children less than 24 months of age: _____(in household)
Children 2-5 years old: _____(in household)

110. How many children do **you** have under two years of age?
____(no children.) If none, go to Q111
What are their names and how old are they?
Name:_____ Age (in months): _____ Sex (m/f):_____
Name:_____ Age (in months): _____ Sex (m/f):_____
Name:_____ Age (in months): _____ Sex (m/f):_____

111. How many live births have you had? _____(number) (If DK/NR enter 99.)
112. How many of these are still living? _____(number) (If DK/NR enter 99.)

113. How far away is the nearest health unit or health worker?
____(1) < 5 km/60 min. walk ____(2) > 5 km/60 min. walk ____ (9) DK/NR

114-7. Which of the following health services are available there?
14. Maternal and child health ____ (1) Yes ____(0) No ____(9) DK/NR
15. Family planning ____ (1) Yes ____(0) No ____(9) DK/NR
16. Immunization ____ (1) Yes ____(0) No ____(9) DK/NR
17. Medical care services ____ (1) Yes ____(0) No ____(9) DK/NR

118. Does anyone in this household need to use prescription or non-prescription drugs? ____(1) Yes ____(0) No, go to Q121 ____(9) DK/NR go to Q121
119. Are you able to get them easily?
____(1) Yes, go to Q121 ____(0) No ____(9) DK/NR
120. Why aren't you able to get them?

120. Why aren't you able to get them?
_____(1) Too far
_____(2) Too expensive
_____(3) Don't know where to get them
_____(4) Other: _____
_____(9) DK/NR

121. What is the name of the local Community Health Worker (CHW)?
_____(1) Knows (said name) _____(0) Does not know _____(9) NR

122. Has the local Community Health Worker visited or contacted you during the last three months? _____(1) Yes _____(0) No _____(9) DK/NR

INTERVIEWER: PLEASE CHECK OFF THE SECTIONS TO BE USED FOR THIS INTERVIEW.

_____Antenatal care, safe delivery, and postnatal care
_____Family planning
_____Acute respiratory infections
_____Breast feeding
_____Diarrhoeal disease control/oral rehydration therapy
_____Childhood disabilities
_____Child immunization
_____Growth monitoring/nutrition education
_____Water supply, hygiene, and sanitation
_____Accidents/trauma
_____Chronic, non-communicable diseases
_____Malaria
_____Tuberculosis
_____Sexually-transmitted diseases

GO TO Q200

Section 1: Antenatal care, safe delivery, and postnatal care

200. Have you been pregnant within the past 24 months?
_____(1) Yes _____(0) No, go to Q301

201. Did you receive antenatal care during your last pregnancy?
_____(1) Yes _____(0) No, go to Q204 _____(9) DK/NR, go to Q204

202. How many times did you get antenatal care? _____times (If DK/NR, enter 99.)

203. Which is the principal place where you received antenatal care?
_____(1) Hospital, health centre/clinic
_____(2) Local TBA/healer, other non-prof.
_____(9) DK/NR

204. Did you receive a tetanus vaccination during your last pregnancy?
_____(1) Yes _____(0) No, go to Q206 _____(9) DK/NR, go to Q206

205. How many vaccinations did you receive?
_____(1) One _____(2) Two _____(3) Three or more _____(9) DK/NR

206. What was the outcome of your most recent pregnancy?
_____(1) Live birth
_____(2) Still birth
_____(3) Abortion/miscarriage, go to Q301
_____(9) DK/NR, go to Q301

207. Where did the delivery take place?
_____(1) Home _____(2) Hospital/clinic _____(9)DK/NR

208. Who was the main person attending the delivery?
_____(1) Doctor, nurse, nurse-midwife
_____(2) Trained TBA, CHW
_____(3) Untrained TBA, CHW, relative, neighbour
_____(9) DK/NR

GO TO Q 301

Section 2: Family planning

301. Are you or your husband currently using any family planning method?
____(1) Yes ____(0) No, go to Q304 ____(9) DK/NR, go to Q304

302. Which method are you/your husband using now?
(select principal method only)
____ (1) Tubectomy
____ (2) Vasectomy
____ (3) IUD
____ (4) Oral pill
____ (5) Injection
____ (6) NORPLANT
____ (7) Condom
____ (8) Foam, emco, jelly, cream, diaphragm
____ (9) Safe period, withdrawal, abstinence
____(10) Other: _____
____(99) DK/NR

303. What is the main source of your family planning service or supplies?
(Record response and go to Q400.)
____(1) Govt hospital/clinic
____(2) Govt. field worker
____(3) Social marketing prog.
____(4) Private physician
____(5) Pharmacy
____ (6) Private hospital/clinic
____ (7) NGO clinic
____ (8) NGO field worker
____ (9) Other: _____
____(99) DK/NR

304. Do you/your husband intend to practice family planning in the future?
____(1) Yes ____(0) No ____ (9) DK/NR

305. What is the most important reason you are not using family planning now?

____ (1) Want more children	____ (6) Method/service unavailable
____ (2) Husband objects	____ (7) Sterility
____ (3) Health reasons	____ (8) Breast feeding
____ (4) Religious reasons	____ (9) Pregnant
____ (5) Fear side effects	____(10) Other: _____
____(99) DK/NR	

GO TO Q400

Section 3: Acute respiratory infections

400. Check Q110 or ask: Do you have children under the age of two years?
_____(1) Yes _____(0) No, go to Q502

401. Have any of your children been sick from a respiratory illness within the last two weeks?
_____(1) Yes _____(0) No, go to Q501 ____(9) DK/NR, go to Q501

402. Did you seek treatment for the illness?
_____(1) Yes _____(0) No, go to Q501 ____(9) DK/NR, go to Q501

403. Did you give the medicine for the prescribed length of time? (Probe for correct response)
_____(1) Yes _____(0) No _____(9) DK/NR

GO TO Q501

Section 4: Breast feeding

501. Are you now breast feeding your baby or a child under age two years?
_____(1) Yes, go to Q503 ____(0) No, go to Q502
_____(9) DK/NR, go to Q502

502. At what age of the baby did you stop breast feeding? ____months.
_____(9) DK/NR

503. At what age of the baby will you/did you begin giving it supplementary foods? ____months. _____(9) DK/NR

GO TO Q601

Section 5: Diarrhoeal disease control/oral reyhdration therapy

601. Has (name of oldest child under age two years) had diarrhoea in the last month?
____(1) Yes ____(0) No, go to Q603 ____(9) DK/NR, go to Q603

602. Did you give your child ORS? ____(1) Yes ____(0) No ____(9) DK/NR

603. Do you know how to mix ORS solution? If no, please explain (explanation includes the following: pour the contents of the ORS packet into the correct amount of clean water, e.g., cooled boiled water or rainwater).
____(1) Yes, knows how to mix ORS solution ____(0) No ____(9) DK/NR

GO TO Q701

Section 6: Childhood disabilities

701. Is any child afflicted by disability?
____(1) Yes, go to Q702 ____(0) No, go to Q801 ____(9) DK/NR, go to Q801

702. What type of disability? Please fill the following:
Disability type
____(1) Movement
____(2) Deformity
____(3) Hearing
____(4) Blindness
____(5) Speech
____(6) Behaviour
____(7) Other_____
____(9) DK/NR

703. Do you know how your child became disabled? (Probe for explanation.)
____(1) Yes ____(0) No ____(9) NR

704. Do you know how to prevent a similar disability from occurring again? (Probe for correct response: e.g., immunization, safe maternal and child care, iodine, Vitamin A.)
____(1) Yes ____(0) No ____(9) NR

705. Have you sought treatment or therapy for your child?
____(1) Yes ____(0) No, go to Q707 ____(9) DK/NR, go to Q707

706. Where has your child received treatment?
Record response and, go to Q801
____(1) Therapy or treatment centres
____(2) Community groups
____(3) Special schools
____(4) Other_____

707. Do you know of available centres which provide services to help your child?
Therapy or treatment centres: ____(1) Yes ____(0) No ____(9) DK/NR
Community groups: ____(1) Yes ____(0) No ____(9) DK/NR
Special schools: ____(1) Yes ____(0) No ____(9) DK/NR
Other _____ ____(1) Yes ____(0) No ____(9) DK/NR

GO TO Q801

Section 7: Child immunization

801. Do you know at what age children should be vaccinated against measles?
___(1) Yes (9-12 months) ___(0) No ___(9) DK/NR

802. Has (name of oldest child under age 2) been immunized?
___(1) Yes ___(0) No, go to Q901 ___(9) DK/NR, go to Q901

803. Do you have the immunization card for this child?
___(1) Yes, has card correctly filled out
___(2) Yes, has card but incorrectly filled out
___(0) No, does not have card
___(9) DK/NR

Check card or probe for immunization history. Check each vaccination received:

BCG	DPT1	DPT2	DPT3	Pol1	Pol2	Pol3	Measles
___	___	___	___	___	___	___	___
804	805	806	807	808	809	810	811

812. For children aged 12-24 months: Child is fully vaccinated (BCG, DPT3, Polio3, Measles)
___(1) Yes ___(0) No ___(9) DK/NR

GO TO Q 901

Section 9: Growth monitoring/nutrition education

901. Is (name of oldest child under age 2) registered for growth monitoring?
___(1) Yes ___(0) No ___(9) DK/NR

902. Has this child ever been weighed by a health worker, nurse, or doctor?
___(1) Yes ___(0) No, go to Q1001 ___(9) DK/NR, go to Q1001

903. Please show me your child's growth card. (Show sample card.)
___(1) Yes, has growth card ___(0) No, cannot find it, go to Q1001

904. (Interviewer: record weighing history from growth card): Total no. times weighed ____

905. Times weighed last 3 months ____

906. Can you explain the information on the growth card to me?
___(1) Yes, mother can correctly interpret the information
___(0) No, mother cannot interpret the information or incorrectly interprets

GO TO Q1001

Section 9: Water supply, hygiene, and sanitation

1001. Where do you usually get your drinking water?
_____(1) Clean source: faucet/tap, pipe, covered well, other
_____(2) Unclean source: open well, pond, dirty stream, other
_____(9) DK/NR

1002. Do you usually boil water for drinking?
___(1) Yes ___(0) No ___(9) DK/NR

1003. How long does it take you to get to your source of water?
_____(1) Less than 15 minutes walk ___(2) More than 15 minutes walk
_____(9) DK/NR

1004. Do you have enough water all year?
_____(1) Yes ___(0) No ___(9) DK/NR

1005. What type of sanitary facility do you use?
_____(1) Clean facility: water-seal, pit privy, WC
_____(2) Unclean facility: open field, bucket
_____(9) DK/NR

GO TO Q1101

Section 10: Accidents and injuries

1101. Has anyone in this household had an injury in the past year?
___(1) Yes ___(0) No, go to Q1106 ___(9) DK/NR, go to Q1106

1102. What was the injury?
_____(1) Fall ___(4) Poisoning
_____(2) Occupational injury ___(5) Other (specify)_____
_____(3) Traffic injury ___(9) DK/NR

1103. What was the outcome of the injury?
_____(1) Permanent disability _____(4) Other
_____(2) Lost time away from normal activity _____(9) DK/NR
_____(3) Death

1104. Where did they receive treatment?

_____(1) Hospital
_____(2) Health care centre
_____(3) CHW
_____(4) Traditional healer
_____(5) Other (specify)_____
_____(9) DK/NR

1105. What was the treatment?

_____(1) Treatment for wounds or bleeding
_____(2) Resuscitation
_____(3) Treatment for poisoning
_____(4) Setting or splinting bones
_____(5) Treatment for shock
_____(6) Treatment for head, neck, or back injury
_____(7) Treatment for burns
_____(9) DK/NR

1106. Where are the nearest emergency care facilities? (Probe for correct answer.)

_____(1) Yes (respondent knows correct answer)
_____(2) No (respondent does not know correct answer)
_____(9) DK/NR

GO TO Q1201

Section 11: Chronic, non-communicable diseases

Diabetes

1201. Have you or any household member ever been diagnosed with diabetes?

_____(1) Yes _____(0) No, go to Q1204 _____(9) DK/NR, go to Q1204

1202. Is the prescribed treatment being followed? (Probe for explanation.)

_____(1) Yes _____(0) No _____(9) DK/NR

1203. Do you and your family members know how to handle a diabetic emergency? (Probe for explanation.)

_____(1) Yes _____(0) No _____(9) DK/NR

Hypertension

1204. Have you or any household member ever been told by a health care provider that you have hypertension?

_____(1) Yes _____(0) No, go to Q1208 _____(9) DK/NR, go to Q1208

1205. Have you been prescribed medication or a special diet to control your hypertension?

_____(1) Yes _____(0) No, go to Q1207 _____(9) DK/NR, go to Q1207

1206. Do you follow the prescribed diet or medication plan?

_____(1) Yes _____(0) No _____(9) DK/NR

1207. Have you ever been told by a health care provider you have complications due to hypertension?

_____(1) Yes _____(0) No _____(9) DK/NR

Anaemia

1208. Have you or any household member ever been diagnosed as having anaemia?
_____(1) Yes _____(0) No _____(9) DK/NR

1209. Does anyone in this household have anaemia now?
_____(1) Yes _____(0) No, go to Q1301 _____(9) DK/NR, go to 1301

1210. Has this person been prescribed a special diet or supplements to control the anaemia?
_____(1) Yes _____(0) No, go to Q1301 _____(9) DK/NR, go to Q1301

1211. Is the prescribed treatment being followed? (Probe for explanation.)
_____(1) Yes _____(0) No _____(9) DK/NR

GO TO Q1301

Section 12: Malaria

Interviewer: ask the questions in this section only in areas where malaria is endemic

1301. Do you know how malaria is spread? (Probe for explanation: Malaria is spread by mosquitoes.)
_____(1) Yes _____(0) No _____(9) NR

1302. What are you currently doing to protect yourself and your household members against malaria?

Using mosquito nets?	_____(1) Yes	_____(0) No	_____(9) NR
Using household sprays?	_____(1) Yes	_____(0) No	_____(9) NR
Eliminating standing water?	_____(1) Yes	_____(0) No	_____(9) NR
Using anti-malarial drugs?	_____(1) Yes	_____(0) No	_____(9) NR
Others?	_____(1) Yes	_____(0) No	_____(9) NR

1303. Have you or any household member experienced unexplained and/or repeated fevers within the last month? _____(1) Yes _____(0) No _____(9) NR

1304. Have you or any household member experienced vomiting, fits, or convulsions?
_____(1) Yes _____(0) No _____(9) NR

1305. Have you or any household member been given a blood test for malaria?
_____(1) Yes _____(0) No _____(9) DK/NR

1306. Have you or any household member been treated for malaria in the last six months?
_____(1) Yes _____(0) No, go to Q1401 _____(9) DK/NR, go to Q1401

1307. What treatment was received?

Anti-malarials (probe for type)	____(1) Yes	____(0) No	____(9) NR
Antipyretic drugs:_____	____(1) Yes	____(0) No	____(9) NR
Other:_____	____(1) Yes	____(0) No	____(9) NR

1308. If anti-malarials have been prescribed, do you know the correct treatment schedule? (Probe for explanation.) ____(1) Yes ____(0) No ____(9) NR

GO TO Q1401

Section 13: Tuberculosis

1401. Have you or any family members ever been diagnosed/tested for TB? (Sputum or skin test)
____(1) Yes ____(0) No ____(9) DK/NR

1402. Have you ever sought treatment of TB for yourself or your family?
____(1) Yes ____(0) No, go to Q1501 ____(9) DK/NR, go to Q1501

1403. If so, is or was treatment taken for the prescribed length of time? (Probe for explanation.)
____(1) Yes ____(0) No ____(9) DK/NR

GO TO Q1501

Section 14: Sexually-transmitted diseases, HIV/AIDS

1501. Do you know what is meant by a sexually-transmitted disease? (Probe for explanation and example.)
____(1) Yes ____(0) No ____(9) DK/NR

1502. Do you know what HIV or AIDS is? (Probe for explanation: HIV is the virus that infects a person and eventually causes a person to get AIDS.)
____(1) Yes ____(0) No ____(9) DK/NR

1503. Do you know how people get STDs, HIV/AIDS? (Probe for correct answers.)
____(1) Yes ____(0) No ____(9) DK/NR

1504. What is your primary source of STD/HIV/AIDS knowledge?
____(1) Friends/relatives ____(4) Newspaper/magazine
____(2) CHW or other health staff ____(5) Other source: _____
____(3) Radio ____(9) DK/NR

1505. What are you doing to protect yourself against STDs or HIV/AIDS? (Probe for explanation.)

Using a condom:	____(1) Yes	____(0) No	____(9) DK/NR
Using safe sex practices	____(1) Yes	____(0) No	____(9) DK/NR

1506. Have you ever been diagnosed with STD, HIV/AIDS?
____(1) Yes ____(0) No ____(9) DK/NR

1507. Have you ever used a condom? ____(1) Yes ____(0) No ____(9) DK/NR

1508. Do you know how to use a condom correctly? (Probe for correct response.)
____(1) Yes ____(0) No ____(9) DK/NR

1509. Where have you obtained condoms during the last 6 months?
____(1) Govt. hospital/clinic/health centre
____(2) Private hospital/clinic/health centre
____(3) Local dispensary/pharmacy
____(4) Health worker delivered at home
____(5) Other _____
____(9) DK/NR

1510. Can a person who looks healthy be infected with STDs/HIV?
____(1) Yes ____(0) No ____(9) DK/NR

1511. Can a person get HIV through ordinary social contact like shaking hands with someone infected with the virus?
____(1) Yes ____(0) No ____(9) DK/NR

1512. Can a pregnant woman who is infected with HIV give the virus to her unborn child?
____(1) Yes ____(0) No ____(9) DK/NR

1513. Should an HIV infected mother continue to breast feed?
____(1) Yes ____(0) No ____(9) DK/NR

1514. Can STDs/HIV be transmitted by having sex with someone who is infected with STDs/HIV?
____(1) Yes ____(0) No ____(9) DK/NR

1515. Is there a cure for AIDS? ____(1) Yes ____(0) No ____(9) DK/NR

This concludes the interview. Thank you for taking part in this survey.

Rapid survey questionnaire
Health education

Complete for each household. Interview the female head of household, if possible.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. How many people live in this household: ____(total)

10. Is anyone in this household a married woman of reproductive age?
____(1) Yes ____(0) No, go to Q12 ____(9) DK/NR, go to Q12

Has a health worker visited this household in the last three months to discuss:

Family planning?	____(1) Yes	____(0) No	____(9) DK/NR
Malaria?	____(1) Yes	____(0) No	____(9) DK/NR
Tuberculosis?	____(1) Yes	____(0) No	____(9) DK/NR
STDs?	____(1) Yes	____(0) No	____(9) DK/NR
Water and sanitation	____(1) Yes	____(0) No	____(9) DK/NR
Chronic/noncomm. diseases?	____(1) Yes	____(0) No	____(9) DK/NR
Others (specify)?	____(1) Yes	____(0) No	____(9) DK/NR

Do you know the importance of the topic(s) discussed? (Probe.)
____(1) Yes ____(0) No ____(9) DK/NR

11. Is anyone in this household pregnant?
____(1) Yes ____(0) No ____(9) DK/NR

12. Are there children under 24 months old in this household?
____(1) Yes ____(0) No ____(9) DK/NR

13. Are there children 24-60 months old in this household?
____(1) Yes ____(0) No ____(9) DK/NR

14. Has a health worker visited or contacted you in the last 3 months?
____(1) Yes ____(0) No ____(9) DK/NR

15. What type of health worker visited (check all that apply)?
____(1) CHW
____(2) Public health nurse
____(3) Midwife
____(4) Doctor
____(5) Other (specify)_____
____(9) DK/NR

16. What did the health worker discuss (check all that apply)?

A. Maternal care			
Antenatal care/delivery	(1) Yes	(0) No	(9) DK/NR
Safe delivery	(1) Yes	(0) No	(9) DK/NR
Postnatal care	(1) Yes	(0) No	(9) DK/NR
B. Child care			
Acute respiratory infections	(1) Yes	(0) No	(9) DK/NR
Breast feeding	(1) Yes	(0) No	(9) DK/NR
Diarrhoeal disease control	(1) Yes	(0) No	(9) DK/NR
Oral rehydration therapy	(1) Yes	(0) No	(9) DK/NR
Childhood disabilities	(1) Yes	(0) No	(9) DK/NR
Child immunizations	(1) Yes	(0) No	(9) DK/NR
Growth monitoring/ nutrition education	(1) Yes	(0) No	(9) DK/NR
C. Community health			
Water supply	(1) Yes	(0) No	(9) DK/NR
Hygiene	(1) Yes	(0) No	(9) DK/NR
Sanitation	(1) Yes	(0) No	(9) DK/NR
D. Other health care			
Accidents and injuries	(1) Yes	(0) No	(9) DK/NR
Chronic/noncomm. diseases	(1)Yes	(0) No	(9) DK/NR
Malaria	(1) Yes	(0) No	(9) DK/NR
Tuberculosis	(1) Yes	(0) No	(9) DK/NR
Sexually-transmitted diseases, HIV/AIDS	(1) Yes	(0) No	(9) DK/NR

