CHAPTER 3

DESIGNING THE QUESTIONNAIRE

This chapter is for survey coordinators. It will help you to:

➢ Decide which indicators will be measured with the survey

➢ Determine what information you need to collect

➢ Learn how to ask questions to obtain the information you need

➢ Design a good questionnaire

➢ Decide who the respondents will be

➢ Understand the contents of MICS3

WHICH GOALS CAN BE MONITORED WITH MICS3?

In 2007, the United Nations General Assembly will hold a commemorative session to review progress made in implementing the World Fit for Children Declaration and Plan of Action. UNICEF will play a lead role in reporting on global advancement towards the World Fit for Children goals. National governments will also be asked to report on their progress. Through the Multiple Indicator Cluster Survey, UNICEF will support the collection of data needed to provide appropriate evidence and assist countries in preparing national progress reports. In addition to supporting an assessment of progress towards the World Fit for Children goals, MICS3 will also collect much of the data needed for evaluating how far we have come midway into the decade in reaching the child-related Millennium Development Goals (MDGs). As with previous rounds of MICS, it is important that countries first examine all sources of data already available or likely to be available by mid-2006 before deciding to conduct a third round of MICS.

The information provided in this chapter will help you collect data that can be used to plan and improve programmes as well as to report on progress towards global goals. The MICS3 questionnaires build upon the 1995 and 2000 rounds of the Multiple Indicator Cluster Survey, but provide additional questions and modules to monitor newly agreed upon indicators. If all additional and optional modules were to be added on to the core modules of the model questionnaires, MICS3 would be able to collect information on at least 99 internationally agreed upon indicators. The complete list of indicators that can be measured through MICS3 and used for global reporting are provided in Appendix One.

The MICS3 monitoring tool has multiple aims and several different groups of target respondents. This means that the data collection process is more complex than for previous rounds of MICS. You will need more resources to conduct the survey and to analyse and report your findings.

MICS3 QUESTIONNAIRES FOR MID-DECADE MONITORING

MICS3 questionnaires provide the basic set of questions needed to obtain population-based estimates of a large number of indicators. As noted in Chapter 1, the questionnaire modules are the product of a long consultative period, and the indicators estimated through MICS3 are largely comparable with those obtained by using most other international household survey programmes. Of particular significance in this context is the Demographic and Health Surveys (DHS) project. UNICEF worked closely with MEASURE DHS to standardize questions so that many of these indicators can be measured using either one of these survey questionnaires. In countries where a recent DHS has been conducted, or will be conducted before the end of the first quarter of 2006, the DHS survey, rather than the MICS, should be used as the primary data collection vehicle.

For the current round of MICS, as in previous rounds, three model questionnaires have been designed: the Household Questionnaire, the Questionnaire for Individual Women and the Questionnaire for Children Under Five. These questionnaires include the so-called core modules. A number of additional modules and optional modules have also been designed, which can be easily integrated into the model questionnaires.

The MICS3 model questionnaires comprise 18 core modules (if information panels on each of the questionnaires are excluded). UNICEF strongly recommends that every participating country retain these core modules, unless the relevant data are available from another reliable source. In addition to these universal modules, there are eight additional modules that should

> **UNICEF recommends retaining all core modules if possible, including additional modules if they are appropriate, and including optional modules if there is interest from the government and other stakeholders.**

be used in countries where they are applicable and appropriate. These are modules to measure indicators related to topics such as malaria, children orphaned and made vulnerable by HIV/AIDS, polygyny, female genital mutilation/cutting and sexual behaviour. *These modules are necessary to monitor the priority indicators identified by UNICEF and should be included by all affected countries.*

Finally, there are a number of optional modules that are supplied for countries with interest in particular areas, such as child discipline, child disability and unmet need for contraception, that are not covered in the model questionnaires or the additional modules. *Be selective about including optional modules, and be sure of what you will do with the data before deciding to include them.*

It is important to remember that the more modules that are included, the more complex the survey will become and the more difficult it will be to ensure that fieldwork produces high-quality data. Therefore you should choose only

To develop your questionnaire, choose only the modules for indicators you need to monitor with a survey.

those question modules you actually need in your new survey. When another survey is planned, one or more modules can be 'piggy-backed' onto the existing questionnaire.

> **EXAMPLE:**
> If a country is planning to conduct a Demographic and Health Survey,
> you should request that DHS include the MICS3 Child Labour module.
> This module is not covered in the model DHS questionnaires, but can be
> easily added on to a DHS survey.

WHY DO WE NEED MODEL QUESTIONNAIRES?