17. Do you believe you have enough information about these topics or do you need to know more?

A. Maternal care	Know more	Enough	DK/NR
Antenatal care/delivery	(1) Yes	(0) No	(9) DK/NR
Safe delivery	(1) Yes	(0) No	(9) DK/NR
Postnatal care	(1) Yes	(0) No	(9) DK/NR
B. Child care			
Acute respiratory infections	(1) Yes	(0) No	(9) DK/NR
Breast feeding	(1) Yes	(0) No	(9) DK/NR
Diarrhoeal disease control	(1) Yes	(0) No	(9) DK/NR
Oral rehydration therapy	(1) Yes	(0) No	(9) DK/NR
Childhood disabilities	(1) Yes	(0) No	(9) DK/NR
Child immunizations	(1) Yes	(0) No	(9) DK/NR
Growth monitoring/ nutrition education	(1) Yes	(0) No	(9) DK/NR

C. Community health

Water supply	____(1) Yes	____(0) No	____(9) DK/NR
Hygiene	____(1) Yes	____(0) No	____(9) DK/NR
Sanitation	____(1) Yes	____(0) No	____(9) DK/NR

D. Other health care

Accidents and injuries	____(1) Yes	____(0) No	____(9) DK/NR
Chronic/noncomm. diseases	____(1) Yes	____(0) No	____(9) DK/NR
Malaria	____(1) Yes	____(0) No	____(9) DK/NR
Tuberculosis	____(1) Yes	____(0) No	____(9) DK/NR
Sexually-transmitted diseases, HIV/AIDS	____(1) Yes	____(0) No	____(9) DK/NR

18. What is the name of the local Community Health Worker (CHW)?
_____(1) Knows (said name) _____(0) Does not know _____(9) NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Antenatal care, safe delivery, and postnatal care

Complete for all women currently living in the household who have had a pregnancy outcome during the past 24 months. The outcome may be a live birth, stillbirth, or abortion. If the woman has had more than one pregnancy, ask about the most recent pregnancy outcome.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. How many live births have you had so far? Number of live births: ____
____(99) DK/NR

10. Did you receive antenatal care during your last pregnancy?
___(1) Yes ___(0) No, go to Q14 ___(9) DK/NR, go to Q14

11. How many times did you get antenatal care? _____times
(If DK/NR, enter 99)

12. How many months had you been pregnant before you got antenatal care?
____(1) 3 mo. (first trimester)
____(2) 4-6 mo. (second trimester)
____(3) 7-9 mo. (third trimester)
____(9) DK/NR

13. Which is the principal place you received antenatal care?
____(1) Hospital
____(2) Health centre/clinic
____(3) Private hospital/clinic
____(4) Local TBA/healer
____(5) Other site of care specify: _____
____(9) DK/NR

14. Did anyone advise you to get antenatal care? ___ (0) No
Yes:
____(1) Physician, nurse
____(2) Community nurse/midwife
____(3) CHW/volunteer
____(4) Traditional birth attendant
____(5) Mother, relative
____(6) Friend, neighbour
____(7) Other: _____
____(9) DK/NR

15. Did you receive a tetanus vaccination during your last pregnancy?
_____(1) Yes _____(0) No, go to Q17 _____(9) DK/NR, goto Q17

16. How many vaccinations did you receive?
_____(1) One _____(2) Two _____(3) Three or more _____(9) DK/NR

17. During your pregnancy, did you take iron pills to keep you strong?
_____(1) Yes _____(0) No _____(9) DK/NR

18. What was the outcome of your most recent pregnancy?
_____(1) Live birth
_____(2) Still birth
_____(3) Abortion/miscarriage, go to Q20
_____(9) DK/NR, go to Q20

19. Where did the delivery take place?
_____(1) Home _____(2) Hospital/clinic _____(9) DK/NR

20. Who was the main person attending the delivery?
_____(1) Doctor, nurse, nurse-midwife
_____(2) Trained TBA, CHW
_____(3) Untrained TBA, CHW
_____(4) Relative, neighbour, friend
_____(5) Other: _____
_____(9) DK/NR

21. What is the name of the local Community Health Worker (CHW)?
_____(1) Knows (said name) _____(0) Does not know _____(9) NR

22. Has the local Community Health Worker visited or contacted you during the last three months?
_____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Family planning

Complete for all married women aged 15-49 years who are currently living in the household.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. Are you currently married or living with a partner?
   ___(1) Yes, go to Q10 ___(0) No, go to Q24 ___(9) DK/NR, go to Q24
10. How many living children do you have? ____ (if DK/NR, enter 99)
11. Have you given birth in the past 12 months?
    ___(1) Yes, go to Q12 ___(0) No, go to Q13 ___(9) DK/NR, go to Q13
12. When was the child born? ____MM/____YR DK/NR ____(99)
13. Can you name one modern method of contraception? (Probe.)
    ___(1) Yes ___(0) No, go to Q15 ___(9) DK/NR, go to Q15
14. Do you know where you can obtain this method? (Probe.)
    ___(1) Yes ___(0) No ___(9) NR
15. Are you or your husband currently using any family planning method?
    ___(1) Yes ___(0) No, go to Q20 ___(9) DK/NR, go to Q20
16. Which method are you/your husband using now?
    (Select principal method only.)
    ___ (1) Tubectomy ___ (6) NORPLANT ___ (99) DK/NR
    ___ (2) Vasectomy ___ (7) Condom
    ___ (3) IUD ___ (8) Foam, emco, jelly, cream, diaphragm
    ___ (4) Oral pill ___ (9) Safe period, withdrawal, abstinence
    ___ (5) Injection ___(10) Other:_____
    ___(99) DK/NR
17. For how long have you been continually using (current method)?
    ___(1) <3 months ___(4) 1-2 years
    ___(2) 4-6 months ___(5) 3-4 years
    ___(3) 7-12 months ___(6) 5 years or more ___(9) DK/NR

18. For how long have you been continually practicing family planning, i.e., continually using one method or another without interruption?
_____(1) <3 months _____(3) 7-12 months _____(5) 3-4 years
_____(2) 4-6 months _____(4) 1-2 years _____(6) 5 years or more
_____(9) DK/NR

19. What is the main source of your family planning service or supplies?
_____(1) Govt. hospital/clinic _____ (6) Private hospital/clinic
_____(2) Govt. field worker _____ (7) NGO clinic
_____(3) Social marketing prog _____ (8) NGO field worker
_____(4) Private physician _____ (9) Other:_____
_____(5) Pharmacy _____(99) DK/NR

go to Q24

20. If you are not using family planning now, have you or your husband ever used any method in the past?
_____(1) Yes _____(0) No, go to Q22 _____(9) DK/NR, go to Q22

21. Which method did you/your husband use most recently?
(Select latest method only.)
_____(1) Tubectomy _____ (6) NORPLANT
_____(2) Vasectomy _____ (7) Condom
_____(3) IUD _____ (8) Foam, emco, jelly, cream, diaphragm
_____(4) Oral pill _____ (9) Safe period, withdrawal, abstain
_____(5) Injection _____(99) Other:_____

22. Do you/your husband intend to practice family planning in the future?
_____(1) Yes _____(0) No _____ (9) DK/NR

23. What is the most important reason you are not using family planning now?
_____ (1) Want more children _____ (6) Method/service unavailable
_____ (2) Husband objects _____ (7) Sterility
_____ (3) Health reasons _____ (8) Breast feeding
_____ (4) Religious reasons _____ (9) Pregnant
_____ (5) Fear side effects _____(10) Other:_____
_____(99) DK/NR

24. What is the name of the local Community Health Worker?
_____(1) Knows (said name) _____(0) Does not know _____(9) No response

25. Has the Community Health Worker visited or contacted you during the last three months?
_____(1) Yes _____(0) No _____ (9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Acute respiratory infections

Complete for women with children under five years of age currently living in the household.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. How many living children do you have under five years of age?
____ children (If DK/NR, enter 99.)
What are their names and ages?
Name: _____ Age:____ (in months) Sex:____(M/F)
Name: _____ Age:____(in months) Sex:____(M/F)
Name: _____ Age:____(in months) Sex:____(M/F)

10. How many children <5 sleep in the same room as adults or other children?
____ DK/NR (99)

11. How many people in your household smoke inside the house?
____ smokers (If DK/NR, enter 99.)

12. Are open fires for cooking or heating used inside your house?
____(1) Yes ____(0) No ____(9) DK/NR

13. Have any of your children been sick with a respiratory illness within the last 2 weeks?
____(1) Yes ____(0) No, go to Q18 ____(9) DK/NR, go to Q18

14. Did you seek treatment for the most recent episode?
____(1) Yes ____(0) No, go to Q18 ____(9) DK/NR, go to Q18

15. Where did you seek treatment?
____(1) Treated at home
____(2) Visited the health centre
____(3) Contacted the CHW
____(4) Other:_____
____(9) DK/NR

16. What treatment were you given?
    _____(1) Anti-microbial drugs
    _____(2) Bronchodilator and/or cough mixture (locally determined)
    _____(3) Antipyretic drugs
    _____(4) Other:_____
    _____(9) DK/NR

17. Did you take the medicine for the prescribed length of time? (Probe for correct response.)
    _____(1) Yes _____(0) No _____(9) DK/NR

18. What is the name of the local Community Health Worker (CHW)?
    _____(1) Knows (said name) _____(0) Does not know _____(9) NR

19. Has the CHW visited or contacted you in the last three months?
    _____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Breast feeding

Complete for the oldest child under two years of age currently living in the household. Interview the mother of the child, if possible. See questionnaire on **Growth monitoring/nutrition education** for related questions.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. How many living children do you have under two years of age?
   ____ (no. children) If none, terminate the interview.
10. Are you now breast feeding your youngest child?
    ____(1) Yes ____(0) No ____(9) DK/NR
11. After your baby was born, when did you begin breast feeding?
    ____(1) Within 3 hours ____(2) 3-12 hours
    ____(3) 13-24 hours ____(4) >24 hours
    ____(5) Not breast-fed, go to Q16 ____(9) DK/NR, go to Q16
12. Did you give the baby the colostrum (local word)?
    ____(1) Yes, go to Q14 ____(0) No, go to Q13 ____(9) DK/NR, go to Q13
13. Why didn't you give the baby the colostrum (local word)?
    ____(1) Problem with breast milk ____(3) Other
    ____(2) Baby could not suck ____(4) DK/NR
14. Do you know why it is important to give the baby the colostrum (local word)? (Probe.)
    ____(1) Yes, mother knows correct reason
    ____(0) No, mother names incorrect reason
    ____(9) DK/NR
15. At what age of the baby will you/did you stop breast feeding?
    ____months DK/NR ____(9)
16. At what age will you/did you begin giving your baby formula or milk other than breast milk? ____months ____(9) DK/NR
17. Water? ____months ____(9) DK/NR
18. Other liquids? ____months ____(9) DK/NR
19. Solid foods? ____months ____(9) DK/NR

Questions about breast feeding education

20. Did any health worker teach you about the benefits of breast feeding?
_____(1) Yes _____(0) No _____(9) DK/NR

21. Can you explain why it is important to breast feed? (Probe.)
_____(1) Knows _____(0) No, does not know _____(9) No response

22. Were you taught about the supplemental foods and when they should be introduced? (Probe.)
_____(1) Yes, does know _____(0) No, does not know _____(9) NR

23. Were you taught how to care for your breasts? (Probe.)
_____(1) Yes _____(0) No _____(9) DK/NR

24. What is the name of the local Community Health Worker (CHW)?
_____(1) Knows (said name) _____(0) Does not know _____(9) NR

25. Has the CHW visited or contacted you in the last 3 months?
_____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Diarrhoeal disease control/ORT

Complete for first woman encountered who is currently living in the household and who has a child under two years of age. If the woman has more than one child under two, take the information for the oldest child under age two. See Water, sanitation and hygiene questionnaire for related questions on diarrhoeal disease control.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT_____

9. How many children do you have under two years of age?
_____(no. children) If none, terminate interview.

   What are their names and how old are they?

   Name:_____ Age (in months): _____ Sex (m/f):_____
   Name:_____ Age (in months): _____ Sex (m/f):_____
   Name:_____ Age (in months): _____ Sex (m/f):_____

10. Do you know what is meant by "diarrhoea?" (Probe for explanation: Three or more watery stools within past 24 hours?)
_____(1) Knows _____(0) Does not know _____(9) No response

    Explain what WE mean by diarrhoea and say, "I would like to ask you some questions about diarrhoea among your young children."

11. Has (name of oldest child under 2) had diarrhoea in the last month?
_____(1) Yes _____(0) No _____(9) DK/NR, go to Q15

12. How long did it last (_____hours; _____days).
Classify as "severe" if three or more days.
_____(1) Severe _____(2) Not severe _____(9) DK/NR

13. Did you do anything to treat it or just let it run its course?
_____(1) Treated it
_____(2) Let it run its course, go to Q15
_____(9) DK/NR, go to Q15

14. How did you treat it?
    _____ (1) Treated it myself with packet ORS
    _____ (2) Treated it myself with homemade SSS
    _____ (3) Treated it myself with gruel/cereal-based sol.
    _____ (4) Took child to relative
    _____ (5) Took child to neighbour
    _____ (6) Took child to local health worker
    _____ (7) Took child to CHW health provider
    _____ (8) Took child to health clinic, hospital
    _____ (9) Other (specify): _____
    _____(99) DK/NR

15. Have you ever heard of ORT, ORS, SSS or (local name)?
    ____(1) Yes: _____ Specify, if answer to Q14 was 1, 2, or 3.
    ____(0) No, go to Q21
    ____(9) DK/NR, go to Q21

16. Is there any source of ORS in your village (around here)?
    _____(1) Yes _____(0) No _____(9) DK/NR

17. Is there a person in your village (around here) who has been trained to use ORS?
    _____(1) Yes _____(0) No _____(9) DK/NR

18. Do you know how to mix ORS? (Probe.)
    If "no," please explain, explanation includes the following:
    Pour the contents of the ORS packet into the correct amount of clean water, e.g., cooled boiled water or rainwater.
    _____(1) Yes, knows how to mix ORS _____(0) Does not know _____(9) NR

19. How long can this solution be used?
    _____(1) Knows (1 day) _____ (0) Does not know _____(9) NR

20. How long can you administer ORS to a child with diarrhoea?
    ____(1) Knows (until the diarrhoea ends) ____(0) Does not know _____(9) NR

21. Do you give extra fluids during diarrhoea?
    ____(1) Yes (If any of those listed are mentioned) ____(0) No ____(9) DK/NR
    a. gruel? ____Yes ____No
    b. soup? ____Yes ____No
    c. rice water? ____Yes ____No
    d. milk solutions with twice the water? ____Yes ____No
    e. other fluid: _____ Yes ____No

22. If the child is still breast feeding, do you continue breast feeding during diarrhoea?
    _____(1) Yes _____(0) No _____(9) DK/NR

23. When your child has diarrhoea how often do you feed it?
_____(1) At least every 3-4 hours
_____(0) Less often than every 3-4 hours
_____(9) DK/NR

24. What is the name of the local Community Health Worker (CHW)?
_____(1) Knows (said name) _____(0) Does not know _____(9) NR

25. Has the local CHW come to visit you in the last three months?
_____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Childhood disabilities

Complete for head of household or primary caretaker in the home regardless of the presence/absence of disabled persons. Disabled persons will refer to those children who are crippled, who have trouble moving, speaking, seeing, hearing, or learning, and who have physical, mental, or emotional handicaps.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. How many children do you have? ___ no. of children

10. What are their names, ages, type of disability?

Name _____	Name _____
Age ___ Sex ___ (M/F)	Age ___ Sex ___ (M/F)
Disability type	Disability type
__(1) Movement	__(1) Movement
__(2) Deformity	__(2) Deformity
__(3) Hearing	__(3) Hearing
__(4) Blindness	__(4) Blindness
__(5) Speech	__(5) Speech
__(6) Behaviour	__(6) Behaviour
__(7) Other _____	__(7) Other _____
__(9) DK/NR	__(9) DK/NR

11. How did your child become disabled?
____(1) Illness ____(3) Injury
____(2) Birth ____(4) Other: _____ (9) DK/NR

12. Do you know how to prevent a similar disability from occurring again? (Probe for correct responses, e.g., immunization, safe maternal and child care, Vit A.)
____(1) Yes ____(0) No ____(9) DK/NR

13. Have you sought treatment or therapy for your child?
____(1) Yes ____(0) No, go to Q15 ____(9) DK/NR, go to Q15

14. Where did your child receive treatment or therapy?
____(1) Therapy or treatment centre ____(4) Other
____(2) Community group ____(9) DK/NR
____(3) Special school

15. What are the available centres which could provide services to help your child?
    _____(1) Therapy or treatment centre
    _____(2) Community group
    _____(3) Special school
    _____(4) Other
    _____(9) DK/NR

16. What is the name of the local Community Health Worker (CHW)?
    _____(1) Knows (said name) _____ (0) Does not know _____(9) NR

17. Has a community health worker visited or contacted you during the past three months?
    _____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Child immunization

Complete for the oldest child under two years of age currently living in the household. Interview the mother of the child, if possible. See questionnaire on antenatal care for related questions on tetanus toxoid immunization.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. How many living children do you have under two years of age?
   ____ (no. children) If none, terminate the interview.

   What are their names and how old are they?
   Name: _____ Age (in months): ____ Sex (m/f): ____
   Name: _____ Age (in months): ____ Sex (m/f): ____
   Name: _____ Age (in months): ____ Sex (m/f): ____

10. Has anyone from the health centre ever talked to you about vaccinating your child(ren)? ____(1) Yes ____(0) No ____(9) DK/NR

11. Do you know which childhood diseases can be prevented by immunization? (Check all named. Must have one correct answer for "yes" response.)

    ____Diphtheria ____Whooping cough ____Tetanus
    ____Measles ____Tuberculosis ____Polio

    ____(1) Yes ____(0) No ____(9) DK/NR

12. Do you know at what age children should be vaccinated against measles?
    ____(1) Yes (9-12 months) ____(0) No ____(9) DK/NR

13. Has (name of oldest child under age 2) been immunized?
    ____(1) Yes ____(0) No, go to Q26 ____(9) DK/NR, go to Q26

14. Do you have the immunization card for this child?
    ____(1) Yes, has card correctly filled out, go to Q16
    ____(2) Yes, has card but incorrectly filled out, go to Q16
    ____(0) No, does not have card ____(9) DK/NR

15. (If no EPI card) Can you remember when your child was vaccinated?
_____(1) Yes _____(0) No, go to Q26 _____(9) DK/NR, go to Q26
Transfer information from the EPI card.
If no EPI card but remembers vaccination dates, enter as such.

Birthdate:	Date received	Age(mo.)	Received on/off schedule		Not received
16. BCG	_____	_____mo	On____(1)	Off____(2)	No____(0)
17. DPT1	_____	_____mo	On____(1)	Off____(2)	No____(0)
18. DPT2	_____	_____mo	On____(1)	Off____(2)	No____(0)
19. DPT3	_____	_____mo	On____(1)	Off____(2)	No____(0)
20. Polio 1	_____	_____mo	On____(1)	Off____(2)	No____(0)
21. Polio 2	_____	_____mo	On____(1)	Off____(2)	No____(0)
22. Polio 3	_____	_____mo	On____(1)	Off____(2)	No____(0)
23. Measles	_____	_____mo	On____(1)	Off____(2)	No____(0)

24. Child is on schedule for age: _____(1) Yes _____(0) No _____(9) DK/NR

25. For children 12-24 months:
Child is fully vaccinated (BCG, DPT3, Polio3, Measles):
_____(1) Yes _____(0) No _____(9) DK/NR

26. When will you take your child for the (next) vaccination?
Date _____
Compare response with the EPI card data. If no EPI card, compare response with child's age
_____(1) Mother correctly knows next vaccine appointment
_____(0) Mother doesn't know
_____(2) Fully vaccinated (not applicable)
_____(9) DK/NR

27. What is the name of the local Community Health Worker (CHW)?
_____(1) Knows (said name) _____(0) Does not know _____(9) NR

28. Has the Community Health Worker visited or contacted you during the last three months?
_____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Growth monitoring/nutrition education

Complete for the oldest child under two years of age currently living in the household. Interview the mother of the child, if possible. See questionnaire on breast feeding for related questions.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. How many living children do you have under two years of age?
____ (no. children) If none, terminate the interview.

   What are their names and how old are they?
   Name: _____ Age (in months): _____ Sex (m/f): _____
   Name: _____ Age (in months): _____ Sex (m/f): _____
   Name: _____ Age (in months): _____ Sex (m/f): _____

10. Is (name of oldest child under age two) registered for growth monitoring?
____(1) Yes ____(0) No ____(9) DK/NR

11. Has any health worker ever explained growth monitoring cards to you?
____(1) Yes ____(0) No ____(9) DK/NR

12. Has this child ever been weighed by a health worker, nurse, or doctor?
____(1) Yes ____(0) No, go to Q19 ____(9) DK/NR, go to Q19

13. Do you have your child's growth card at home? (Show sample card.)
____(1) Yes ____(0) No, go to Q19 ____(9) DK/NR, go to Q19

14. Please show me the card.
____(1) Yes, has growth card ____(0) No, cannot find it, go to Q19

15. (Interviewer: inspect card. Does the growth card have age and weight data plotted?)
____(1) Yes, plotted correctly
____(2) Yes, but plotted incorrectly
____(0) No, not plotted, go to Q19
____(9) DK/NR, go to Q19

16. (Interviewer: record weighing history from growth card):
Total no. times weighed) ____

17. Times weighed last quarter____

18. Can you explain the information on the growth card to me?
____(1) Yes, mother can interpret the information correctly
____(0) No, mother cannot interpret the information or interprets incorrectly

19. During the last prenatal and/or postnatal care visit, were you educated about how to improve the nutritional status of your child?
____(1) Yes ____(0) No ____(9) DK/NR

20. What is the name of the local Community Health Worker (CHW)?
____(1) Knows (said name) ____(0) Does not know ____(9) NR

21. Has the local CHW visited or contacted you during the past three months?
____(1) Yes ____(0) No ____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

OPTIONAL WEIGHING TO DETERMINE CURRENT NUTRITIONAL STATUS.

Name	Sex	Age (mo)	Wt. (Kg.)	Ht. (Cm)	Remarks:
	(22)	(23)	(24)	(25)	

Rapid survey questionnaire
Water supply, hygiene, and sanitation

Complete for each household. Interview the female head of household, if possible.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. Where do you usually get your drinking water?
   ____(1) Clean source: faucet/tap, pipe, bore hole, covered well
   ____(2) Unclean source: open well, pond/river/stream, rain water catchment
   ____(3) Other(specify)_____
   ____(9) DK/NR
10. Is your water supply chlorinated?
    ____(1) Yes ____(0) No ____(9) DK/NR
11. Do you usually boil water for drinking?
    ____(1) Yes ____(0) No ____(9) DK/NR
12. How long does it take you to walk to your source of water?
    ____(1) < 15 minutes ____(2) > 15 minutes ____(9) DK/NR
13. Can you get enough water all year?
    ____(1) Yes ____(0) No ____(9) DK/NR
14. Do you always wash your hands before handling food?
    ____(1) Yes ____(0) No ____(9) DK/NR
15. Please explain why it is important to wash your hands? (Probe.)
    ____(1) Knows ____(0) Doesn't know ____(9) NR
16. What is the primary way this household disposes of human waste?
    ____(1) water-seal latrine ____(4) open field
    ____(2) pit privy ____(5) bucket
    ____(3) WC ____(9) DK/NR
17. Please explain why it is important to use a structured/sanitary facility? (Probe.)
    ____(1) Knows ____(0) Doesn't know ____(9) NR
18. What is the name of the local Community Health Worker (CHW)?
    ____(1) Knows (said name) ____(0) Does not know ____(9) NR

19. Has the local CHW visited or contacted you during the past three months?
    ____(1) Yes ____(0) No ____(9) DK/NR

Interviewer observations of household

20. Does water container have a clean cover/lid?
    ____(1) Yes ____(0) No ____(9) DK/NR
21. Do pots, pans, plates, and glasses appear clean?
    ____(1) Yes ____(0) No ____(9) DK/NR
22. Are fruits, vegetables, meats covered and stored away from small domestic animals? ____(1) Yes ____(0) No ____(9) DK/NR
23. Does the latrine appear to be used?
    ____(1) Yes ____(0) No ____(9) DK/NR
24. Are the animals penned away from water and food?
    ____(1) Yes ____(0) No ____(9) DK/NR
25. Does garbage appear to be disposed of in a sanitary way?
    ____(1) Yes ____(0) No ____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Accidents and injuries

Complete for each household.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. Has anyone in this household had a serious accident or injury in the past year?
   ____(1) Yes, ask for information in matrix. For each person, enter codes listed.
   ____(0) No, go to Q10
   ____(9) DK/NR, go to Q10

Name	Age	Sex	Type injury	Treated?	Where treated	Outcome

Types of injury codes:
(01) Fall
(02) Occupational injury
(03) Traffic injury
(04) Poisoning
(05) Other (specify)
(09) DK/NR

Where treated codes:
(01) Hospital
(02) Health care centre
(03) CHW
(04) Traditional healer
(05) Other (specify)___

Outcome codes:
(01) Cured/recovered
(02) Still recovering
(03) Permanent disability
(04) Death
(05) Other
(09) DK/NR

10. If someone in your household was injured, what would you do to help him/her?
    (Probe for correct answer.)
    ____(1) Yes, knows how to help ____(0) No, doesn't know ____(9) No response

11. Where are the nearest emergency care facilities? (Probe for correct answer.)
    _____(1) Yes (respondent knows correct answer)
    _____(2) No (respondent does not know correct answer)
    _____(9) No response

12. What is the name of the local Community Health Worker (CHW)?
    _____(1) Knows (said name) _____(0) Does not know _____(9) NR

13. Has the local CHW visited or contacted you during the past three months?
    _____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Chronic, non-communicable diseases

Complete for each household. Interview the female head of household, if possible.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

Diabetes

9. Do you know what diabetes is? (Probe for explanation.)
____(1) Yes ____(0) No ____(9) DK/NR

10. Have you or any household member ever been diagnosed as having diabetes?
____(1) Yes ____(0) No ____(9) DK/NR

11. Does anyone in this household have diabetes now?
____(1) Yes ____(0) No, go to Q16 ____(9) DK/NR, go to Q16

12. Is this person being treated now?
____(1) Yes ____(0) No, go to Q15 ____(9) DK/NR, go to Q15

13. Is the prescribed treatment being followed? (Probe for explanation.)
____(1) Yes ____(0) No ____(9) DK/NR

14. Do you monitor glucose level at home?
____(1) Yes ____(0) No ____(9) DK/NR

15. Do you and your household members know how to handle a diabetic emergency?
(Probe for explanation.)
____(1) Yes ____(0) No ____(9) DK/NR

Hypertension

16. Do you know what hypertension is? (Probe for explanation.)
____(1) Yes ____(0) No ____(9) DK/NR

17. Have you or any household member ever been diagnosed as having hypertension?
____(1) Yes ____(0) No ____(9) DK/NR

18. Does anyone in this household have hypertension now?
____(1) Yes ____(0) No, go to Q22 ____(9) DK/NR, go to Q22

19. Is this person being treated now?
    _____(1) Yes _____(0) No, go to Q21 _____(9) DK/NR, go to Q21
20. Is the prescribed treatment being followed? (Probe for explanation.)
    _____(1) Yes _____(0) No _____(9) DK/NR
21. Do you and your household members know what to do in case of a heart attack or stroke? (Probe for explanation.)
    _____(1) Yes _____(0) No _____(9) DK/NR

Anaemia

22. Do you know what anaemia is? (Probe for explanation.)
    _____(1) Yes _____(0) No _____(9) DK/NR
23. Have you or any household member ever been diagnosed as having anaemia?
    _____(1) Yes _____(0) No _____(9) DK/NR
24. Does anyone in this household have anaemia now?
    _____(1) Yes _____(0) No, go to Q27 _____(9) DK/NR, go to Q27
25. Is this person being treated now?
    _____(1) Yes _____(0) No, go to Q27 _____(9) DK/NR, go to Q27
26. Is the prescribed treatment being followed? (Probe for explanation.)
    _____(1) Yes _____(0) No _____(9) DK/NR
27. What is the name of the local Community Health Worker (CHW)?
    _____(1) Knows (said name) _____(0) Does not know _____(9) NR
28. Has the local CHW visited or contacted you during the last 3 months?
    _____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Chronic, non-communicable diseases

Complete for each household. Interview the female head of household, if possible.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

Diabetes

9. Do you know what diabetes is? (Probe for explanation.)
   ____(1) Yes ____(0) No ____(9) DK/NR
10. Have you or any household member ever been diagnosed as having diabetes?
    ____(1) Yes ____(0) No ____(9) DK/NR
11. Does anyone in this household have diabetes now?
    ____(1) Yes ____(0) No, go to Q16 ____(9) DK/NR, go to Q16
12. Is this person being treated now?
    ____(1) Yes ____(0) No, go to Q15 ____(9) DK/NR, go to Q15
13. Is the prescribed treatment being followed? (Probe for explanation.)
    ____(1) Yes ____(0) No ____(9) DK/NR
14. Do you monitor glucose level at home?
    ____(1) Yes ____(0) No ____(9) DK/NR
15. Do you and your household members know how to handle a diabetic emergency?
    (Probe for explanation.)
    ____(1) Yes ____(0) No ____(9) DK/NR

Hypertension

16. Do you know what hypertension is? (Probe for explanation.)
    ____(1) Yes ____(0) No ____(9) DK/NR
17. Have you or any household member ever been diagnosed as having hypertension?
    ____(1) Yes ____(0) No ____(9) DK/NR
18. Does anyone in this household have hypertension now?
    ____(1) Yes ____(0) No, go to Q22 ____(9) DK/NR, go to Q22

19. Is this person being treated now?
_____(1) Yes _____(0) No, go to Q21 _____(9) DK/NR, go to Q21

20. Is the prescribed treatment being followed? (Probe for explanation.)
_____(1) Yes _____(0) No _____(9) DK/NR

21. Do you and your household members know what to do in case of a heart attack or stroke? (Probe for explanation.)
_____(1) Yes _____(0) No _____(9) DK/NR

Anaemia

22. Do you know what anaemia is? (Probe for explanation.)
_____(1) Yes _____(0) No _____(9) DK/NR

23. Have you or any household member ever been diagnosed as having anaemia?
_____(1) Yes _____(0) No _____(9) DK/NR

24. Does anyone in this household have anaemia now?
_____(1) Yes _____(0) No, go to Q27 _____(9) DK/NR, go to Q27

25. Is this person being treated now?
_____(1) Yes _____(0) No, go to Q27 _____(9) DK/NR, go to Q27

26. Is the prescribed treatment being followed? (Probe for explanation.)
_____(1) Yes _____(0) No _____(9) DK/NR

27. What is the name of the local Community Health Worker (CHW)?
_____(1) Knows (said name) _____(0) Does not know _____(9) NR

28. Has the local CHW visited or contacted you during the last 3 months?
_____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Malaria

Complete for target groups in known endemic region, especially pregnant women and/or children under five needing malaria treatment services.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. Can you explain to me what malaria is? (Probe.)
   ____(1) Knows ____(0) Doesn't know ____(9) NR

10. Has anyone in your household had malaria (local term) since the beginning of the year? (Or determine appropriate starting point for recall period.)
    ____(1) Yes (Ask names.) ____(0) No, go to Q13 ____(9) DK/NR, go toQ13

    Name: _____ Relation: _____ Age: ____ Sex: ____
    Name: _____ Relation: _____ Age: ____ Sex: ____
    Name: _____ Relation: _____ Age: ____ Sex: ____

11. How did you know that it was malaria (local term)?
    In endemic areas where malaria is a well known disease, the interviewer could forego asking about symptoms of malaria and instead directly ask about disease.
    ____(1) High fever
    ____(2) Shivers
    ____(3) Headache
    ____(4) Other (specify)_____
    ____(9) DK/NR

12. How many days did the malaria episode prevent that person from conducting his/her normal daily activities? ____No. of days

13. Do you know how malaria (local term) is spread? (Probe for explanation.)
    ____(1) Yes ____(0) No ____(9) DK/NR

14. What are your household members currently doing to protect themselves from malaria?
    ____(1) Using mosquito nets
    ____(2) Using household sprays
    ____(3) Eliminating standing water
    ____(4) Using anti-malarial drugs

_____(5) Other: _____
_____(9) DK/NR

15. Has anyone in your household died in the last 12 months?
_____(1) Yes _____(0) No, go to Q18 _____(9) DK/NR, go to Q18

16. Which symptoms were present one week before death?
_____(1) High fever
_____(2) Shivers
_____(3) Headache
_____(4) Other (specify)_____
_____(9) DK/NR

17. What do you think was the cause of death? (Probe for answer.)

18. What is the name of the local Community Health Worker (CHW)?
_____(1) Knows (said name) _____(0) Does not know _____(9) NR

19. Has the local CHW visited or contacted you in the last 3 months?
_____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Tuberculosis

Complete for households with known case of TB and/or for high-risk segments of the population including known HIV positives, occupational groups (miners, etc.), low SES, densely-packed populations.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. Can you explain to me what tuberculosis (local word) is? (Probe.)
   ____(1) Knows ____(0) Doesn't know ____(9) NR
10. Do you know how TB is spread? (Probe for explanation.)
    ____(1) Knows ____(0) Doesn't know ____(9) NR
11. Do you know how to prevent infection? (Probe for explanation.)
    ____(1) Knows ____(0) Doesn't know ____(9) NR
12. Were all your children vaccinated at birth with BCG?
    ____(1) Yes ____(0) No ____(9) DK/NR
13. Have you or any family members experienced a persistent cough lasting more than 2 weeks?
    ____(1) Yes ____(0) No, go to Q18 ____(9) DK/NR, go to Q18
14. Did this person seek treatment for TB?
    ____(1) Yes ____(0) No, go to Q18 ____(9) DK/NR, go to Q18
15. Where did this person go to seek treatment?
    ____(1) Health centre
    ____(2) CHW/volunteer
    ____(3) Other _____
    ____(9) DK/NR
16. Was this person given medicine to treat TB?
    ____(1) Yes ____(0) No, go to Q18 ____(9) DK/NR, to go Q18
17. Did they take the medicine for the prescribed length of time (Probe for explanation.)
    ____(1) Yes ____(0) No ____(9) DK/NR
18. What is the name of the local Community Health Worker?
    ____(1) Knows (said name) ____(0) Does not know ____(9) NR

19. Has the CHW visited or contacted you in the last three months?
_____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Sexually-transmitted diseases, HIV/AIDS[1]

Complete for individuals at risk of acquiring infection, especially sexual partners of individuals practising high-risk behaviour, or clients with STDs.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT_____

9. Do you know what is meant by a sexually-transmitted disease? (Probe for correct response.)
   ____(1) Yes ____(0) No ____(9) DK/NR
10. Do you know the difference between HIV infection and AIDS (local term)? (Probe for correct response.)
    ____(1) Yes ____(0) No ____(9) DK/NR
11. Can a person who looks healthy be infected with an STD?
    ____(1) Yes ____(0) No ____(9) DK/NR
12. Can a person get the AIDS virus by shaking hands with someone who is infected with the virus?
    ____(1) Yes ____(0) No ____(9) DK/NR
13. Can a pregnant woman who is infected with HIV pass on the virus to her unborn child?
    ____(1) Yes ____(0) No ____(9) DK/NR
14. Can STDs be transmitted by having sex with someone who is infected with an STD?
    ____(1) Yes ____(0) No ____(9) DK/NR
15. Is there a cure for AIDS?
    ____(1) Yes ____(0) No ____(9) DK/NR

1 Portions of this instrument are adapted from a baseline instrument in Lamptey P. and P. Piot. *The handbook for AIDS prevention in Africa.* Family Health International, 1990.

16. What are you currently doing to prevent yourself or others from becoming infected with an STD?
    _____(1) Using a condom
    _____(2) Practicing safer sex (Probe for explanation.)
    _____(9) Other (specify)_____
    _____(0) Nothing

17. Do you know how to use a condom correctly? (Probe for correct response.)
    _____(1) Yes _____(0) No _____(9) DK/NR

18. Where have you obtained condoms during the last six months?
    _____(1) At a government hospital
    _____(2) At a government clinic or health centre
    _____(3) At a private hospital
    _____(4) At a private clinic or health centre
    _____(5) At a local dispensary
    _____(6) A health worker came to you
    _____(7) Other _____
    _____(9) DK/NR

19. Have you been diagnosed with an STD in the past 12 months?
    _____(1) Yes _____(0) No, go to Q22 _____(9) DK/NR, go to Q22

20. What was your diagnosed illness? (Probe for response.)
    _____(1) HIV/AIDS
    _____(2) Other STD: _____
    _____(9) DK/NR

21. Where did you go for treatment?
    _____(1) To a government hospital
    _____(2) To a government clinic or health centre
    _____(3) To a private hospital
    _____(4) To a private clinic or health centre
    _____(5) Contacted a health worker
    _____(6) Other: _____
    _____(9) DK/NR

22. How did you first learn about STDs?
    _____(1) By word of mouth
    _____(2) From a CHW or other health staff
    _____(3) Heard about it on the radio
    _____(4) Other:_____
    _____(9) DK/NR

23. What is the name of the local Community Health Worker (CHW)?
    _____(1) Knows (said name) _____(0) Does not know _____(9) NR

24. Has the local CHW visited or contacted you in the last three months?
    _____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Vital events and health status

Complete for each household. List all people currently living in the household, by age and sex.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT_____

9. How many people live in this household: _____(total)

   I would like to ask you for the name, age, and sex of each person living in this household. (List age of children under age two in months.)

10. Married women of reproductive age (15-49): _____(in household)
    - 10.1 Name:_____ Age (in years): _____ Pregnant? (Y/N/DK)_____
    - 10.2 Name:_____ Age (in years): _____ Pregnant? (Y/N/DK)_____
    - 10.3 Name:_____ Age (in years): _____ Pregnant? (Y/N/DK)_____

11. Children less than 24 months old: _____(in household)
    - 11.1 Name:_____ Age (in months): _____ Sex (m/f): _____
    - 11.2 Name:_____ Age (in months): _____ Sex (m/f):_____
    - 11.3 Name:_____ Age (in months): _____ Sex (m/f):_____

12. Children 24-60 months old: _____(in household)
    - 12.1 Name:_____ Age (in years): _____ Sex (m/f):_____
    - 12.2 Name:_____ Age (in years): _____ Sex (m/f):_____
    - 12.3 Name:_____ Age (in years): _____ Sex (m/f):_____

13. Other men, women, and children: _____(in household)
    - 13.1 Name:_____ Age (in years): _____ Sex (m/f):_____
    - 13.2 Name:_____ Age (in years): _____ Sex (m/f):_____
    - 13.3 Name:_____ Age (in years): _____ Sex (m/f):_____

    (Total of questions 10-13 should equal total shown in Item 9.)_____

Morbidity

14. Is there anyone in your household who has been sick this week?
_____(1) Yes _____(0) No, go to Q60 ____(9) DK/NR, go to Q60

Who is/are sick? (Probe and fill out following table, using SI. No. from Q10-Q13, e.g., 10.3, 12.2):

15		16	17	18	19	20	21
SI No	Name	Age m/y	Sex M/F	Disease (code, 01,02,etc.)	Treated (Y/N)	Where treated (1,2,3,etc.)	Outcome (1,2,3,etc.)

If more than one person is ill, continue coding with 25, 35, 45, etc.

18. Disease code:

01 Diarrhoea/dysentery	08 Polio
02 Anaemia	09 Tuberculosis
03 Scabies	10 Acute respiratory inf.
04 Diphtheria	11 Fever
05 Whooping cough	12 Malaria
06 Tetanus	13 Other: _____
07 Measles	99 DK/NR

20. Where treated:
1 Government clinic/hospital
2 Mobile clinic
3 Private clinic/hospital
4 Private doctor
5 Private midwife/nurse
6 Traditional practitioner
7 Pharmacy/drug store
8 Other:_____
9 DK/NR

21. Outcome

1 Cured/recovered	4 Died
2 Still recovering	5 Other: _____
3 Permanent disability	6 DK/NR

Mortality

60. Were there any deaths in this household during the last 12 months?
_____(1) Yes _____(0) No, go to Q100 ____(9) DK/NR, go to Q100

Who died? (Probe and fill out following table):

61		62	63	64	65	66	67
SI No	Name	Age m/y	Sex M/F	Cause of death Code 01, 02, etc.	Date died dd/mm/yy	Died where? code: 01,02, etc.	Death Y/N

If more than one death, continue coding with 71, 81, 91 etc.

64. Cause of death code:

01 Diarrhoea/Dysentery
02 Anaemia
03 Scabies
04 Diphtheria
05 Whooping Cough
06 Tetanus
07 Measles
08 Polio
09 Tuberculosis
10 ARI
11 Preg.-related
12 Heart disease
13 Cancer
14 Diabetes
15 Typhoid
16 Accident
17 Pneumonia
18 Hepatitis
19 Malaria
20 Other
99 DK/NR

66. Where died

1 Government clinic/hospital
2 Mobile clinic
3 Private clinic/hospital
4 Private doctor's office/clinic
5 Private midwife/nurse's clinic
6 Traditional practitioner's centre
7 Home
8 Relative's house
9 Other:_____
99 DK/NR

Fertility

100. Were there any births in this household in the last 12 months?
_____(1) Yes _____(0) No, end interview _____(9) DK/NR, end interview

Who was born? (Probe and fill out following table, using SI No. from Q11, e.g., 11.1, 11.2, etc.):

101		102	103	104	105	106	107
SI No	Name	Age m/y	Sex M/F	Outcome Code 01, 02, etc.		Born where? 01, 02, etc.	Birth certificate Y/N

If more than one birth, continue coding with 111, 121, etc.

104. Outcome:
- 01 Live birth (single)
- 02 Live birth (twins)
- 03 Live birth (2)
- 04 Stillbirth
- 05 Died within 1 week
- 06 Died within 1 month
- 09 DK/NR

106. Where born
- 01 Government clinic/hospital
- 02 Mobile clinic
- 03 Private clinic/hospital
- 04 Private doctor's office/clinic
- 05 Private midwife/nurse's clinic
- 06 Traditional practitioner's centre
- 07 Home
- 08 Relative's house
- 09 Other:_____
- 99 DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Child morbidity and mortality assessment

Complete for each woman aged 15-49 who was ever married (i.e., married, separated, widowed, divorced). If there is more than one eligible woman in each household, use separate forms. Give each woman residing in the household a number starting from the oldest to the youngest. Use Q9-22 (Module A[1]) if it is possible to have a more complete birth history. If not, use Q23-38 (Module B[2]). You can use data from **Module A** to determine infant and child mortality rates. If this survey is translated, it is important to maintain the wording and order of questions in **Modules A** and **B.**

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

Module A: Child mortality

9. In what month and year were you born? ____MM/____YR
____(99) DK/NR
10. How many of your sons are now living with you?_____ (99) DK/NR
11. How many of your sons are now living elsewhere?_____ (99) DK/NR
12. How many of your daughters are now living with you?_____(99) DK/NR
13. How many of your daughters are now living elsewhere?_____ (99) DK/NR
14. Have you ever given birth to a child who later died, even if she/he lived only a short time?
____(1) Yes ____(0) No, go to Q17 ____ (9) DK/NR, go to Q17
15. How many of your sons have died? ____(99) DK/NR
16. How many of your daughters have died? ____(99) DK/NR
17. INTERVIEWER: Sum the answers to Questions 10, 11, 12, 13, 15, and 16:
_____total

1 Module A is adapted from: David, P.H., et al. *Measuring childhood mortality: A guide for simple surveys,* UNICEF, 1990, pp. 152-154.
2 Module B is adapted from: David, P.H., et al, ibid. pp. 155-156.