The model questionnaires and the additional and optional modules have been designed for two reasons. First, they provide standard questions needed to estimate indicators of internationally agreed upon goals so that each country's indicators can be compared with others. If the survey methods are adequate and appropriate sampling techniques are used, these national indicators can also be compared with earlier estimates. Second, the questionnaires and modules provide questions and standard methodologies that countries can use to collect data to plan and improve a wide range of programmes. These questions can provide data at country and regional level to assess need, advocate for new programmes, modify old ones, and collect baseline data for evaluation when programmes begin.

Each country will want to adapt the model questionnaires and modules to meet their particular needs and circumstances. The information in this chapter will help you design a survey that is not only relevant, but that is easy to use and that will provide the best data possible. You will find out why each

If you follow the advice in this chapter carefully, you can adapt the questions to serve the data needs of your programme, while ensuring that results are internationally comparable.

module appears in the questionnaires and how it can be adapted to furnish the data you need. At the same time, it will ensure that you can report valid, reliable and internationally comparable data to track your country's progress.

HOW DO I DESIGN A GOOD QUESTIONNAIRE?

The first step in designing a good questionnaire is to be clear about your aims and collect only the minimum amount of information necessary. Don't make the interview too long by including modules or

Collect only the minimum amount of information you need. Overloading the MICS3 questionnaires may compromise the quality of all the data collected in the survey.

questions that are not relevant to your needs. It is always tempting to add more questions. But you run the risk of overloading your field workers, demanding too much of your respondents and making data analysis too complex. You and your team need to know why each question is included and what you will do with the information after it is obtained. *Overloading the MICS3 questionnaires may compromise the quality of all the data collected in the survey.*

On the other hand, retaining too few modules may result in very short questionnaires that lack the rhythm for a successful face-to-face interview. It is important to remember that questionnaires are tools to systematically collect information from respondents in a conversational fashion. They should follow a logical pattern.

The following pages provide general guidance on constructing a good questionnaire. Once the questionnaire is designed, it will be in your best interests to send it to your UNICEF Regional Office and to UNICEF Headquarters in New York for review, to ensure that your customized questionnaire is internationally comparable and capable of producing estimates of internationally agreed upon indicators. Mechanisms will be created in each UNICEF region to make sure that you receive timely feedback on your survey tools and responses to other technical support needs. Implementing the survey will require careful preparation and oversight. Here too, you will need to stay in close contact with the MICS3 coordinator at UNICEF Headquarters and the UNICEF Regional Office.

The main aim of a good survey instrument is to minimize the amount of error that occurs when gathering information. Interviewers can only obtain answers that are reliable and valid if they are using well-designed questionnaires. By *reliable*, we mean that, no matter who asks the question or where and when it is asked, the same respondent would most likely give the same answer. When a questionnaire is well designed, each question is asked in the same way by every interviewer, and differences between interviewers will be kept to a minimum. By *valid*, we mean that the question elicits a response that is true and accurate, and measures whatever it is that you want to measure. A good questionnaire should enable you to obtain valid measures by helping to ensure that the respondent understands what information is being sought.

These considerations are especially important for monitoring surveys, since one of their purposes is to measure trends over time and to compare indicators internationally. A good design and translation, and thorough pre-testing of the questionnaire, can help make sure that your survey collects reliable and valid data.

**Table 3.1
Sources of Error in Surveys**

Data from household sample surveys that collect retrospective information can contain errors for many reasons. These errors can be grouped under two main headings:

Sampling error arises by chance, because the survey questions a sample of respondents rather than the whole population. Errors can also arise because your sample does not adequately represent the entire population. You can avoid these kinds of errors by ensuring that your sampling frame is adequate and your sample size is large enough to enable your measurements to be precise. In Chapter 4, we discuss ways to avoid sampling and coverage errors.

Measurement error results from imperfectly measuring what you set out to measure. This kind of error is usually more serious than sampling error because it cannot be corrected, and sometimes cannot even be detected. One important way to avoid measurement error is to ensure that your survey is carefully designed. Chapter 3 explains how to go about that. Another way to avoid measurement error is to ensure that well-trained and supervised field staff conduct the interviews. Chapters 5 and 6 discuss this aspect of the survey in detail.

The core, additional and optional modules are designed to be used all over the world. Using these questionnaires verbatim is the best way to ensure that the results of your survey are comparable to the results from other countries and to the results from previous MICS. *For this reason, it is important to retain the exact wording of core questions in the model questionnaires.*

The other aim of a good questionnaire is to elicit the necessary information quickly and easily. As mentioned earlier, this means that it should contain the minimum number of

Questions must be asked in the same way each time a survey is conducted.

questions needed to obtain the required data. Both the interviewer and the respondents should be able to understand these questions easily. The wording and question sequence are designed to motivate respondents and help them recall difficult information. The survey instrument is designed to be manageable, economical and to intrude as little as possible on the activities and privacy of families that are interviewed.