18. Apart from these (Total # from Q 17) births, have you had any other live births?
    ____(1) Yes ____(0) No, go to Q20 ____(9) DK/NR, go to Q20
19. INTERVIEWER: If yes, ask if now living or dead, and correct where necessary.
20. Could you give me the following information on all your children born alive, even if they are now dead, beginning with your last delivery?

INTERVIEWER: Begin to list with the woman's most recent live birth and ask the questions that follow for each child born in the last five years (this will allow for calculation of death rate in children under five years):

Name of child	Month/year of birth	Sex M/F	Now alive? Y/N/DK	If dead, date of death MM/YR
Last child	/			/
Next to last	/			/
Second to last	/			/
Third to last	/			/
Fourth to last	/			/
Fifth to last	/			/
Twin	/			/

21. Respondent is: ____(1) woman herself ____(2) her mother
    ____(3) her sister living in same house ____(4) other
    (Marriage duration option; to be included if only ever-married women are interviewed):
22. How many years has it been since you were first married?
    (That is, since your first marriage, even if you have married more than once.)
    Date of marriage: mm/yy
    Month __ Year __ or Completed years __

Module B: Child mortality (Optional: Use if difficult to construct histories)

23. In what month and year were you born?
    ____MM/____YR ____(99) DK/NR

24. How many of your sons are now living with you? _____(99) DK/NR
25. How many of your sons are now living elsewhere? _____(99) DK/NR
26. How many of your daughters are now living with you? _____(99) DK/NR
27. How many of your daughters are now living elsewhere? _____(99) DK/NR
28. Have you ever given birth to a child who later died, even if she/he lived only a short time?
    ___(1) Yes ___(0) No, go to Q31 ___(9) DK/NR, go to Q31
29. How many of your sons have died?_____ _____(99) DK/NR
30. How many of your daughters have died?_____ _____(99) DK/NR
31. INTERVIEWER: Sum the answers to Questions 24, 25, 26, 27, 29, and 30:
    _____Total
32. Apart from these (total # from Q31) births, have you had any other live births?
    ___(1) Yes ___(0) No, go to Q34 ___(9) DK/NR, go to Q34
33. INTERVIEWER: If yes, ask if now living or dead, and correct where necessary.
34. Could you give me the following information on all your children born alive, even if they are now dead, beginning with your last delivery?
35. In what month and year was your last live birth?
    ___MM/___YR ___(9) DK/NR
36. Was this child a boy or a girl?
    ___(1) Boy ___(2) Girl ___(9) DK/NR
37. Is she/he still alive? ___(1) Yes ___(0) No ___(9) DK/NR
38. Did you have another live birth before this last one?
    ___(1) Yes ___(0) No, go to Q41 ___(9) DK/NR, go to Q41
39. Was this baby a boy or a girl? ___(1) Boy ___(2) Girl ___(9) DK/NR
40. Is she/he still alive today? ___(1) Yes ___(0) No ___(9) DK/NR
41. Respondent is: ___(1) woman herself ___(2) her mother
    ___(3) her sister living in same house ___(4) other

    (Marriage duration option (Q42); to be included if only ever-married women are interviewed):
42. How many years has it been since you were first married? (That is, since your first marriage, even if you have married more than once.)
    Date of marriage: mm/yy
    Month ___ Year ___ or Completed years ___

INTERVIEWER: Please check Q22 (Module A) or Q31-40 (Module B) to see if any infant or child from this household is dead. For the most recent death, ask the following questions:

43. Did (name of deceased child) die because of an accident or an illness?
__(1) Accident, go to Q44 ___(2) Illness, go to Q45 ___(9) DK/NR, go to Q45

44. What was the accident?_____, go to Q49

45. From what illness did (name of deceased child) die?
_____(9) DK/NR

46. What were the signs or symptoms present two weeks before death?
____(1) Diarrhoea
____(2) Diarrhoea with blood
____(3) Cold
____(4) Difficulty breathing
____(5) Rash or pimples
____(6) Fever
____(7) Seizures
____(8) Other symptoms (specify)_____
____(9) DK/NR

47. (IF INTERVIEWER IS TRAINED IN IDENTIFYING CAUSE OF DEATH)
In the opinion of the interviewer, of what did the child die?
____(1) Infection (specify)_____
____(2) Diarrhoea
____(3) ARI (pneumonia)
____(4) Malnutrition
____(5) Other (specify)_____
____(6) Vaccine preventable disease (specify)_____
____(9) DK/NR

48. How long did (name of deceased child) have the illness?
_____days; _____months; _____(9) DK/NR

49. Was she/he taken somewhere to receive treatment for the illness/accident before dying?
____(1) Yes ____(0) No ____(9) DK/NR

50. Where was she/he taken?
____(1) Public hospital
____(2) Health centre
____(3) Doctor's office
____(4) Clinic/private hospital
____(5) Pharmacy
____(6) Traditional healer
____(7) Other (specify)_____
____(9) DK/NR

51. Where did she/he die?
____(1) Public hospital
____(2) Health centre
____(3) Clinic/Private hospital
____(4) At the house
____(5) Other(specify)_____
____(9) DK/NR

52. Do you have a death certificate?
____(1) Yes ___(0) No, go to Q55 ___(9) DK/NR, go to Q55

53. May I see that certificate?
____(1) Yes, shows certificate ____(2) No, does not show certificate, go to Q55

54. What was the cause of death, according to the certificate?
_____

55. Has anyone else in this household died in the last six months?
____(1) Yes ____(0) No, go to Q57 ____(9) DK/NR, go to Q57

56. Name?_____ Age?_____
Symptoms prior to death?_____
Treatment received?_____

Child morbidity

57. Has any child under the age of two been sick in the last two weeks?
_____(1) Yes _____(0) No, go to Q73 _____(9) DK/NR, go to Q73

58. What were the symptoms of sickness?
_____(1) Fever Ask Q 59-74
_____(2) Diarrhoea Ask Q 59-74
_____(3) Difficulty breathing Ask Q 63-74
_____(4) Poor weight gain/weight loss Ask Q 65-74
_____(5) Other (specify)_____
_____(9) DK/NR

59. If diarrhoea, how long was/is the episode? _____days _____(99) DK/NR

60. Does the child have diarrhoea today?
_____(1) Yes _____(0) No _____(9) DK/NR

61. Did you give the sick child ORS?
_____(1) Yes _____(0) No _____(9) DK/NR

62. Do you/did you continue breast feeding your baby during illness?
_____(1) Yes _____(0) No _____(9) DK/NR

63. If coughing etc., for how many days (has the cough lasted/did the cough last)?
(If less than one day, 00.) _____Day _____(99) DK/NR, go to Q65

64. When the child had the illness with a cough, did she/he breathe faster than usual with short, rapid breaths? _____(1) Yes _____(0) No _____(9) DK/NR

65. If poor weight gain, has the child had any of the following symptoms:
swollen feet dry eyes
thin hair blindness
sores inside mouth no desire to laugh or play
failure to develop intelligence
_____(1) Yes _____(0) No _____(9) DK/NR

66. Did you seek advice or treatment for the illness?
_____(1) Yes _____(0) No, go to Q68 _____(9) DK/NR, go to Q68

67. Where did you seek advice or treatment?
_____(1) Government clinic/hospital _____(5) Traditional practitioner
_____(2) Mobile clinic _____(6) Pharmacy/drug shop
_____(3) CHW _____(9) Other (specify)_____
_____(4) Private doctor

68. Was anything given to treat the illness?
_____(1) Yes _____(0) No, go to Q71 _____(9) DK/NR, go to Q71

69. What was given to treat the illness?
    _____(1) Injection
    _____(2) Antibiotic
    _____(3) Anti-malarial
    _____(4) Cough syrup
    _____(5) Other pill or syrup
    _____(6) Unknown pill or syrup
    _____(7) Home remedy/herbal medicine
    _____(8) Other (specify)_____
    _____(9) DK/NR

70. Were you told by the health care provider what illness your child had?
    _____(1) Yes specify:_____ _____(0) No _____(9) DK/NR

71. Does the child have the symptoms (mentioned above) today?
    _____(1) Yes _____(0) No _____(9) DK/NR

72. (IF INTERVIEWER IS TRAINED IN IDENTIFYING CAUSE OF ILLNESS)
    In the opinion of the interviewer, what illness does/did the child have?
    _____(1) Infection (specify)_____
    _____(2) Diarrhoea
    _____(3) ARI (pneumonia)
    _____(4) Malnutrition
    _____(5) Other (specify)_____
    _____(6) Vaccine preventable disease (specify)_____
    _____(9) DK/NR

73. Has anyone else in this household been sick in the last two weeks?
    _____(1) Yes _____(0) No _____(9) DK/NR

74. Name?_____
    Age?_____
    Symptoms?_____
    Treatment received?_____

75. What is the name of the local Community Health Worker (CHW)?
    _____(1) Knows (said name) _____(0) Does not know _____(9) NR

76 Has the local CHW visited or contacted you in the last three months?
    _____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Rapid survey questionnaire
Adult morbidity and mortality assessment

Complete for each household. List all adults currently living in the household, by age and sex.

IDENTIFICATION

1. Study no ____ 2. Province no ____ 3. Cluster no ____
4. Interviewer no ____ 5. Respondent no ____ 6. Date of interview / /
7. Respondent age ____ 8. Respondent sex ____

NAME OF RESPONDENT _____

9. How many adults live in this household: _____(total)
   I would like to ask you for the name, age, and sex of each adult living in this household.
10. Married women of reproductive age (15-49): _____(in household)
    Name:_____ Age: __ Pregnant? (Y/N/DK)____
    Name:_____ Age: __ Pregnant? (Y/N/DK)____
    Name:_____ Age: __ Pregnant? (Y/N/DK)____
11. Other men and women: _____(in household)
    Name:_____ Age: ____ Sex (m/f):____
    Name:_____ Age: ____ Sex (m/f):____
    Name:_____ Age: ____ Sex (m/f): ____
    (Total of questions 10-11 should equal total shown in Q9.) _____

Adult morbidity

12. Has any adult in this household been sick in the past 2 weeks?
    ___(1) Yes ___(0) No ___(9) DK/NR
13. Please tell me their names and when they were sick:
    Name:_____ When?: _____days ago
    Name:_____ When?: _____days ago
    Name:_____ When?: _____days ago
14. Is there any adult in your household who is sick today?
    ___(1) Yes ___(0) No, go to Q23 ___(9) DK/NR, go to Q23

    INTERVIEWER: For the person who is sick today, or sick most recently in the last two weeks, please ask the following questions.

15. What were/are the symptoms of the illness?
    - ____(1) High fever
    - ____(2) Diarrhoea
    - ____(3) Weight loss
    - ____(4) Persistent cough
    - ____(5) Cough with sputum
    - ____(6) Earache or ear discharge
    - ____(7) Seizures
    - ____(8) Weakness or lethargy
    - ____(9) Other (specify) _____
    - ____(99) DK/NR

16. How long did the illness last?
    - ____Days
    - ____Weeks
    - ____DK/NR

17. Was advice or treatment sought?
    - ____(1) Yes ____(0) No, go to Q19 ____(9) DK/NR, go to Q19

18. Where was advice or treatment sought?
    - ____(1) Government clinic/hospital
    - ____(2) Mobile clinic
    - ____(3) CHW
    - ____(4) Private doctor
    - ____(5) Traditional practitioner
    - ____(6) Pharmacy/drug shop
    - ____(7) Other (specify)_____
    - ____(9) DK/NR

19. Was anything given to treat the illness?
    - ____(1) Yes ____(0) No, go to Q21 ____(9) DK/NR, go to Q21

20. What was given to treat the illness?
    - ____(1) Injection
    - ____(2) Antibiotic
    - ____(3) Anti-malarial
    - ____(4) Cough syrup
    - ____(5) Other pill or syrup
    - ____(6) Unknown pill or syrup
    - ____(7) Home remedy/herbal medicine
    - ____(8) Other (specify)_____
    - ____(9) DK/NR

21. In the opinion of the interviewee, what is/was the illness?
    (use disease code from Q22)____ ____(9) DK/NR

22. (IF INTERVIEWER IS TRAINED IN IDENTIFYING CAUSE OF ILLNESS)
    In the opinion of the interviewer, what illness does/did the person have? ___
    Disease code:
    - ____(01) Dysentery
    - ____(02) Anaemia
    - ____(03) Scabies
    - ____(04) Diphtheria
    - ____(05) Whooping cough
    - ____(06) Tetanus
    - ____(07) Measles
    - ____(08) Diabetes
    - ____(09) Hypertension
    - ____(10) STD/HIV
    - ____(11) Polio
    - ____(12) Tuberculosis
    - ____(13) Acute respiratory infection
    - ____(14) Fever
    - ____(15) Malaria
    - ____(16) Other: _____
    - ____(99) DK/NR, go to Q23

Adult mortality

23. Was there any death in this household during the last 12 months?
__(1) Yes __(0) No, end interview __(9) DK/NR, end interview

24. Who died? (Probe and fill out following table):
Name:_____ Age:___ Sex:___ When?_____weeks/months ago
Name:_____ Age:___ Sex:___ When?_____weeks/months ago
(Interviewer: Ask Q. 25-36 for each person who has died in the last year.)

25. What symptoms were present 2 weeks before death?
_____(1) High fever
_____(2) Diarrhoea
_____(3) Weight loss
_____(4) Persistent cough
_____(5) Cough with sputum
_____ (6) Earache or ear discharge
_____ (7) Seizures
_____ (8) Weakness or lethargy
_____ (9) Other (specify)_____
_____(99) DK/NR

26. How long did (name of deceased) have the illness?
_____Days
_____Weeks
_____DK/NR

27. Was advice or treatment sought?
_____(1) Yes _____(0) No, go to Q29 _____(9) DK/NR, go to Q29

28. Where was advice or treatment sought?
_____(1) Government clinic/hospital
_____(2) Mobile clinic
_____(3) CHW
_____(4) Private doctor
_____(5) Traditional practitioner
_____(6) Pharmacy/drug shop
_____(7) Other (specify)_____
_____(9) DK/NR

29. Was anything given to treat the illness?
_____(1) Yes _____(0) No, go to Q31 _____(9) DK/NR, go to Q31

30. What was given to treat the illness?
_____(1) Injection
_____(2) Antibiotic
_____(3) Anti-malarial
_____(4) Cough syrup
_____(5) Other pill or syrup
_____(6) Unknown pill or syrup
_____(7) Home remedy/herbal medicine
_____(8) Other (specify)_____
_____(9) DK/NR

31. Where did the person die?
_____(1) Government clinic/hospital
_____(2) Health centre
_____(3) Private clinic/hospital
_____(4) Doctor's office
_____(5) At the house
_____(6) Other (specify)_____
_____(9) DK/NR

32. Do you have a death certificate?
_____(1) Yes _____(0) No _____(9) DK/NR

33. May I see that certificate?
_____(1) Yes, shows certificate _____(2) No, does not show certificate

34. What was the cause of death, according to the certificate? _____

35. In the opinion of the interviewee, what was the illness?
(Use Disease Code from Q36) _____(9) DK/NR

36. (IF INTERVIEWER IS TRAINED IN IDENTIFYING CAUSE OF DEATH) In the opinion of the interviewer, what did the person die of?

Cause of Death Code:

_____(01) Diarrhoea/Dysentery
_____(02) Anaemia
_____(03) Scabies
_____(04) Diphtheria
_____(05) Whooping cough
_____(06) Tetanus
_____(07) Measles
_____(08) Polio
_____(09) Tuberculosis
_____(10) Hypertension
_____(99) DK/NR
_____(11) Pregnancy-related
_____(12) Heart disease
_____(13) Cancer specify_____
_____(14) Diabetes
_____(15) Typhoid
_____(16) Accident
_____(17) Pneumonia
_____(18) Hepatitis
_____(19) Malaria
_____(20) Other Specify:_____

37. What is the name of the local Community Health Worker (CHW)?
_____(1) Knows (said name) _____(0) Does not know _____(9) NR

38. Has the local CHW visited or contacted you in the last three months?
_____(1) Yes _____(0) No _____(9) DK/NR

This concludes the interview. Thank you for taking the time to participate in this survey.

Appendix D: Cluster-survey registers

GENERAL PHC
Health education

MATERNAL CARE
Antenatal care, safe delivery, and postnatal care
Family planning

CHILD CARE
Acute respiratory infections
Breast feeding
Diarrhoeal disease control/oral rehydration therapy
Childhood disabilities
Child immunization
Growth monitoring/nutrition education

COMMUNITY HEALTH
WATER SUPPLY, HYGIENE, AND SANITATION

OTHER HEALTH CARE
Accidents and injuries
Chronic, non-communicable diseases
Malaria
Tuberculosis
Sexually-transmitted diseases, HIV/AIDS

MORBIDITY, MORTALITY AND FERTILITY
Vital events and health status
Child morbidity and mortality assessment
Adult morbidity and mortality assessment

The following instruments are similar to the Rapid survey questionnaires, only in a different format. The answers of up to ten respondents can be recorded on a single register.

These instruments can also be used as presented or modified as appropriate to any given situation. You are encouraged to "mix and match" questions and sections from the various questionnaires, add, delete, revise, and combine to adapt the instruments to your situation and needs.

Please note that these are only the instruments. Examples of how they can be modified and used with different sampling techniques are described in this User's guide.

Cluster form: Health education

(1) Study No. _____ (2) Province No. _____ (3) Cluster No. _____ (4) Interviewer	NAME										
(5) Respondent No.		1	2	3	4	5	6	7	8	9	10
(6) Date / /											
(7) Age											
(8) Sex											
(9) How many people live in this household?											
(10) Is anyone in this household a married woman of reproductive age?											
(11) Is anyone in this household pregnant?											
(12) Are there any children under 24 mos. in this household?											
(13) Are there children 24 - 60 mos. in this household?											
(14) Has a health worker visited/contacted you in the last three months?											
(15) What type of health worker visited?											
(16) What did the health worker discuss?											
Maternal care											
Antenatal care											
Safe delivery											
Postnatal care											
Child care											
Acute respiratory infections											
Breast feeding											
Diarrhoea diseases control											
Oral rehydration therapy											
Childhood disabilities											
Child immunization											
Growth monitoring/nutrition education											
Community health											
Water supply											
Hygiene											
Sanitation											
Other health care											
Accidents and injuries											
Chronic, non-communicable diseases											
Malaria											
Tuberculosis											
Sexually-transmitted diseases, HIV/AIDS											

(17) Do you believe you have enough information on these topics or do you want to know more?												
Maternal care												
Antenatal care												
Safe delivery												
Postnatal care												
Child care												
Acute respiratory infections												
Breast feeding												
Diarrhoea diseases control												
Oral rehydration therapy												
Childhood disabilities												
Child immunization												
Growth monitoring/nutrition education												
Community health												
Water supply												
Hygiene												
Sanitation												
Other health care												
Accidents and injuries												
Chronic, non-communicable diseases												
Malaria												
Tuberculosis												
Sexually-transmitted diseases HIV/AIDS												
(18) What is the name of the local CHW?												

Key (15) 1 CHW; 2 Public health nurse; 3 Midwife; 4 Doctor; 5 Other (specify); 9 DK/NR

Cluster form: Antental care, safe delivery, and postnatal care

(1) Study No.	N										
(2) Province No.	A										
(3) Cluster No.	M										
(4) Interviewer	E										
(5) Respondent No.		1	2	3	4	5	6	7	8	9	10
(6) Date / /											
(7) Age											
(8) Sex											
(9) How many live births have you had so far?											
(10) Did you receive antenatal care during your last pregnancy?											
(11) How many times did you get antenatal care?											
(12) How many months had you been pregnant before you got antenatal care?											
(13) Which is the principal place you received antenatal care?											
(14) Did anyone advise you to get antenatal care?											
(15) Did you receive a tetanus vaccination during your last pregnancy?											
(16) How many vaccinations did you receive?											
(17) During your pregnancy, did you take iron pills to keep you strong?											
(18) What was the outcome of your most recent pregnancy?											
(19) Where did the delivery take place?											
(20) Who was the main person attending the delivery?											
(21) What is the name of the local CHW?											
(22) Has the CHW visited/contacted you during the last three months?											

Key (12)
1) three mo. (first trimester)
2) 4-6 mo. (second trimester)
3) 7-9 mo. (third trimester)
9) DK/NR

(18)
1) Live birth
2) Stillbirth
3) Abortion /miscarriage
4) DK/NR

(13) 1) Hospital 2) Health centre/clinic 3) Private hospital/clinic 4) Local TBA/healer 5) Other site of care 9) DK/NR	(20) 1) Doctor, nurse, nurse-midwife 2) Trained TBACHW 3) Untrained TBA, CHW 4) Relative, neighbor, friend 5) Other: _____ 9) DK/NR
(14) 1) Physician, nurse 2) Community nurse, midwife 3) CHW/volunteer 4) Traditional birth attendant	5) Mother, relative 6) Friend, neighbour 7) Other: _____ 9) DK/NR

Cluster form: Family planning

(1) Study No. _____ (2) Province No. _____ (3) Cluster No. _____ (4) Interviewer _____	N A M E									
(5) Respondent No.		1	2	3	4	5	6	7	8	9	10
(6) Date / /											
(7) Age											
(8) Sex											
(9) Are you currently married or living with a partner?											
(10) How many living children do you have?											
(11) Have you given birth in the past 12 months?											
(12) When was child born?											
(13) Can you name one modern method of contraception?											
(14) Do you know where you can obtain this method?											
(15) Are you or your husband currently using any family planning method?											
(16) Which method are you/your husband using now?											
(17) For how long have you been continually using (current method)?											
(18) For how long have you been continually practicing family planning without interruption?											
(19) What is the main source of your family planning service or supplies?											
(20) If you are not using family planning now, have you or your husband ever used any method in the past?											
(21) Which method did you/your husband use most recently?											
(22) Do you/your husband intend to practice family planning in the future?											
(23) What is the most important reason you are not using family planning now?											
(24) What is the name of the local CHW?											
(25) Has the CHW visited/contacted you during the last three months?											

Key (16) and (21)	(17) and (18)
1) Tubectomy 2) Vasectomy 3) IUD 4) Oral pill 5) Injection 6) NORPLANT 7) Condom 8) IUD, 8 Foam, emco ,jelly, cream, diaphram 9) Safe period, withdrawal 10) Other 99) DK/NR	1) < three months 2) pit privy 3) 7-12 months 4) 1-2 years 5) 3-4 years 6) 5 years or more 9) DK/NR

(19)	
1) Govt hospital/clinic 2) Govt field worker 3) Social marketing prog. 4) Private physician 5) Pharmacy	6) Private hospital/clinic 7) NGO clinic 8) NGO field worker 9) Other 99) DK/NR

(23)	
1) Want more children 2) Husband objects 3) Health reason 4) Religious reasons 5) Fear side effects	6) Method/service unavailable 7) Sterility 8) Breast feeding 9) Pregnant 10) Other 99) DK/NR

Cluster form: Acute respiratory infections

	NAME										
(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
(9) How many living children do you have under five?											
(10) How many children < five years sleep in the same room as adults or other children?											
(11) How many people in your household smoke inside your house?											
(12) Are open fires for cooking or heating used inside your house?											
(13) Have any of your children been sick with a respiratory illness within the last two weeks?											
(14) Did you seek treatment for the most recent episode?											
(15) Where did you seek treatment?											
(16) What treatment were you given?											
(17) Did you take the medicine for the prescribed length of time?											
(18) What is the name of the local CHW?											
(19) Has the CHW visited/contacted you during the last three months?											

Key (15)	(16)
1) Treated at home	1) Anti-microbial drugs
2) Visited the health centre	2) Bronchodilator and/or cough mixture
3) Contacted the CHW	3) Antipyretic drugs
4) Other: _____	4) Other
9) DK/NR	9) DK/NR

Cluster form: Breast feeding

		NAME										
(1)	Study No.											
(2)	Province No.											
(3)	Cluster No.											
(4)	Interviewer											
(5)	Respondent No.		1	2	3	4	5	6	7	8	9	10
(6)	Date / /											
(7)	Age											
(8)	Sex											
(9)	How many living children do you have under two?											
(10)	Are you breast feeding your youngest child?											
(11)	After your baby was born, when did you begin breast feeding?											
(12)	Did you give the baby the colostrum?											
(13)	Why didn't you give the baby colostrum?											
(14)	Do you know why it is important to give the baby the colostrum?											
(15)	At what age of the baby will you/did you stop breast feeding?											
(16)	At what age will you/did you begin giving your baby formula or milk other than breast milk?											
(17)	Water?											
(18)	Other liquids?											
(19)	Solid foods?											
(20)	Did any health worker teach you about the benefits of breast feeding?											
(21)	Can you explain why it is important to breast feed?											
(22)	Were you taught about the supplemental foods and when they should be introduced?											
(23)	Were you taught how to care for your breasts?											
(24)	What is the name of the local CHW?											
(25)	Has the CHW visited/contacted you during the last three months?											

Key (11)	(13)
1) Within three hours 2) 3-12 hours 3) 13-24 hours 4) < 24 hours 5) Not breast fed 9) DK/NR	1) Problem with breast milk 2) Baby could not suck 3) Other 9) DK/NR

Cluster form: Diarrhoeal disease control/ORT

	NAME										
(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
(9) How many living children do you have under five?											
(10) Do you know what is meant by "diarrhoea?"											
(11) Has (oldest child under two) had diarrhoea in the last month?											
(12) How long did is last?											
(13) Did you do anything to treat it or just let it run its course?											
(14) How did you treat it?											
(15) Have you ever heard of ORT, ORS, SSS or (local name)?											
(16) Is there any source of ORS in your village?											
(17) Is there a person living in your village who has been trained to use ORS?											
(18) Do you know how to mix ORS?											
(19) How long can this solution be used?											
(20) How long can you administer ORS to a child with diarrhoea?											
(21) Do you give extra fluids during diarrhoea?											
gruel?											
soup?											
rice water?											
milk solutions with twice the water?											
other fluids?											
(22) If the child is still breast feeding, do you continue breast feeding during diarrhoea?											
(23) When your child has diarrhoea how often to you feed it?											

(24) What is the name of the local CHW?

(25) Has the CHW visited/contacted you in the last three months?

Key (13)

1) Treated it 2) Let it run its course 9) DK/NR

(14)

1) Treated it myself with packet of ORS
2) Treated it myself with homemade SSS
3) Treated it myself with gruel/cereal-based solid
4) Took child to relative
5) Took child to neighbour
6) Took child to local health worker
7) Took child to CHW health provider
8) Took child to health clinic, hospital
9) Other (specify): _____
99) DK/NR

Cluster form: Childhood disabilities

		NAME										
(1)	Study No.											
(2)	Province No.											
(3)	Cluster No.											
(4)	Interviewer											
(5)	Respondent No.		1	2	3	4	5	6	7	8	9	10
(6)	Date / /											
(7)	Age											
(8)	Sex											
(9)	How many children do you have?											
(10)	What are their names, ages, type of disability?											
(11)	How did your child become disabled?											
(12)	Do you know how to prevent a similar disability from occurring again?											
(13)	Have you sought treatment or therapy for your child?											
(14)	Where did your child receive treatment or therapy?											
(15)	What are the available centres which could provide services to help your child?											
(16)	What is the name of the local CHW?											
(17)	Has the CHW visited/contacted you in the last three months?											

Key (10)
1) Movement
2) Deformity
3) Hearing
4) Blindness
5) Speech
6) Behaviour
7) Other
9) DK/NR

(11)
1) Illness
2) Birth
3) Injury
4) Other
9) DK/NR

(14)
1) Therapy or treatment centre
2) Community group
3) Special school
4) Other_____
9) DK/NR

Cluster form: Child immunization

	NAME										
(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
(9) How many living children do you have under two years?											
(10) Has anyone from the health centre ever talked to you about vaccinating your children?											
(11) Do you know which childhood diseases can be prevented by immunization?											
Diptheria											
Measles											
Whooping cough											
Tuberculosis											
Tetanus											
Polio											
(12) Do you know age children should be vaccinated against measles?											
(13) Has oldest child under two been immunized?											
(14) Do you have the immunization card for this child?											
(15) If no card, can you remember when your child was vaccinated?											
Transfer info. from EPI card											
(16 BCG											
(17) DPT 1											
(18 DPT 2											
(19) DPT 3											
(20) Polio 1											
(21) Polio 2											
(22) Polio 3											
(23) Measles											

(24) Child is on schedule for age?												
(25) For children 12-24 months: Child is fully vaccinated												
(26) When will you take your child for the (next) vaccination?												
Mother knows												
Mother doesn't know												
Fully vaccinated (NA)												
DK/NR												
(27) What is the name of the local CHW?												
(28) Has the CHW visited/contacted you in the last three months?												

Key (16) through (23): 1) Received on schedule; 2) Received off schedule; 3) Not received

Cluster form: Growth monitoring/nutrition education

	NAME										
(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
(9) How many children do you have under two years?											
(10) Is (name of oldest child under two) registered for growth monitoring?											
(11) Has any health worker ever explained growth monitoring cards to you?											
(12) Has this child ever been weighed by a health worker, nurse or doctor?											
(13) Do you have your child's growth card at home?											
(14) Please show me the card.											
(15) Interviewer: inspect card. Does growth card have age and weight data plotted?											
(16) Interviewer: record weighing history from growth card. Total number of times weighed.											
(17) Times weighed in last quarter.											
(18) Can you explain the information on the growth card to me?											
(19) During the last prenatal and/or postnatal care visit, were you educated about how to improve the nutritional status of your child?											
(24) What is the name of the local CHW?											
(25) Has the CHW visited/contacted you in the last three months?											

Key (15)

1) Yes, plotted correctly
2) Yes, but plotted incorrectly
0) No, not plotted
9) DK/NR

Cluster form: Water supply, environmental sanitation and hygiene

(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /	NAME										
		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
(9) Where do you usually get your drinking water?											
(10) Is your water supply chlorinated?											
(11) Do you usually boil water for drinking?											
(12) How long does it take you to walk to your source of water?											
(13) Can you get enough water all year?											
(14) Do you always wash your hands before handling food?											
(15) Please explain why it is important to wash your hands?											
(16) What is the primary way this household disposes of human waste?											
(17) Please explain why it is important to use a structured / sanitary facility?											
(18) What is the name of the local CHW?											
(19) Has the CHW visited/contacted you in the last three months?											
INTERVIEWER OBSERVATIONS OF HOUSEHOLD											
(20) Does water contianed have a clean cover/lid?											
(21) Do pots, pans, plates and glasses appear clean?											
(22) Are fruits, vegetables, meats covered and stored away from small domestic animals?											
(23) Does latrine appear to be used?											
(24) Are the animals penned?											

(25) Does garbage appear to be disposed of in a sanitary way?												
(26) What is the name of the local CHW?												
(27) Has the CHW visited/contacted you in the last three months?												

Key (12)
1) < 15 minutes 2) > 15 minutes 9) DK/NR

(9)
1) Clean source: faucet/tap, pipe, bore hole, covered well
2) Unclean source: open well, pond/river/stream/rain water catchment
3) Other (specify): _____
9) DK/NR

(16)
1) water-seal latrine
2) pit privy
3) WC
4) open field
5) bucket
9) DK/NR

Cluster form: Accidents and injuries

	NAME										
(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
(9) Has anyone in this household had a serious accident or injury in the past year?											
9.1 Name											
9.2 Age											
9.3 Sex											
9.4 Type of injury codes											
9.5 Treated?											
9.6 Where treated?											
9.7 Outcome?											
(10) If someone in your household was injured, what would you do to help them?											
(11) Where are the nearest emergency care facilities?											
(12) What is the name of the local CHW?											
(13) Has the CHW visited/contacted you in the last three months?											

Key 9.4 Type of injury codes	9.7 Outcome codes
01) Fall	01) Cured/recovered
02) Occupational injury	02) Still recovering
03) Traffic injury	03) Permanent disability
04) Poisoning	04) Death
05) Other (specify) _____	05) Other
09) DK/NR	09) DK/NR
9.6 Where treated codes	
01) Hospital	
02) Health care centre	
03) CHW	
04) Traditional healer	
05) Other (specify) _____	

Cluster form: Chronic, non-communicable diseases

	NAME										
(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
Diabetes											
(9) Do you now what diabetes is?											
(10) Have you or any household member ever been diagnosed as having diabetes?											
(11) Does anyone in this household have diabetes now?											
(12) Is this person being treated?											
(13) Is the prescribed treatment being followed?											
(14) Do you monitor glucose level at home?											
(15) Do you and your household members know how to handle a diabetic emergency?											
Hypertension											
(16) Do you know what hypertension is?											
(17) Have you or any household member ever been diagnosed as having hypertension?											
(18) Does anyone in this household have hypertension now?											
(19) Is this person being treated now?											
(20) Is the prescribed treatment being followed?											
(21) Do you and your household members know what to do in case of a heart attack or stroke?											
Anaemia											
(22) Do you know what anaemia is?											
(23) Have you or any household member ever been diagnosed as having anaemia?											

(24) Does anyone in this household have anaemia now?											
(25) Is this person being treated now?											
(26) Is the prescribed treatment being followed?											
(27) What is the name of the local CHW?											
(28) Has the CHW visited or contacted you during the last three months?											

Cluster form: Malaria

(1)	Study No.	N										
(2)	Province No.	A										
(3)	Cluster No.	M										
(4)	Interviewer	E										
(5)	Respondent No.		1	2	3	4	5	6	7	8	9	10
(6)	Date / /											
(7)	Age											
(8)	Sex											
(9)	Can you explain to me what malaria is?											
(10)	Has anyone in your household had malaria since the beginning of the year?											
(11)	How did you know that it was malaria?											
(12)	How many days did the malaria episode prevent that person from conducting his/her daily activities?											
(13)	Do you know how malaria is spread?											
(14)	What are your household members currently doing to protect themselves from malaria?											
(15)	Has anyone in your household died in the last 12 months?											
(16)	Which symptoms were present 1 week before death?											
(17)	What do you think was the cause of death?											
(18)	What is the name of the local CHW?											
(19)	Has the CHW visited/contacted you in the last three months?											

Key (11) and (16)
1) High fever
2) Shivers
3) Headache
4) Other _____
9) DK/NR

(14)
1) Using mosquito nets
2) Using household sprays
3) Eliminating standing water
4) Using anti-malarial drugs
5) Others
9) DK/NR

Cluster form: Tuberculosis

(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /	NAME										
		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
(9) Can you explain to me what tuberculosis is?											
(10) Do you know how TB is spread?											
(11) Do you know how to prevent infection?											
(12) Were all your children vaccinated with BCG?											
(13) Have you or any family members experienced a persistent cough lasting more than two weeks?											
(14) Did this person seek treatment for TB?											
(15) Where did this person go to seek treatment?											
(16) Was this person given medicine to treat TB?											
(17) Did they take the medicine for the prescribed length of time?											
(18) What is the name of the local CHW?											
(19) Has the CHW visited/contacted you in the last three months?											

Key (15)

1) Health centre
2) CHW/volunteer
3) Other
9) DK/NR

Cluster form: Sexually-transmitted diseases

	NAME										
(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
(9) Do you know what is meant by a sexually-transmitted disease?											
(10) Do you know what the difference is between HIV infection and AIDS? Probe for explanation.											
(11) Can a person who looks healthy be infected with an STD?											
(12) Can a person get the AIDS virus by shaking hands with someone who is infected with the virus?											
(13) Can a pregnant woman who is infected with the HIV pass on the virus to her unborn child?											
(14) Can STDs be transmitted by having sex with someone who is infected with an STD?											
(15) Is there a cure for AIDS?											
(16) What are you currently doing to prevent yourself or others from becoming infected with an STD?											
(17) Do you know how to use a condom correctly?											
(18) Where have you obtained condoms during the last six months?											
(19) Have you been diagnosed with an STD in the past 12 months?											
(20) What was your diagnosed illness?											
(21) Where did you go for treatment?											
(22) How did you first learn about STDs?											
(23) What is the name of the local CHW?											
(24) Has the CHW visited/contacted you in the last three months?											

Key (16)
1) Using a condom
2) Practicing safer sex
9) Other
0) Nothing

(18)
1) Government hospital
2) Government clinic or health centre
3) Private hospital
4) Private clinic or health centre
5) Local dispensary
6) Health worker came to you
7) Other _____
9) DK/NR

(20)
1) HIV/AIDS
2) Other STD
9) DK/NR

(21)
1) Government hospital
2) Government clinic or health centre
3) Private hospital
4) Private clinic or health centre
5) Contacted a health worker
6) Other _____
9) DK/NR

(22)
1) By word of mouth
2) From a CHW or other health staff
3) Heard it on the radio
4) Other: _____
9) DK/NR

Cluster form: Vital events and health status

	NAME										
(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
(9) How many people live in this household?											
(10) Married women of reproductive age (15 - 49):											
Age											
Pregnant?											
(11) Children less than 24 months old:											
Name											
Age											
Sex											
(12) Children 24 - 60 months old:											
Name											
Age											
Sex											
(13) Other men, women and children:											
Name											
Age											
Sex											
Morbidity											
(14) Is there anyone in your household who has been sick this week?											
Who is/are sick?											
(15) SI number											
Name											
(16) Age											
(17) Sex											
(18) Disease code											
(19) Treated?											
(20) Where treated?											
(21) Outcome											

Mortality											
(60) Were there any deaths in this household during the last 12 months?											
(61) SI number											
Name											
(62) Age											
(63) Sex											
(64) Cause of death											
(65) Date died											
(66) Died where											
(67) Death "yes"/"no"											
(100) Were there any births in this household in the last 12 months?											
(101) SI number											
Name											
(102) Age											
(103) Sex											
(104) Outcome											
(105) Date born											
(106) Born where											
(107) Birth certificate "yes"/"no"											

Key (18)

1) Diarrhoea/dysentery
2) Anaemia
3) Scabies
4) Diphtheria
5) Whooping cough
6) Tetanus
7) Measles
8) Polio
9) Tuberculosis
10) ARI
11) Fever
12) Malaria
13) Other: _____
99) DK/NR

(20)

1) Government clinic/hospital
2) Mobile clinic
3) Private clinic/hospital
4) Private doctor
5) Private midwife/nurse
6) Traditional practitioner
7) Pharmacy/drug store
8) Other: _____
9) DK/NR

(21)

1) Cured/recovered
2) Still recovering
3) Permanent disability
4) Died
5) Other: _____
9) DK/NR

(64) 1) Diarrhoea/Dysentery 2) Anaemia 3) Scabies 4) Diphtheria 5) Whooping cough 6) Tetanus 7) Measles 8) Polio 9) Tuberculosis 10) Acute respiratory inf.	11) Pregnancy related 12) Heart disease 13) Cancer 14) Diabetes 15) Typhoid 16) Accident 17) Pneumonia 18) Hepatitis 19) Malaria 20) Other 99) DK/NR
Key (66) and (106) 1) Government clinic/hospital 2) Mobil clinic 3) Private clinic/hospital 4) Private doctor's office/clinic 5) Private midwife/nurse's clinic 6) Traditional practitioner's centre 7) Home 8) Relative's house 9) Other: _____ 99) DK/NR	(104) 1) Live birth (single) 2) Live birth (twins) 3) Live birth (2) 4) Stillbirth 5) Died within 1 week 6) Died within 1 month 9) DK/NR

Cluster form: Child morbidity and mortality assessment

	NAME										
(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /		1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
Module A: Child mortality											
(9) In what month and year were you born?											
(10) How many of your sons are now living with you?											
(11) How many of your sons are now living elsewhere?											
(12) How many of your daughters are now living with you?											
(13) How many of your daughters are now living elsewhere?											
(14) Have you ever given birth to a child who later died, even if she/he lived only a short time?											
(15) How many of your sons have died?											
(16) How many of your daughters have died?											
(17) INTERVIEWER: Sum the answers to questions 10-16.											
(18) Apart from these births, have you had any other live births?											
(19) INTERVIEWER: If yes, ask if now living or dead, and correct where necessary.											
(20) Could you give me the following information on all your children born alive, even if they are now dead, beginning with your last delivery?											
Child 1 month/year											
Child 1 sex											
Child 1 alive? If no, date of death.											
Child 2 month/year											
Child 2 sex											
Child 2 alive? If no date of death.											
(21) Respondent is:											

(22) How many years has it been since you were first married?											
Module B: Child mortality											
(OPTIONAL: Use if difficult to construct histories)											
(23) In what month and year were you born?											
(24) How many of your sons are now living with you?											
(25) How many of your sons are now living elsewhere?											
(26) How many of your daughters are now living with you?											
(27) How many of your daughters are now living elsewhere?											
(28) Have you ever given birth to a child who later died, even if she/he lived only a short time?											
(29) How many of your sons have died?											
(30) How many of your daughters have died?											
(31) INTERVIEWER: Sum the answers to Questions 24 - 30.											
(32) Apart from these births, have you had any others?											
(33) INTERVIEWER. If yes, ask if now living or dead and correct where necessary.											
(34) Could you give me the following information on all your children born alive, even if they are now dead, beginning with your last delivery?											
(35) In what month and year was your last live birth?											
(36) Was this child a boy or a girl?											
(37) Is she/he still alive?											
(38) Did you have another live birth before this last one?											
(39) Was this baby a boy or a girl?											
(40) Is she/he still alive today?											
(41) Respondent is:											
(42) How many years has it been since you were first married?											

INTERVIEWER: Check Q20 or Q28-33 to see if any infant or child from this household is dead. For most recent death, ask the following questions:											
(43) Did (deceased child) die due to accident/illness?											
(44) What was the accident?											
(45) From what illness did child die?											
(46) What were the signs/symptoms present two weeks before death?											
(47) In opinion of the interviewer, of what did child die?											
(48) How long did child have the illness?											
(49) Was she/he taken somewhere to receive treatment for the illness/accident before dying?											
(50) Where was she/he taken?											
(51) Where did she/he die?											
(52) Do you have a death certificate?											
(53) May I see that certificate?											
(54) What was the cause of death, stated on certificate?											
(55) Has anyone else in this household died in last 6 mos?											
(56) Name											
Age											
Symptoms prior to death											
Treatment received?											
Child morbidity											
(57) Has any child under two years been sick in last two weeks?											
(58) What were the symptoms of sickness?											
(59) If diarrhoea, how long was/is the episode?											
(60) Does the child have diarrhoea today?											
(61) Did you give the sick child ORS?											
(62) Do you/did you continue breast feeding your baby during illness?											