However, even when you are using a good questionnaire, there is no guarantee that interviewers will stick to the correct interpretation of the questions. *Good training in the use of the questionnaire is essential.* Instructions for administering the

Your interviewers must learn how to ask questions properly. Be sure you use the interviewer guide to train your field staff.

questionnaires are found in Appendix Three. You should translate this, if necessary, and make

copies for survey staff. Give a copy to each interviewer during the training programme. Advice on how to select and train interviewers is found in Chapter 5.

A guide to help you analyse the data obtained through the MICS3 questionnaires is provided in Chapter 8. In addition to estimating indicators at the national level, indicators can be tabulated by a range of background characteristics to allow the identification of disparities and their extent, sample sizes permitting.

CUSTOMIZING MICS3 QUESTIONNAIRES AND MODULES

One of the most important lessons from previous rounds of MICS is that countries that adapted the model questionnaires too freely and without due consideration for a number of simple rules failed to produce high-quality, comparable data. Nor were they able to use standard data processing and tabulation plans or programs due to profound differences in the survey tools they were using.

It is common sense that no single model questionnaire can represent diverse experiences and realities of countries around the world. However, it is also true that successful adaptation or customization of survey tools to country situations is possible, while retaining comparability with other countries. You will decide on some of the changes or adaptations to be made during the initial process of designing the questionnaire. Others will be made after the questionnaires have been pre-tested (information on the usefulness of pre-testing is provided below).

In adapting the questionnaires, UNICEF recommends that the following guidelines be followed to ensure comparability and quality:

- First, decide on the indicators for which you need to collect data. This should be followed by the identification of modules that you will need to include in your questionnaires. Appendix One includes information on the numerators and denominators of all indicators covered by MICS3, as well as the modules in which they are found.
- In deciding on the modules you want to use, be aware that a decision to exclude one may affect another. A typical example is the Child Mortality module. One of the objectives of this module is to identify women who have had a live birth during the 2-year period preceding the survey. This will help identify those women who should answer questions contained in the Tetanus Toxoid and Maternal and Child Health modules.
- Retain the core modules in the model questionnaires as much as possible. These include internationally agreed upon indicators (many of which are MDG indicators) that are known to be applicable in almost all settings.
- Make a thorough assessment of whether your country is affected by issues in the additional modules. This will help you decide whether to include these modules. For example, all countries in which malaria is endemic should make sure to include additional modules on malaria, insecticide-treated nets and intermittent preventive treatment for pregnant women.

- Assess whether there is interest in the country in the optional modules. Make sure to consult other stakeholders and development partners to see if there is demand for data on these topics. In particular, determine whether the data collected by the optional modules would have any programmatic value.
- For reasons already discussed, do not overload the questionnaires.
- Retain the order of modules and questions unless there is a very good reason to do otherwise. Remember that for the majority of modules, the ordering suggested has been tested many times over the years, both in the context of previous MICS rounds and other international household surveys. MICS3 questionnaires have also been pre-tested by UNICEF Headquarters and have been modified and finalized based on the pre-test.
- Appendix Two provides information on some style and formatting characteristics of the MICS3 questionnaires and modules. These include standardization of question numbers, use of certain response codes for particular types of responses and other formatting features, such as the use of lowercase or uppercase letters. You should make sure to retain these standard characteristics.
- UNICEF recommends that the original question numbers be retained during the customization process, even when questions are deleted or inserted. This will facilitate the comparison of questionnaires from different countries, make the adaptation of model data processing programs by countries easier, and minimize the risk of producing modules where skip patterns may be incorrect.
- There might be a need to add questions to the MICS3 questionnaires that are not included in the model questionnaires or in the additional or optional modules. In doing so, utmost care should be taken to make sure that numbers assigned to the new questions do not replace the numbers on questions in the model questionnaires that may have been excluded because of their lack of relevance to the country situation. If new questions are added, they should be assigned numbers not used in the model questionnaires, or additional and optional modules. For instance, if a new question is to be added between HA15 and HA16, it can be assigned the number HA15A.
- UNICEF recommends that Latin numerals be retained in question numbers.
- In adapting response categories, you should first understand what the existing categories aim to capture. In some cases, a likely response category in a country may already be included in the model question, using a different term. In such cases, the wording can be changed to the term used in the country. If a new response category has to be added, it should not take up the numeric or letter code of a response category already used in the model questionnaires and modules.
- It is very important that the eligibility criteria, usually expressed in age ranges, not be changed. Eligibility criteria are based on the definitions of internationally agreed upon indicators, and such changes may result in an inability to measure the indicator. For instance, child discipline questions are asked of children aged 2-14 years, and indicators based on this module are calculated for this age group. If the age range were to be changed from 2-14 years to 2-9 years, for instance, this would mean that child discipline indicators could not be calculated. If changes are desired in this respect, they should only

be in terms of capturing a wider group; then, the appropriate age group can be selected during the analysis stage and the appropriate indicator calculated.