(63) If coughing etc., for how many days?												
(64) When the child had illness with cough, did she/he breathe faster than usual with short rapid breaths?												
(65) If poor weight gain, has child had any of the following symptoms?												
swollen feet?												
thin hair?												
sores inside mouth?												
dry eyes?												
blindness?												
no desire to laugh or play?												
failure to develop intelligence?												
(66) Did you seek advise or treatment for the illness?												
(67) Where did you seek advice or treatment?												
(68) Was anything given to treat the illness?												
(69) What was given to treat the illness?												
(70) Were you told by the health care provider what illness your child had?												
(71) Does the child have the symptoms (mentioned above) today?												
(72) In opinion of interviewer, what illnes does/did child have?												
(73) Has anyone else in this household been sick in the last two weeks?												
(74) Name												
Age												
Symptoms												
Treatment received?												
(75) What is the name of the local CHW?												
(76) Has the CHW visited/contacted you in the last three months?												

Key (21) and (41)
1) Woman herself
2) Her mother
3) Her sister living in same house
4) Other

(46)
1) Diarrhoea
2) Diarrhoea with blood
3) Cold
4) Difficulty breathing
5) Rash or pimples
6) Fever
7) Seizures
8) Other (specify):___
9) DK/NR

(47) 1) Infection (specify) _____ 2) Diarrhoea 3) ARI (pneumonia) 4) nutrition 5) Other (specify) _____ 6) Vaccine preventable disease (specify) _____ 9) DK/NR	(50) and (51) 1) Public hospital 2) Health centre 3) Doctor's office 4) Clinic/private hospital 5) Pharmacy 6) Traditional healer 7) Other (specify) _____ 9) DK/NR
(58) 1) Fever 2) Diarrhoea 3) Difficulty breathing 4) Poor weight gain/weight loss 5) Other (specify) _____ 9) DK/NR	(67) 1) Government clinic/hospital 2) Mobile clinic 3) CHW 4) Private doctor 5) Traditional practitioner 6) Pharmacy/drug shop 9) Other (specify) _____
(69) 1) Injection 2) Antibiotic 3) Anti-malarial 4) Cough syrup 5) Other pill or syrup 6) Unknown pill or syrup 7) Home remedy/herbal medicine 8) Other (specify) _____ 9) DK/NR	(72) 1) Infection (specify) _____ 2) Diarrhoea 3) ARI (pneumonia) 4) Malnutrition 5) Other (specify) _____ 6) Vaccine preventable disease (specify) _____ 9) DK/NR

Cluster form: Adult morbidity and mortality assessment

(1) Study No. (2) Province No. (3) Cluster No. (4) Interviewer (5) Respondent No. (6) Date / /	NAME	1	2	3	4	5	6	7	8	9	10
(7) Age											
(8) Sex											
(9) How many adults live in this household?											
(10) Married women of reproductive age (15-44):											
Name											
Age											
Pregnant?											
(11) Other men and women?											
Name											
Age											
Sex											
Adult morbidity											
(12) Has any adult in this household been sick in the past two weeks?											
(13) Please tell me their names and when sick?											
Name											
When sick?											
(14) Is there any adult in your household who is sick today?											
(15) What were/are the symptoms of the illness?											
(16) How long did the illness last?											
(17) Was advice or treatment sought?											
(18) Where was advice or treatment sought?											
(19) Was anything given to treat the illness?											
(20) What was given to treat the illness?											
(21) In the opinion of the interviewee, what is/was the illness?											
(22) In the opinion of the interviewer, what illness does/did the person have?											
Adult mortality											
(23) Was there any death in this household during the last 12 months?											
(24) Who died?											

(25) What symptoms were present two weeks before death?												
(26) How long did (deceased), have illness?												
(27) Was advice or treatment sought?												
(28) Where was advice or treatment sought?												
(29) Was anything given to treat the illness?												
(30) What was given to treat the illness?												
(31) Where did the person die?												
(32) Do you have a death certificate?												
(33) May I see that certificate?												
(34) What was the cause of death, according to certificate?												
(35) In the opinion of the interviewee, what was the illness?												
(36) In the opinion of the interviewer, what did the person die of?												
(37) What is the name of the local CHW?												
(38) Has the local CHW visited/contacted you during the last three months?												

Key (15) and (25)
1) High fever
2) Diarrhoea
3) Weight loss
4) Persistent cough
5) Cough w/sputum
6) Earache/ear discharge
7) Seizures
8) Weakness or lethargy
9) Other (specify)
99) DK/NR

(20) and (30)
1) Injection
2) Antibiotic
3) Anti malarial
4) Cough syrup
5) Other pill or syrup
6) Unknown pill or syrup
7) Home remedy/herbal medicine
8) Other (specify)
9) DK/NR

(18), (28) and (31)
1) Government clinic/hospita
2) Mobile clinic
3) CHW
4) Private doctor
5) Traditional practitioner
6) Pharmacy/drug store
7) Other (specify) _____
9) DK/NR

(22)
1) Dysentery
2) Anaemia
3) Scabies
4) Diphtheria
5) Whooping cough
6) Tetanus
7) Measles
8) Diabetes
9) Hypertension
10) STD/HIV
11) Polio
12) Tuberculosis
13) ARI
14) Fever
15) Malaria
16) Other:
_____
99DK/NR

(35) and (36)	
1) Diarrhoea/Dysentery	11) Pregnancy- related
2) Amemia	12) Heart disease
3) Scabies	13) Cancer specify
4) Diphtheria	14) Diabetes
5) Whooping cough	15) Typhoid
6) Tetanus	16) Accident
7) Measles	17) Pneumonia
8) Polio	18) Hepatitis
9) Tuberculosis	19) Malaria
10) Hypertension	99) DK/NR
20) Other specify	

Appendix E: Guidelines for training and supervising interviewers

Detailed guidelines can be found in any standard textbook on survey methods. The following is a brief list of some hints that are especially relevant for rapid surveys in PHC.

ASSIGNMENTS

- Assign caseloads that can be easily completed within a few days. Don't assign too many cases or clusters. A rule of thumb: one interviewer can finish approximately 8-15 interviews, or 1-2 clusters per day.
- Assign each interviewer to clusters close to one another to reduce travel time and cost.
- It's better to assign interviewers to areas where they are not known, but also close to their homes.
- Prepare the assignments before sending the interviewers to the field. Make sure they know exactly where they are to go and what they are to do.

MATERIALS

- Interviewers should have the following: folder or three-ring binder, enumeration forms, respondent assignments, questionnaires, map of survey area, letter of introduction, pencil, eraser.

BRIEFING AND TRAINING

- Even experienced interviewers need to be given an orientation to the survey so they can become familiar with the instrument and the sampling plan, and raise questions.
- Brief the interviewers as a group in order to develop team spirit and a common understanding of the survey, and to share their experiences, suggestions, and questions.
- Share pre-test results and experience with similar surveys, if it is available.
- Develop a specific agenda for the briefing/training. Distribute it to the interviewers so they will know what to expect.
- Use an overhead projector or newsprint to review the instruments and sampling procedures.

- If your questionnaire includes open-ended questions or probes, make sure that the interviewers know the most typical responses for the former and the correct responses for the latter.
- Have two experienced interviewers conduct an interview in front of the group. Critique the interview and invite the group to join in the critique.
- Give each interviewer a chance to practice an interview, either with another interviewer or in a practice session with a cluster.
- Emphasize the importance of interviewing the selected individuals, of not substituting, of setting up a convenient time to call back for the interview, if necessary, and of travelling to the household even if it is far away and the respondent may not be home.
- Review the "Interviewer's Code." Explain to new interviewers the rationale behind each item.

INTERVIEWER'S CODE

1. Be completely honest in your work.
2. Be reliable and conscientious.
3. Be completely objective in manner.
4. Be accurate and neutral in asking and recording answers to questions.
5. Write the responses fully and legibly.
6. Be understanding, patient, but do not prod or lead the respondent. Never suggest an answer.
7. Be presentable: neat, groomed, clean.
8. Be prepared — read and understand the questions and responses.
9. Be neutral. Don't show reactions, emotions, agreement, or disagreement with responses. Don't give your opinion.
10. Repeat a question if the respondent doesn't understand it.
11. Use an informal, casual manner when asking the questions. Try to build rapport and trust. Avoid appearing to be superior more intelligent, judgmental, or impatient.
12. Don't share the responses with others: neighbours, relatives. They are confidential.
13. Keep note of any problems or unexpected reactions that occur during the interviews. They may help improve the survey.

SUPERVISION

- Begin supervision during the briefing/training. Look for those who may not be motivated in or knowledgeable about the survey. Work with them. If they do not respond, replace them before beginning the survey.
- If enumeration is involved, have a larger number of enumerators than needed for interviewing. Select the best enumerators to be interviewers.
- Tell the interviewers that there will be spot checks, re-interviews to check validity, and perhaps a post-enumeration survey. Spot check five to ten percent of the sample. The smaller the sample, the greater the percentage of spot checks should be.
- Do spot checks and some re-interviews early on the first day.
- Have the interviewers check their completed questionnaires before they leave the cluster so that they can re-interview respondents, if necessary.
- At the end of the first day, have the interviewers review one another's completed questionnaires and respondent disposition forms to identify problems and to suggest solutions.

Appendix F: Cluster sampling programme

This appendix contains a computer program (Cluster identification worksheet) for selecting cluster samples. It uses a spreadsheet program. You can load the computer file into *Lotus 1-2-3, Quattro*, or any similar program that will accept *1-2-3* files. You fill in the required information about the survey population in the first three columns. The program generates a listing of clusters and their locations in the last two columns. The program can be used for single and multi-stage cluster sampling.

Cluster identification worksheet

This worksheet is the computerised version of the manual form shown in Step 5. It is a *Lotus 1-2-3* spreadsheet named CLUSTER.WK1. Load it into your computer from the PHC MAP diskette.

Although most people think of clusters as natural groupings of people (villages, census tracts, urban blocks), this is incorrect. In cluster sampling you will divide your total survey population into 30 equal groups. Each of these groups will be a "cluster." Then you will identify seven respondents in each of these clusters.

You need to know the total population of your survey population to determine the size of each cluster. Simply divide the total population by 30. For example, if your catchment area has 45,000 people, each cluster will include 1,500 people (45,000/30 = 1,500).

It doesn't matter if there are fewer or more than 30 "natural clusters," since you will define the clusters by dividing the total population into 30 groups of equal size.

It also doesn't matter if the population is scattered over a large area. People can even be on islands or in remote areas and still be included in the sample. If you want your sample to represent all of your target population, then do not leave any "natural clusters" out. However, if it is not feasible to include some areas, then leave them out. BUT, your sample will not represent those who are left out. If you limit your sample to people within one kilometre of a health centre, then that is all it represents.

Complete the cluster identification worksheet

You must have estimates of the size of sample sub-units. List these sub-units (villages, census tracts, voting precincts, towns) in Columns A and B of the Cluster identification worksheet. Record the population of each subunit in Column C. This figure does not have to be exact. The relative

size of each subunit is what is important. Thus, you can use recent census data even if it is a few years old.

The computer will calculate the cumulative population in Column D and the total population. In the example, this is 29,481, which you can see at the bottom of Column C and on the second line at the top of the page.

Enter the number of clusters you want at the top of the form (in most cases this will be 30). The computer divides the total population (29,481) by the number of clusters (30) to get the cluster size (983), which is displayed on the third line at the top.

This figure is also called the sampling interval: the interval between one cluster and the next. That is, the cluster start numbers will each be 983 units from one another.

The computer will now do two things when you press <Enter>. It will select a **random start number** and place it on the fourth line. The example shows 491. Then it will use that number to identify the start numbers for each cluster. These will appear in Column F. Column E gives you the numerical order of your 30 clusters.

DO NOT MAKE ANY CHANGES. That will generate a new list of start numbers. Print this list out first so that you have a record.

The last step is to identify the communities where those start numbers are located. Compare the first number in Column F (491) with the cumulative figures (Column D). Find the first number in Column D that is greater than 491. That is 548 (Pagai). Thus, the first start number is in Pagai. Write that on the first line in Column G. Do the same thing with the second start number in Column F (1,474). The first number in Column D that is greater than 1,474 is 1,964 (Serina). Write that in Column G next to 1,474. Continue until you have identified all 30 communities where your start numbers are located.

Communities that have large populations (such as # 14 and # 16, Pingra and Srivish) are likely to have more than one start number. That is because their population is two or three times larger than the cluster size (983). Therefore, two or three of your clusters may be in one community.

Multi-stage sampling for large clusters

If your population is very large, you can select your sample in stages. Start with the largest administrative unit, say districts. Select your 30 cluster start numbers and identify the districts that will be in the sample.

You are going to list the population of the sub-units (say sub-districts) of each of these districts. Then you are going to find the sub-district where the random start number is located.

Let's use Serina as an example. Use the cluster identification form to list all of Serina's subdistricts in Column A and each subdistrict's estimated population in Column C, just as before. However, in the first row enter the name of the district (Serina) and the corresponding cumulative population figure that was generated in the first worksheet (1,278). You need to add that number to Serina's population to match the start number with your subdistricts.

The following example shows what your worksheet might look like. Column D will give you a cumulative population for Serina. Then find the first number in Column D that is larger than the start number for Serina (1,474), which is in Barley.

CLUSTER IDENTIFICATION WORKSHEET

Number of clusters	=	**30**
Sample population size	=	**29,482**
Cluster size (sampling interval)	=	**983**
Random start number	=	**491**

A Community Name	B Community Number	C Estimated Population	D Cumulative Population	E Selected Cluster	F Start Number
Serina			1278		
Kota	1	129	1407		
Barley	2	123	1530	2	1474
Sanburn	3	142	1672		
Geneva	4	78	1750		
N. Barn	5	106	1856		
S. Barn	6	108	1964		
TOTAL		686	1964		

Repeat this process for each of the 30 districts chosen. Note that you do not need to produce the output data (Columns E and F) except for the first selection of start numbers.

You can also repeat this process for each selected subdistrict to identify the villages where the start numbers are located. If the households in the villages are numbered, you can actually identify the individual household where you would start your interviews.

However, it would be better to select your households at random once you identify the smallest administrative unit. Simply number them and

select 7-10 households at random, more if the households do not all include eligible respondents.

Appendix G: Other sampling tools

This appendix includes five computerised tools that you can use for sampling. They are:

APPENDIX G.1: ESTIMATES OF TARGET GROUP SIZES
APPENDIX G.2: SAMPLE SIZE ESTIMATION FOR WHO TWO-STAGE CLUSTER SURVEY
APPENDIX G.3: RANDOM NUMBER TABLE
APPENDIX G.4: RANDOM SAMPLING PROCEDURES
APPENDIX G.5: ESTIMATING FERTILITY AND CHILD MORTALITY RATES AND RATIOS

Appendix G.1: Estimates of target group sizes

The following file (TARGET.WK1) is used to estimate the size of the principal target groups in a given population. You will need to know the approximate size of the total population under study and the percentages of women and children by age. It also helps to have approximate rates for births and deaths. Insert the required information in the "USER INPUT" column, and the programme will make all the necessary calculations.

For example, the data currently in the file show that in a population of 4,196 there will probably be 1,096 married women aged 15-49. This would usually be a large enough group to draw from for most samples. However, there would be only two maternal deaths each year in that population. To have a large enough sample of maternal deaths (say 20), you would have to have a much larger population. You can determine how large that population would have to be by increasing the estimated total population number in the "USER INPUT" column until the "Maternal death" figure reaches 20.

If you do not have the population size but know the number of households and household size, multiply the two and enter the estimated population size in cell F23. Then insert the household size and number of households in the appropriate cells (F24 and GG25). You could also change the formula in cell F23 to (F24*G25).

Insert population estimates in the "USER INPUT" column. Estimates of eligible subjects are computed and shown in the "COMPUTER CALCULATED" column. The estimates in this table are based on data from Dhaka, Bangladesh. Enter data in WORKSHEET.

SUMMARY OF SAMPLES:			
Population	4,196	**Children**	
Households	800	**Live Births**	147
		Under 5	565
Women	2,037	0-11 mo	89
15-49 yrs	1,096	12-23 mo	101
Maried women 15-49	829	24-60 mo	375
Pregnacies (1 yr)	357	**Deaths**	
"Detectable"	238	0-11 mo	20
Maternal deaths	2	1-4 yr	3

WORKSHEET		USER INPUT	COMPUTER ESTIMATES
1. Estimated total population*(see note)		4,196	
2. Estimated household size		5.2	
3. Estimated number of households		800	
4. Estimated male/female ratio:	**Males**	100	0.94
	Females	106	
5. Estimated number females		2,037	
6. Population age distribution:	<5 yrs	13.5%	274
	5-14 yrs	28.2%	575
	15-49 yrs	53.8%	1,096
	> 49 yrs	4.4%	89
7. Estimated married women 15-49:			
	Married	75.7%	829
	Un-married	20.0%	219
	Widowed	3.3%	36
	Separated	0.6%	6
	Divorced	0.4%	5
8. Estimated pregnancies (1 year):		357	
Est. crude birth rate		0.0350	
Est. pregnancy wastage		0.0500	
Est. pregnancy detection rate		66.6%	
Est. no. detected pregnancies		238	
9. Estimated number of births (1 year):		147	
10. Estimated number children 5 years:		565	
	0-11 mo.	15.7%	89
	12-23 mo.	17.9%	101
	24-60 mo.	66.4%	375
11. Estimated mortality:			
Infant deaths 1yr	IMR	0.1340	20
Child deaths 1-4 yrs	CMR	0.0066	3
Maternal deaths	MMR	0.0110	2

* NOTE: If you do not have the population size but have the number of households and household size, then multiply the two and enter the estimated population size in cell F23.

Appendix G.2: Sample size estimation for WHO two-stage cluster survey

The program shown on the next two pages was developed by Ralph Frerichs. It can be used by the manager to determine the sample size needed for a cluster and a random sample based on the information summarised at the beginning of Step 5: Sampling. The manager merely needs to have:

- an estimate of the proportion of the population with a particular attribute (children fully immunized);
- the desired confidence interval (e.g., 90 percent);
- the number of clusters (usually 30);
- the average number of respondents per cluster (usually 7-10);
- and the estimated "intraclass correlation coefficient" (see below).

By trying different estimates of these five items, the program can compute various sample sizes for both random and cluster samples. The program also computes the design effect and indicates with a Yes or No whether the sample size is acceptable or not. The estimated confidence intervals at 90, 95, and 99 percent are also computed.

This program is designed to estimate the sample size for a single population. This could be used, for example, to assess health needs in a single district. The "Hypothesis testing" program is used for two samples. It could be used, for example, to compare health needs in two districts, or in a "before and after" survey to assess changes over time.

Note: The intraclass correlation coefficient is an estimate of the homogeneity of subjects within a cluster. The value ranges from 0 to 1, with 0 meaning that there is no difference between people in one cluster and those in the others and Figure 1 meaning that the people within a cluster have similar characteristics, e.g., they have all been immunized.

Frerichs summarised examples of coefficient values from several studies. Infant deaths = 0.00 means that there is no difference in the pattern of infant deaths from1 cluster to another. Immunization coverage = 0.23 means that there is a moderate tendency for children within a given cluster to have a similar immunization history. The tendency for children in a given cluster either to have or not to have received the third dose of DPT is even higher.

1. Infant deaths	0.00
2. Tetanus	0.002
3. Pertussis	0.049
4. Measles	0.099
5. Immunization coverage	0.23
6. First dose DPT	0.26
7. Trained birth attendant	0.27
8. Second dose DPT	0.31
9. Third dose DPT	0.47

The computer file is reproduced on the next two pages.

Sample Size Estimation For WHO Two-stage, Cluster Survey

INSTRUCTIONS: Fill in estimates where indicated in the first block. The program computes sample sizes needed for: 1) random; and 2) cluster samples. It computes the design effect for a cluster sample, and determines whether the sample size is acceptable. There are two programs: the first (below) is for INTERVAL estimation (of one population). The second (page down) is for HYPOTHESIS TESTING (of two populations).

Interval estimation				
To be completed by the investigator				**Fill In**
Estimated proportion with the attribute		0.300		<---
One-half length of confidence interval		0.070		<---
Desired level of confidence (90% = 1.64; 95% = 1.96; 99% = 2.58)		1.96		<---
Number of clusters (should be >25)		30		<---
Average number per cluster		7		<---
Intraclass correlation coefficient (ROH)		0.03		<---
Derived by the program				
Necessary variance of sample proportion		0.001276		
Sample size if SIMPLE RANDOM SAMPLE		165		
Variance of proposed cluster sample		0.001180		
Sample size for proposed CLUSTER SAMPLE		210		
Est. DESIGN EFFECT for cluster sample		1.18		
Sample size specifications are OK		Yes		
Interval estimation				
Estimated Confidence Interval for Prop. with Attribute of Interest				
Confidence Level				
Proportion				
II	90%	95%	99%	
Upper	0.3563	0.3673	0.3886	
Lower	0.2437	0.2327	0.2114	
Scaling	0	0.2		

Hypothesis testing —Two samples of equal size		
		Fill in
Est. proportion with the attribute in FIRST population	0.30000	<---
Est. proportion with the attribute in SECOND population	0.45000	<---
Desired level of statistical significance (<.10=1.64; <.05=1.96; <.01=2.58)	1.96	<---
Desired power of the test to statistically detect the est. difference in proportions (90%=1.28; 95%-1.64; 99%=2.34)	1.28	<---
Average number per cluster	7.0	<---
Intraclass correlation coefficient (ROH)	0.30	<---
Derived by the program		
Necessary sample size if SIMPLE RANDOM SAMPLE	277	
Necessary sample size per study group using indicated TWO-STAGE CLUSTER SAMPLE	268	
Necessary number of cluster (should be >25)	38	

Hypothesis testing						
Estimated confidence interval comparing two proportions						
Confidence level						
Proportion	90%		95%		99%	
Group	1	2	1	2	1	2
Upper	0.344	0.504	0.360	0.477	0.379	0.535
Lower	0.250	0.396	0.240	0.385	0.221	0.365
Scaling	0.1	1.				

Appendix G.3: Random number table

The following is an excerpt from a computer file that you can use to generate a random number table to fit the exact size of your population. Simply insert the population total in cell A5 (next to the "name of the site") and press F9 to compute a new table. The table shown below can also be used if desired.

Instructions: Insert population of area in cell A5, and name of site in B5. Press F9 to generate a new table.

POPULATION LOCATION												
54333 Name of site												
24915	28728	4083	48145	52967	20539	53034	25748	15222	26093	17262	34054	18710
12052	38180	11757	5655	38328	13608	5880	22224	2305	38875	19594	52698	1676
24436	1350	8549	34395	22343	49105	50569	22489	52809	6607	44172	17752	49278
35294	41389	12835	6903	10018	42747	44501	36997	17150	54096	4739	50795	26923
31465	4052	32750	18660	14822	46328	44573	31431	45381	23786	33666	21510	41315
21776	23736	10521	5382	4727	32856	4337	22374	9904	13927	3849	9810	8926
29411	34179	729	40717	22841	33466	27195	50807	6742	48931	27909	34790	50084
32584	53626	11545	4857	28178	44561	20125	39882	21661	14308	32240	6268	21327
52275	16134	10623	18930	21490	46373	20010	14221	8854	53612	6570	34326	18696
21015	25697	48932	48878	36688	34894	15185	52622	19397	5018	37853	52805	33842
13997	28443	30296	7396	1187	33790	18916	17057	34	4524	31494	16299	21785
40710	33350	24051	6453	4103	46711	8030	45891	12900	32394	37076	3935	38135
19613	22626	2583	48516	11411	48799	14255	1657	39772	35774	22326	20213	21128
847	45947	51890	20533	50608	41180	6660	24685	36335	21685	3187	17188	16658
51940	13339	16290	50604	34248	18475	41654	22904	41918	17744	40221	53259	7454
34666	6400	38115	43457	29066	37938	48663	13207	54106	26353	38992	646	25245
53795	42416	37839	4944	49488	3268	29828	31719	25218	8000	54091	1387	10599
47298	11475	40299	5581	44313	44970	43092	22395	4123	53023	20522	39512	35042
38566	38110	53018	21217	52834	9691	28755	52022	5913	53454	9748	39988	27152
5900	41546	29899	26564	43852	21391	21571	777	42471	18507	42773	30803	49582
17849	33623	22557	50095	4911	14953	50149	15620	43759	3743	5070	46817	39767
16971	16508	49742	21519	52255	26407	17498	45044	20970	19092	22916	191	13238
14520	33512	28660	33586	45367	21949	16742	5034	4606	34919	15502	8596	2494
48441	24557	17006	52744	47826	41735	24707	29182	30101	22846	25948	22941	46061
41316	51594	11655	13294	13885	18902	44388	32140	5591	38674	17344	43322	18216
343	39203	41768	43724	21602	25396	38128	10141	4849	44768	23598	37091	16631
3113	24174	25385	37387	5213	7725	18291	16164	45430	9772	1635	8887	52886
13177	49086	15432	33470	48481	33613	21779	22956	36736	30252	21223	31288	3831
14346	30653	30707	6967	28512	45098	37737	37292	14776	48411	2876	38916	46928
20001	35314	530	12032	26052	47288	45279	41895	51900	26258	17915	47449	23819
19199	42379	19565	17527	21543	43601	16230	42163	32857	3619	48956	15042	52169
9642	24455	45602	48868	12106	6764	3057	27829	8733	46640	27891	1943	4840
43158	13938	10807	43355	26639	10509	8557	51371	53639	40324	29272	43727	53479
32643	20883	40714	7581	52465	24645	19246	52994	30613	27726	48323	21174	37907
51804	31090	22218	30054	3500	25983	36971	9694	721	49434	30191	28057	10290
5645	47968	20234	21049	35440	10047	16982	29559	49152	43912	43427	54206	32397
33145	39256	32509	40301	26077	52602	39403	51674	47975	39018	738	34710	27716
13263	41228	39624	42164	21643	17618	34878	31496	10376	16433	51256	19555	53949
53580	37567	20427	1890	8027	6334	3690	27925	37262	25135	33802	13097	32877
48587	6003	12384	30155	48123	36516	41157	45985	24960	23239	31036	43539	24279

Appendix G.4: Random sampling procedures

The random number spreadsheet shown in Appendix G.3 can also be used to generate a random sample for you. It can be used to generate a complete sample or the last stage of a cluster sample. It can be used for any size population as well, from 100 cases to more than 100,000 cases.

The basic principle behind random sampling is that every unit has the same chance of being selected. To make this possible, you need a complete and up-to-date listing of all members of the target population that you wish to sample. If you go to a village of 100 households, you can enumerate the households (give each one a number) and draw your sample from that listing. Usually you don't want to include all households, only those with eligible respondents. Thus, your enumeration could be designed to list only those households with children under age two years. Then you draw your sample from that listing.

Many PHC programmes do a complete listing of all households in their catchment area every year. Some have computerised records of each family and each family member. If you have either of these, you can probably draw a random sample. Stratified random samples are preferred if the population is made up of significantly different sub-populations. This is because they provide more accurate data on each subgroup in your population. So if your population is made up of rural and urban subgroups, poor and middle-class, or Hindu, Moslem, Christian, and Buddhist sub-populations, AND your household registration system includes information on these characteristics, then you can draw a random sample fairly easily. If the size of each group is known, it is best to draw the sample in proportion to the total. For example, if Moslems constitute 60 percent of the population, then the Moslem stratum should be 60 percent of the sample.

Once you have your listing of your population, follow these steps:

1. Use **TARGET.WK1** to estimate the size of each target group in your population. You may skip this step if you have precise data on the characteristics of each target group. For example, if you know how many pregnant women there are in your area, go to the next step. If you don't know, use **TARGET** to make an estimate.
2. Use **SIZE.WK1** to determine the required sample size for each target group. Suppose that you want to get information about pregnant women who are enrolled in your programme. If you estimate that 30 percent of them are enrolled, then you can use **SIZE.WK1** to estimate

the size of the sample of pregnant women. At a 95 percent confidence level, that would be 165 women (see Appendix G.2).

3. Use **RANDOM.WK1** to generate a random sample of each target group. Finally, make sure that each pregnant woman in your register has a sequential number (from 1 to N). Assume that there are 250 of these women. Enter this number (250) into cell B4 of the Random number table (**RANDOM.WK1**). Press F9 to generate a random listing of these 250 women. Take the first 165 listed as your sample.

The following excerpt from the Random number table displays this listing. If some of the women listed are not eligible or available, substitute the next numbers on the list.

Instructions: Insert population of area in cell A5, and name of area in cell B5.

Press F9 to generate a new table.

POPULATION LOCATION								
250 Pregnant women								
173	194	109	50	7	219	82	210	174
216	124	107	235	50	90	98	26	67
151	23	34	129	71	162	183	172	70
169	17	7	14	41	235	106	207	185
113	45	91	129	95	198	213	54	220
154	91	98	27	207	12	38	170	18
206	166	130	191	106	193	162	223	192
104	45	128	134	205	49	70	8	114
24	1	169	16	18	162	15	122	142
152	41	10	1	81	125	124	136	112
112	135	141	115	130	24	5	17	66
130	207	76	106	15	173	115	47	240
214	115	151	55	130	99	109	249	49
69	137	74	233	75	27	208	56	68
24	204	219	213	90	111	51	233	18
200	137	174	226	216	174	61	52	2
184	130	35	24	222	186	51	208	238
201	231	209	236	28	2	81	248	42

Appendix G.5: Estimating fertility and child mortality rates and ratios

The vital events and mortality questionnaires (Appendix C) produces the data you will need to construct both fertility and mortality estimates. A rough rule of thumb is that you will need about 200 respondents in each 5-year age group to have a large enough sample to compute the estimates.

Since there are normally 7 age groups, that means that you will need a sample of about 1,400 married women aged 15-49. That would give you about 300 live births (an average of 30-50 per age group). That is enough to compute **fertility** rates **directly**.

That same sample of 1,400 women would not provide enough cases to compute **child mortality** rates **directly**, however. You would identify only about 30-40 infant deaths and 4-6 child deaths in the past year. Obviously, you would have to expand your sample significantly to get enough cases to compute mortality rates directly. If you use the TARGET.WK1 program to make some estimates, you will find that you need to interview over 7,000 married women to find 20 child deaths over the past year.

There are a number of **indirect** techniques that demographers use to estimate mortality and fertility rates. These techniques produce "life tables" that show the probability of deaths or births among different age groups. An example is shown below of a table that provides estimates of child mortality by ages 1, 2, 3, 5, 10, 15, and 20. Child mortality (age 2-5) is computed by subtracting infant mortality from under 5 mortality (0.50 - .028 = 0.022).

Indirect measures of childhood mortality

Age group of women	Number of women	Number of children born	Number of children dead	Percent Dead	Mortality measures
15-19	2,826	285	8	0.028	0-1 yr
20-24	2,648	3,052	105	0.034	0-2 yrs
25-29	1,818	5,851	318	0.054	0-3 yrs
30-34	1,334	6,978	350	0.050	0-5 yrs
35-39	1,010	7,054	437	0.061	0-10 yrs
40-44	1,029	8,544	705	0.083	0-15 yrs
45-49	629	5,641	559	0.099	0-20 yrs
Total	11,294	37,405	2,482		

If you use indirect methods, you should be able to get enough cases with a sample of 1,700-2,000 married women. That is because these methods rely on birth and death **histories** of women, not just the events of the past year. Thus, each woman interviewed can contribute information about several years of experience, which may include two or three births or deaths.

Indirect methods are rather complex to compute, and you should get help from a trained demographer before deciding to undertake this kind of analysis.

The UNICEF handbook on *Measuring childhood mortality* shows how to collect and process child mortality data using a short questionnaire that we have included in Appendix C (Child mortality). You can use this questionnaire just like any other in this module. However, the authors caution not to change the order of wording or questions. They have been extensively tested and any revisions could bias the results. On the other hand, you may combine this questionnaire with others to carry out a multiple survey of several topics.

You can also use the cluster sampling methodology described in this module. Of course, your sample will have to be 10 times larger than the typical 30 cluster x 7 respondent sample. You can use the SIZE.WK1 program in this appendix to examine various combinations of clusters and respondents. The following list will give you a rough idea of these combinations and the associated design effects for samples of about 2,000. These combinations are all based on the following assumptions:

- Estimated proportion with the attribute (mortality) 5%
- One-half the length of the confidence interval .02
- That is, the true value will be between 4 and 6%
- Desired level of confidence 95% = 1.96
- Estimated intraclass correlation coefficient .005

Let us assume that you decide to draw 60 clusters of 34 respondents each. Use the **CLUSTER.WK1** file to select your cluster start numbers. Follow the instructions to draw 34 respondents from each cluster (preferably at random). Although the UNICEF methodology allows you to interview all eligible women in a selected household, it would be better to interview only one per household. That will ensure that your results are more representative of the area's population.

The UNICEF Handbook describes how to construct life tables and other estimates of mortality. But as mentioned above, the calculations are complex, and you should seek expert assistance before trying to estimate mortality indirectly.

Clusters	Respondents	Sample size	Design Effect
30	67	2010	1.33
40	50	2000	1.25
50	40	2000	1.20
60	34	2040	1.17
70	29	2030	1.14
80	25	2000	1.12
90	23	2070	1.11
100	20	2000	1.10

Note: Obviously, you should change the assumptions to reflect your particular situation. However, all of these combinations would produce results at the 95 percent confidence level that are within two percentage points of the true mortality rates.

Appendix H: Survey management forms

The two forms on the next pages can be used to: 1) enumerate eligible respondents within a cluster; and 2) record interview experience with selected respondents.

Form 1 (Household enumeration) should be used at the final stage of cluster sampling to identify all households in the cluster that include an eligible respondent. If there were 30 clusters, then 30 of these forms would be filled out. The top portion of the form includes routine data (study name, date, etc.), a statement of the eligibility criteria for respondents (e.g., all married women age 15-49; children under two years old), and the cluster number and community name (to make it easier to identify). It also includes the estimates taken from the sample design (see Appendix F) of the total population in the cluster, the expected number of households there, and the expected number of respondents. These last figures will give the enumerator an idea of the task at hand and can serve to verify the population estimates.

The enumerator would go to each household in the cluster, and give it an identifying number (HH No.). If it doesn't have one, the enumerator should determine whether the household is occupied (HH Occ: Yes, No). The enumerator should then interview a household resident to determine how many eligible respondents live there (Elig Resp) and note anything unusual in the Remarks column (e.g., away on holiday for two mo.).

After all of the households have been enumerated in all of the clusters, the study team would use a random number table to select the desired number of respondents (e.g., seven) from each of these lists. Those selected would be marked on the form (Selected). Those households would then be transferred to Form 2.

Form 2 (Respondent disposition) would contain a list of the households to be contacted. A master list can be made out in the office and copies of the assigned households given to each interviewer. If there were to be seven interviews per cluster, and an interviewer were assigned three clusters, then each of ten interviewers would be given a list of 21 households to contact (3 clusters x 7 respondents).

The interviewer would note the date that the first attempt was made to interview the respondent (Attempted interview). If the respondent is not at home or for some reason cannot be interviewed, then up to two "call-back" attempts would be made. The interviewer would write in the dates of these attempts. He or she would indicate in the next column

(Interviewed Yes, No) whether the respondent was successfully interviewed, and include any relevant comments (e.g., refused, sick).

After the interviews are completed, the totals for each cluster should be calculated.

This example assumes that there is no substitution for respondents who are not at home or cannot be interviewed. If substitution is permitted, then the list of eligible respondents can be increased. For example, instead of selecting seven respondents at random from Form 1, an addition number (say three) could be added to be interviewed if one of the original seven cannot be.

FORM 1: Household enumeration **STUDY NAME:**

ELIGIBILITY CRITERIA: **DATE:**

CLUSTER NO: **COMMUNITY NAME:** **ENUMERATOR:**

EST. POPULATION: **HH:** **ELIGIBLE RESPONDENTS:**

SEQ No.	HH No.	HH Occ.	Elig Resp.	Selected	Remarks	SEQ No.	HH No.	HH Occ.	Elig Resp.	Selected	Remarks
1						#26					
2						#27					
3						#28					
4						#29					
5						#30					
6						#31					
7						#32					
8						#33					
9						#34					
10						#35					
11						#36					
12						#37					
13						#38					
14						#39					
15						#40					
16						#41					
17						#42					
18						#43					
19						#44					
20						#45					
21						#46					
22						#47					
23						#48					
24						#49					
25						#50					
Total						Total					

Form 2: Respondent disposition **Study name:**

Interviewer: **Date:**

Clus No.	SEQ No.	HH No.	Attempted Interview			Interview		Remarks	Clus No.	SEQ No.	HH No.	Attempted Interview			Interview		Remarks
			1	2	3	Y	N					1	2	3	Y	N	
									TOTAL								

Appendix I: Tabulation and analysis templates

This appendix includes three tools that can help you organize and carry out your analysis more easily. They are:

Appendix I.1: Analysis plan
Appendix I.2: Data entry and analysis templates
Appendix I.3: Confidence interval estimation template

Appendix I.1: Analysis plan

The following is an illustrative analysis plan for a rapid survey. The plan is a list of suggested frequency distributions, averages (means), and cross-tabulations. The first frequency distribution shows how a table would be set up, with subclassifications of the variable (age) and the number and percent distributions laid out. The numbers in parentheses refer to the variables coding numbers on the questionnaire.

RAPID SURVEY QUESTIONNAIRE: Breastfeeding and growth monitoring

Frequency distributions

1. Number of women by age (6) N and percent

Categories	N	%
aged 15 to 19 years	_____	
aged 20 to 24 years	_____	
aged 25 to 29 years	_____	
aged 30 to 34 years	_____	
aged 35 to 39 years	_____	
aged 40 to 44 years	_____	
aged over 44 years	_____	
Total	_____	100 %

Mean age of respondents: _____ Yrs.

2. Number of women by number of children under age two (7)

No. children	(0)
One child	(1)
Two children	(2)
Three or more children	(3)

3. Number of women currently BREAST FEEDING (8)
   Yes (1)
   No (0)
   Don't Know (9)

4. Time after birth that BREAST FEEDING began (9)
   Within 3 hours (1)
   3 - 12 hours (2)
   13 - 24 hours (3)
   More than 24 hours (4)
   DK/NR (9)

5. Number for women who fed baby colostrum (10)
   Yes (1)
   No (0)
   DK/NR (9)

6. Mean age at which BREAST FEEDING will/did stop:____months (11)

7 Mean age at which mothers will/did begin supplementary foods: _____months (12)

8. Proportion of children under 2 registered for growth monitoring (13)
   Yes (1)
   No (0)
   DK/NR (9)

9. Proportion of mothers who have had growth monitoring explained to them by health workers (14)
   Yes (1)
   No (0)
   DK/NR (9)

10. Proportion of women who have had their children weighed by a health worker, nurse, or doctor (15)
    Yes (1)
    No (0)
    DK/NR (9)

11. Proportion of mothers who have growth card at home (16)
    Yes (1)
    No (0)
    DK/NR (9)

12. Proportion of mothers with card who were able to find it (17)
    Yes (1)
    No (0)
    DK/NR (9)

13. Proportion of cards with weight and age correctly plotted (18)
    Yes, correctly plotted (1)
    Plotted, but incorrectly (2)
    Not plotted (0)
    DK/NR (9)

14. Total number of times children with cards have been weighed (19)
    Mean number of times weighed:_____

15. Total number of times children with cards weighed in the past quarter (20)
    Mean number of times weighed:_____

16. Proportion of mothers with cards who can explain it correctly (21)
    Yes (1)
    No (0)
    NR (9)

17. Proportion who know name of their local CHW (22)
    Yes (1)
    No (0)
    NR (9)

18. Proportion who have been visited by a CHW during the past three months (23)
    Yes (1)
    No (0)
    NR (9)

Cross-tabulations

Cross-tabs are generally not used in cluster samples because the sample cannot be broken into subsamples for comparison of one subgroup to another. That is, the statistics that are produced by cross-tabs cannot be used. However, cross-tabs may still be useful in a qualitative sense. They may give the manager an idea of possible relationships that could be examined more closely in future investigations. If you are using random or stratified samples, then cross-tabs are appropriate as one of the most important types of analysis.

The proposed cross-tabs examine the distribution of an independent variable (e.g., number of children) by a dependent variable (age) to see if there is a correlation between the two variables. That is, does the number of children vary according to the age of the mother? The rapid surveys tend to include very few dependent variables. Age is the predominant one in this example. Others that might be important and could be added include sex, education, literacy, race, ethnic group, income level, and location.

1. Age of mother (6) by

Number of children (7)
Number of women who breast fed with colostrum (10)
Number of women who have their child's growth chart at home (12)
Number of children registered for growth monitoring (13)
Number of children weighed at least once (15)
Number of mothers whose chart is correctly plotted (18)
Number of mothers who can explain the growth chart (21)

2. Community health worker's visit (17) by

Number of children (7)
Number of women who breast fed with colostrum (10)
Number of children registered for growth monitoring (13)
Number of children weighed at least once (15)
Number of mothers whose chart is correctly plotted (18)
Number of mothers who can explain the growth chart (21)

Appendix I.2: Data entry and analysis templates

The sample printouts that follow illustrate how survey data can be entered into a preformatted spreadsheet that will automatically compute most of the basic counts, averages, and frequency distributions that you will need. The first spreadsheet (**MINIGM.WK1**) can be used to summarise data for 30 clusters with up to 11 variables in addition to the descriptors. The second (**RAPIDANC.WK1**) covers 14 variables, plus descriptors, and includes multiple choice questions. It can be used to enter all 210 responses from the 30 clusters.

This same format can be used for entering data manually. Simply use several sheets of ruled paper, draw vertical lines to separate the columns, label the variables along the top, and enter the data in each row.

The format and construction of these templates are identical; the only difference is the number of variables and respondents. The **MINIGM** file has been set up to summarize data for 30 clusters. The **RAPIDANC** file has been set up for 210 respondents. Both can be enlarged or reduced simply by inserting or deleting the appropriate number of rows. Variables can be added or deleted as well, although this is a bit more complicated since each variable will have its own coding structure.

The top border of both templates shows a summary of the variables and their corresponding codes or abbreviations for easy reference. Those codes or abbreviations are repeated in the row below. For example, in the **MINIGM** spreadsheet Ch refers to variable 6: No. Children under age 2. In the **RAPIDANC** spreadsheet the variable's code number (9, 12, etc.) is used instead of abbreviations.

To enter data the interviewer simply needs to key in the precoded data from a cluster or questionnaire into a row. For example, starting to the right of "Quest." 1 in the **MINIGM** spreadsheet, enter the date under variable 4, then the cluster's ID number in the next column (5), the total number of children the respondents have under age 2 in the next column (6), and so forth through item (17). Repeat this process until all data from all questionnaires have been entered.

Many entries will simply be coded 1 for "Yes," 0 for "No," and 9 for "Don't Know/No" Response. Some multiple choice items may have additional codes (see, for example, variables 9, 10, 11, 13, 15, and 17 in the **RAPIDANC** spreadsheet). If an item is blank on the questionnaire, it should be left blank in the spreadsheet. Do not enter a 0, as that is usually a negative response and will be counted as such. Do not press the space bar, as that inserts an

invisible apostrophe (’). In fact, do not enter anything, since the program counts all non-blank cells when it does tabulations.

This program has no error-checking features, so it will be important to verify the entries to make sure that they are correct. There are two simple ways to do this: 1) enter the data twice in two separate files, print them out, and compare the entries; and 2) use a two-person team to enter the data, with the first reading out the data and checking what the second person enters.

MINI-SURVEY QUESTIONNAIRE, GROWTH MONITORING

16/January/1991

Study No. _____ (1) Prov. _____ (2) Interviewer _____ (3)

ID ID No. BSup Begin Supp Food SH Shows card

Ch<2 Children under two RGM Registered for GM #Wt Times weighed

BF Breastfeeding baby W Ever Weighed WLQ # weights last qtr

SBF Age Stop Breastfeeding CH Growth chart at home EXC Can explain chart

	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(14)	(15)	(16)	(17)
Ques	Date	ID	Ch 2	BF	SBF	BSup	RGM	W	CH	SH	#Wt	WLQ	EXC
1	24/April/1990	101	1	1	24	6	1	1	1	0			
2	24/April/1990	102	2	0	14	4	1	0	0				
3	24/April/1990	103	1	1	16	7	0	1	9				
4	24/April/1990	104	1	1	4	8	0	1	9				
5	24/April/1990	105	1	1	12	9	1	1	0				
6	24/April/1990	106	1	1	15	5	1	1	0				
7	24/April/1990	107	1	1	18	7	1	1	1	0			
8	24/April/1990	108	1	1	21	12	1	1	1	1	3	1	1
9	24/April/1990	109	2	0	22	2	1	0	1	1	2	1	1
10	24/April/1990	110	1	1	25	14	0	1	0				
11	24/April/1990	111	1	1	32	13	1	1	1	1	3	1	0
12	24/April/1990	112	1	1	12	10	1	1	0				
13	26/April/1990	113	2	1	14	8	1	1	1	1	4	1	1
14	26/April/1990	114	1	1	16	5	0	1	9				
15	26/April/1990	115	1	1	18	9	1	1	0				
16	26/April/1990	116	1	0	15	12	1	0	1	1	2	1	1
17	26/April/1990	117	1	1	13	16	1	1	0				
18	26/April/1990	118	1	1	17	8	0	1	9				
19	27/April/1990	119	1	1	22	9	1	1	0				
20	27/April/1990	120	1	1	21	6	1	1	1	1	1	1	1
21	27/April/1990	121	1	1	13	11	1	1	0				
22	27/April/1990	122	2	1	14	14	1	1	9				
23	27/April/1990	123	1	1	16	6	1	1	0				
24	27/April/1990	124	2	1	18	9	1	1	1	1	4	2	1
25	27/April/1990	125	1	0	22	9	1	0	1	1	3	1	0
26	27/April/1990	126	2	1	21	6	1	1	1	0			
27	27/April/1990	127	1	1	24	5	1	1	0				
28	27/April/1990	128	2	1	26	4	1	1	1	1	4	1	1
29	27/April/1990	129	1	1	22	12	1	1	0				
30	27/April/1990	130	1	1	14	10	1	1	9				
Total	30	30	30	30	30	30	30	30	30	12	9	9	9

Number	37	541	256		26	10	
Average	1.23	2.89	1.11		2.89	1.11	

Frequency Distributions:	BF	RGM	W	CH	SH		EXC
1 Yes	26	25	26	12	9	7	
0 No	4	5	4	12	3		2
9 UNK/NR	0	0	0	6	0		0
PROBLEM HIGHLIGHTER: IF NO > 10 PROBLEM NOTED BELOW AS 1.							
PROBLEM = 1	0	0	0	1	0		0

Percentage distributions:	EP	RGM	W	CH	SH	EXC
1 Yes	86.7%	83.3%	86.7%	40.0%	75.0%	77.8%
0 No	13.3%	16.7%	13.3%	40.0%	25.0%	22.2%
9 UNK/NR	0%	0	0	20.0%	0.0%	0.0%

Data Base Range Instructions:

BF	RGM	W	CH	SH	EXC
1	1	1	1	1	1
BF	RGM	W	CH	SH	EXC
0	0	0	0	0	0
BF	RGM	W	CH	SH	EXC
9	9	9	9	9	9

GRAPH INFORMATION

Three graphs have been prepared for this spreadsheet. One is always active. Press F10 to view it, and F10 again to return to the spreadsheet.

To view the other graphs press /,Graph,Name, (highlight name desired).

Graph Names:

% Brstfed	Percent children breast fed
%WEIGHED	Percent of children ever weighed
REG_GM	Percent of children registered for growth monitoring

When all of the data have been entered, press F9 to calculate (or recalculate) the totals, averages, and frequency distributions.

These are shown at the bottom of each spreadsheet, after the last respondent's questionnaire. The large spreadsheet (RAPIDANC) includes a macro to move quickly to this area (press < Alt + F >).

There are several types of calculations shown, most of which are shown in the same column as the data for a given variable. For example, the computation of the average number of children under age two is directly under the data entries for that variable in Column D.

Counts (totals of columns)

30 respondents to questions 5-12
12 respondents to question 14
37 children > 2 yrs

Averages (means)

1.23 children < 2 per respondent
Stop breast feeding at 18.03 months
Children weighted 2.89 times

Frequency and percentage distributions

26 women (86.7%) breast feeding
4 women (13.3%) not breast feeding

Problem highlighter

More than 10 respondents did not have a growth chart at home

The "problem highlighter" allows the manager to set a level above which a particular response is considered a problem. In the MINIGM spreadsheet, that level is set at 10 (cell F54). The level can be set to any number merely by typing it in the cell. The program compares the number of "No" responses in each column to 10 and places a 0 or 1 in the next row. The 0 indicates no problem (10 or fewer); the 1 indicates a problem (11 or more).

Three graphs are included in the MINIGM spreadsheet. Press F10 to display the first. Instructions for switching to the other graphs are found at cell A70.

The RAPIDANC spreadsheet is structured the same way, except that multiple choice frequency distributions are placed at the bottom of the spreadsheet because they require more room. In this example, variables 9, 10, 11, 13, 15, and 17 are displayed. The excerpt illustrated here only shows the first three of these distributions due to space limitations.

At the very bottom of each spreadsheet is a block of "data base instructions" that the *Lotus 1-2-3* program needs to compute the frequency and percentage distributions. These do not need to be printed for the report, but they do need to be included in any copy that is made of these computer files.

RAPID SURVEY DATA ENTRY AND TABULATION TEMPLATE FILE: RAPIDANC.WK1
Date. 16/January/1991 Press Alt + F = Go to FREQUENCY DISTRIBUTIONS ANTENATAL CARE

Study No. _____(1) Prov. _____(2)
Interviewer _____(3)
5 ID No. (Clstr + Rspndnt) 12 Received TT last preg. 19 CHW visit last 3 mo.

6 Age of women 13 No. of vacc. received
7 Received ANC last preg 14 Took iron pills
8 No. times rec'd ANC 15 Outcome of pregnancy
9 Month preg. before ANC 16 Where delivered
10 Place ANC received 17 Delivered by:
11 Advised to get ANC 18 Name of CHW

Quest.	Date (4)	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	24/Apr/90	101	23	1	1	1	1	1	1	1	0	1	1	1	9	1
2	24/Apr/90	102	24	0			3	5	0			3			9	0
3	24/Apr/90	103	25	9			4	6	0			2	1	2	0	0
4	24/Apr/90	104	26	9			5	3	0			2	1	3	1	0
5	24/Apr/90	105	27	0			2	2	9			1	1	2	0	0
6	24/Apr/90	106	28	0			2	4	0			1	1	4	9	0
7	24/Apr/90	107	30	1	2	2	3	3	0			2	2		0	0
8	24/Apr/90	201	35	1	1	1	4	2	1	1	0	3			0	0
207	27/Apr/90	3004	30	1	2	1	1	3	1	1	9	3	1	3	0	9
208	27/Apr/90	3005	30	1	2	1	1	3	1	1	9	3	1	3	0	9
209	27/Apr/90	3006	30	1	2	1	1	3	1	1	9	3	1	3	0	9
210	27/Apr/90	3007	28	9			1	6	9	2	1	2	2		0	0
Total:	210		30	210	97	98	210	210	210	96	96	210	152	122	210	210
VARIABLE NO.:			(6)		(8)					(13)						
Number					197					295						
Average			*****		*****					3.07						

Frequency Distributions ..... VARIABLE:	(7)	(12)	(14)	(16)	(18)	(19)
1 Yes	97	97	12	121	48	24
0 No	85	84	35	32	134	158
9 UNK/NR	28	29	49	0	28	26

PROBLEM HIGHLIGHTER: 100 PROBLEM IS NOTED BELOW AS 1.

PROBLEM = 1; 0 1 1 1 1 1

Percentage Distributions:	(7)	(12)	(14)	(16)	(18)	(19)
1 Yes	46.2%	****	12.5%	79.6%	22.9%	11.4%
0 No	40.5%	****	36.5%	20.4%	63.8%	75.2%
9 UNK/NR	13.3%	****	51.0%	0.0%	13.3%	13.3%

(9) Months preg. prior ANC			(10) Place where ANC received			(11) Advised to get ANC by:		
1 3 months	49	50.0%	1 Hospital	50	23.8%	1 Physician, nurse	20	9.5%
2 4-6 months	26	26.5%	2 Health centre/ clinic	38	18.1%	2 Community nurse/ midwife	48	22.9%
3 7-9 months	12	12.2%	3 Private hospital/clinic	47	22.4%	3 CHW/Volunteer	47	22.4%
9 UNK/NR	11	11.2%	4 Local TBA/healer	29	13.8%	4 TBA	21	10.0%
			5 Other site of care	16	7.6%	5 Mother/relative	37	17.6%
			9 UNK/NR	30	14.3%	6 Friend/neighbor	25	11.9%
						7 Other	0	0.0%
						9 UNK/NR	12	5.7%
(13) No. Vaccinations Rec'd			(15) Pregnancy outcome			(17) Delivery attendant		
1 One	61	63.5%	1 Live birth	104	49.5%	1 GHW	11	9.0%
2 Two	3	3.1%	2 Stillbirth	43	20.5%	2 TBA	35	28.7%
3 Three	10	10.4%	3 Abortion/miscarr	44	21.0%	3 Unattended	35	28.7%
9 UNK/NR	22	22.9%	9 UNK/NR	19	9.0%	4 Private provider	15	12.3%
						5 CHW	14	11.5%
						6 CN/NMW	0	0.0%
						9 UNK/NR	12	9.8%

Adjusting the spreadsheets

Deleting and inserting rows

As noted above, it is very easy to expand or contract the spreadsheets to fit the number of respondents in any given survey.

1) To DELETE rows: place the cursor on any data row except the first and last. Press < / >, Worksheet, Delete, Row, (highlight the number of rows to delete), <Enter>. All of the formulas will be adjusted automatically. However, if you delete the first or last rows, there will be an error, and the formulas will have to be re-entered.

2) To INSERT additional rows: place the cursor on any data row except the first and last. Press < / >, Worksheet, Insert, Row, (highlight the number of rows to enter), <Enter>. Next you must copy an already formatted row into the blank spaces: </>, Copy, (highlight all of the cells in the row to be copied), <Enter>, (place the cursor at the first blank row, press the period/decimal point [.] and move the highlight down to the last blank row), <Enter>. This will fill in the blank rows and the formulas for totals, averages, and frequency distributions will be adjusted automatically.

Deleting and inserting columns

It is slightly more complicated to delete, and especially to insert, new columns of variables. That is because the codes and formulas will usually have to be adjusted. It would be prudent to have the assistance of someone who is familiar with *Lotus 1-2-3* @ functions and formulas. Two easy ways to make adjustments:

3) Instead of DELETING unwanted columns, just leave them blank or **erase** (rather than **delete**) the portion of the column that contains data and tabulations (</>, Range, Erase, [highlight area to be erased], <Enter>).

4) Instead of INSERTING new columns, find one that has the same coding structure as the one you want to insert (e.g., Yes = 1, No = 0, DK/NR = 9), copy the portion of the column that contains data, tabulations, **and the database instructions** to the first blank column on the right of the spreadsheet: </>, Copy, (highlight range to be copied), <Enter>, (move cursor to cell location), <Enter>). You will need to change the variable name at the head of the column, e.g., EXC in Column N of the MINIGM spreadsheet, and in the database instructions at the bottom of the spreadsheet. For example, if the new variable name is ORT, change EXC to ORT wherever it appears in the column.

This is necessary so that the program can match the instructions with the proper column.

Adapting the spreadsheets to other PHC topics

To customise the spreadsheet completely, it would be best to get someone who is familiar with *Lotus 1-2-3* or similar spreadsheets to work with you. Basically, you will need to:

- change the summary of variables at the top of the spreadsheet;
- insert new variable names along the row above the database;
- copy, move, or insert the appropriate number and types of columns for each variable;
- insert or delete rows to fit the number of expected respondents;
- adjust the formulas for counts, averages, and frequency distributions at the bottom of the spreadsheet;
- set up frequency distributions for multiple choice questions; and
- adjust the data base instructions.

Appendix I.3: Confidence interval estimation template

Ralph Frerichs has developed a simple template that can be used to compute confidence intervals for selected variables. An example is shown on the next page.

This template would be used after the data have been entered and tabulated to determine the standard error, the design effect, the intraclass correlation, and three confidence intervals (90, 95, and 99 percent).

To use the template, select a variable to examine. In this example, the variable is "the proportion of women who received TT vaccination during their last pregnancy." You must first count the number of women in each cluster who were interviewed and the number who responded "yes" or "no" to the variable. Then simply enter those numbers in Column B (No. of sampled women) and Column C (Observed). In the example, there were 7 women interviewed and 6 who answered "yes" in the first cluster. The numbers were 7 and 6 in the second cluster, 7 and 5 in the third, and so forth.

The only other data you need to enter is the total number of the population's target group. In this case, 24,653 (entered in cell D45).

Press F9 and the program will make all of the calculations. The average proportion who received TT is shown in the "Total" Column at the far right column (cell G42) as 0.694. That is, 69.4 percent of the sampled women received TT.

The confidence intervals are shown in the lower left corner of the page. For example, we are 90 percent confident that the true proportion of women who received TT lies somewhere between 61.3 and 77.4 percent. Or, put another way, the proportion is 69.4 percent, plus or minus 8 percentage points.

This template can be easily adjusted to increase or decrease the number of clusters. Simply delete or insert the appropriate number of rows in the table. See the instructions in the previous section (Appendix H2) for more details.

Antenatal survey, Sisaket, Thailand

Proportion who received TT during last pregnancy
FILE:TT.WK1

A Sequence No. of cluster	B No. of sampled women	No. of women who received TT C Observed	D Expected	Observed minus expected squared E	Proportion with TT in each cluster F
1	7	6	4.86	1.308	0.857
2	7	6	4.86	1.308	0.857
3	7	5	4.86	0.021	0.714
4	7	6	4.86	1.308	0.857
5	7	7	4.86	4.595	1.000
6	7	6	4.86	1.308	0.857
7	7	7	4.86	4.595	1.000
8	7	7	4.86	4.595	1.000
9	7	1	4.86	14.872	0.143
10	7	2	4.86	8.159	0.286
11	7	5	4.86	4.591	0.714
12	7	6	4.86	1.308	0.857
13	7	7	4.86	4.595	1.000
14	7	7	4.86	4.595	1.000
15	7	3	4.86	3.446	0.429
16	7	7	4.86	4.595	1.000
17	7	4	4.86	0.734	0.571
18	7	5	4.86	0.021	0.714
19	7	3	4.86	3.446	0.429
20	7	4	4.86	0.734	0.571
21	7	4	4.86	0.734	0.571
22	7	2	4.86	8.159	0.286
23	7	1	4.86	14.872	0.143
24	7	4	4.86	0.734	0.571
25	7	7	4.86	4.595	1.000
26	7	4	4.86	0.734	0.571
27	7	4	4.86	0.734	0.571
28	7	5	4.86	0.021	0.714
29	6	3	4.16	1.352	0.500
30	7	7	4.86	4.595	1.000
Total	209	145	145.00	102.088	0.694

Est. total women in cluster	24,653.	STANDARD ERROR of estimated sample proportion	
Ave. no. women/cluster	6.97	for cluster sample	= 0.049
Ave. no. clusters	30	If simple random sample	= 0.032

	Confidence Intervals 90%	95%	99%		
Upper	0.774	0.790	0.821	DESIGN EFFECT	2.36
Lower	0.613	0.597	0.567	ESTIMATED INTRA-CLASS CORRELATION COEFFICIENT	0.23

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Acronyms and abbreviations

AIDS	Acquired immune deficiency syndrome
AKF	Aga Khan Foundation
AKHN	Aga Khan Health Network
AKHS	Aga Khan Health Service
AKU	Aga Khan University
ARI	Acute respiratory infections
BCG	Bacillus of Calmette and Guerin (tuberculosis vaccine)
CHW	Community health worker
CMR	Child mortality rate
DPT	Diphtheria, pertussis and tetanus vaccines
EPI	Expanded Programme for Immunization
GM	Growth monitoring
IEC	Information, education, communication
IMR	Infant mortality rate
KAP	Knowledge, attitudes, practice (behaviour)
MIS	Management information system
MMR	Maternal mortality rate
MOH	Ministry of health
NGO	Non-governmental organisations
OPV	Oral poliovirus vaccine
ORS	Oral rehydration salts
ORT	Oral rehydration therapy
PHC	Primary health care
PHC MAP	Primary Health Care Management Advancement Programme
PNC	Peri-natal care
PRICOR	Primary Health Care Operations Research
STD	Sexually-transmitted diseases
TB	Tuberculosis
TBA	Traditional birth attendant
TT	Tetanus toxoid
UNICEF	United Nations International Children's and Education Fund
URC	University Research Corporation
USAID	United States Agency for International Development
WHO	World Health Organization

Glossary

Attribute: A quality or characteristic of interest, such as age
Binomial: Refers to a variable or distribution that has only two possible values, such as Yes/No, right/wrong, up/down.
Cluster: A group, usually within a specific geographic area.
Cluster sample: A sample of a population that is divided into a specified number of groups. In this module the standard cluster sample consists of 30 clusters from which 7 or more respondents are selected for interview.
Community health worker (CHW): A person indigenous to the community who provides basic preventive and curative health services to members of the community. Includes village health workers, health guides, and other terms
Community: A group of people having common organization or interest or living in the same place under the same laws.
Coverage: The percent of a target group that has received a service or is protected from a disease or health problem
Effectiveness: The degree to which desired outcomes are achieved
Effects: Changes in knowledge, skills, attitudes and behariours as a result of a PHC programme
Efficiency: The degree to which desired outcomes are achieved without wasting resources
Goals: The impact the PHC programme expects to have on health. Goal statements specify the improvement desired, target group, amount of change expected
Impacts: Changes in health status (mortality, morbidity, fertility, disability)
Indicator: An indirect measure of an event or condition. For example, a baby's weight-for-age is an indicator of the baby's nutritional status.
Indicators: Indirect measures of a programme's progress related to: inputs, processes (outputs, effects, impacts); objectives; and goals.
Inputs: Resources (personnel, materials and equipment, information and money)
Management: The art and science of getting things done through people.
Objectives: The output and/or effect that a programme hopes to achieve
Outcomes: Results of programme, including outputs, effects and impacts
Outputs: Products and services provided by a PHC programme
Effects: Changes in knowledge, skills, attitude and behaviour, (including coverage) as a result of a PHC programme

Impacts: Changes in health status, (mortality, morbidity, disability, fertility) as a result of a PHC programme

Primary health care: Essential health care, accessible at affordable cost to the community and the country, based on practical, scientifically sound and socially acceptable methods. It includes at least eight components: health education, proper nutrition, clean water and basic sanitation, maternal and child health care, immunization, control of common diseases and injuries, prevention of local endemic diseases, essential drugs.

Processes: Activities or tasks carried out through programmes

Random sample: Selection of respondents in such a way that every member of the population being studied has an equal chance of being selected.

Respondent: The individual/s being asked or administered questions.

Sampling interval: In cluster sampling, this is the interval between one cluster and the next. The sampling interval is determined by dividing the population of the area under study by the number of clusters required for the survey.

Sampling interval: In cluster sampling, this is the interval between on e cluster and the next. The sampling interval is determined by dividing the population of the area under study by the number of cluster required for the survey. For example, if the population of the study area is 45,000 and the total number of clusters needed is 30, then the sampling interval is 1500 (45,000/30=1,500).

System: A set of discrete, but interdependent, components designed to achieve one or more objectives.

Tabulate: To put data into a table or columns. To arrange systematically.

Target group: Specific groups of people designated to receive a PHC service, such as children under age two years designated to receive immunizations

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MODULE 2
USER'S GUIDE

Primary Health Care Management Advancement Programme