Once again, UNICEF strongly recommends that participating countries share their questionnaires with UNICEF Regional Offices and UNICEF Headquarters to make sure that rules are correctly followed when customizing the surveys. This will also enable UNICEF to provide technical assistance to survey implementing agencies, as needed.

TRANSLATING AND BACK-TRANSLATING QUESTIONNAIRES

Survey questions have been carefully designed to measure each global indicator. Therefore, changes to the questions should be avoided as much as possible. This also applies to translations, where subtle changes in the meaning of questions can occur.

The question modules need to be translated into the respondents' local language *before* the survey begins. Translation should never be left to the interviewer, since small differences in interpretation can destroy the reliability and validity of your data.

In a separate operation, *another translator* should then translate the new questions back into English (or the original language), without referring to the original model. This new translation should match the original version. Discuss any ambiguous words or phrases and decide on the correct translation for the local language.

PRE-TESTING THE QUESTIONNAIRE

The translated questionnaire needs to be ***pre-tested*** in the community, using respondents similar to the respondents likely to be in the survey sample. You will find more information about doing a pre-test in Chapter 5. This pre-test should identify any problem areas, misinterpretations or cultural objections to the questions.

The results of the pre-test should be incorporated into the final questionnaire.

IMPORTANT: *A pre-test of your questionnaire is very important, since it is easy to get it wrong the first time. A pre-test can provide a great deal of information for designing the final questionnaire and for planning other aspects of the survey process.*

You may find that the response categories for some questions are not sufficient to allow for the range of answers you receive. For example, you may need to add a particular type of health facility to the list of places where a woman might give birth (See Maternal and Newborn Health module). Or, you may find that there are categories that do not apply to your country.

Do not ignore the lessons of the pre-test, but also be careful not to change the order or the meaning of the questions. You may need to do more than one pre-test before your questionnaire is satisfactory. Discuss the results with

Do not rush to print your questionnaires before you have done the pre-test and made the necessary changes.

experienced colleagues and with the interviewers, and decide what changes are needed. Follow the simple rules listed above. Make any changes necessary to the instructions to interviewers, to the wording of prompting questions and to the translation. Only then are you ready to reproduce the questionnaire forms.

Table 3.2
What a Pre-test Can Tell You

✓ Are respondents willing to answer the questions in the form you propose to use?
✓ What are the country-specific response categories?
✓ Are any of the questions particularly difficult or sensitive? Do interviewers understand the questions? Extra training can focus on these questions.
✓ Do the respondents misinterpret the questions? Are any of the words ambiguous or difficult to understand? The pre-test should point to where changes in wording or improved translation are needed.
✓ Does the questionnaire flow smoothly? Can the interviewers follow the instructions easily?
✓ Is there adequate space on the form and are the answers clearly coded? The pre-test should show where the format needs to be improved before the final questionnaire is printed.
✓ Is it necessary to create new codes for common answers that were not included in the original questionnaires?
✓ How long does an interview take? The answer to this question will help you decide how many interviewers are needed and how long the fieldwork will take.

In summary, the final questionnaire should be the product of careful preparatory work. It should ask only for the information your programme needs and will use. It should be as short and as easy for interviewers to use as possible.

Table 3.3
Questionnaire Checklist

- ✓ Questions should be clear and as short as possible; use simple language.
- ✓ The questions should flow clearly and logically, and the layout should make it easy to administer the questionnaire.
- ✓ Appropriate codes should be used for all response categories, and a code should be available for a category of answers that does not fit into the other response categories.
- ✓ Instructions to interviewers should be easy to follow and easy to distinguish from the questions to respondents.
- ✓ Make sure the questionnaires have been translated, back-translated and pre-tested.
- ✓ Check that the questionnaires provide *all* the information needed to calculate estimates for each indicator.

RESPONDENTS TO MICS3 QUESTIONNAIRES

The *Household Questionnaire* is designed to be administered to every household drawn for the survey sample. You may begin the household interview with any knowledgeable adult who is usually living in the household visited. Most of the modules in the Household Questionnaire can be completed with this person, who is assumed to know the answers to basic questions about the dwelling and the household, such as the water and sanitation situation, and can be assumed to be knowledgeable enough to provide proxy information on other household members in regard to education, orphanhood, age and sex.

The model Household Questionnaire also includes a core module on Child Labour, however, which must be answered by the mother or primary caretaker[1] of the child about whom the questions are being asked. There are a number of other additional and optional modules (on Child Discipline and Disability, for example) that can be added to the Household Questionnaire, which also require that the mother or primary caretaker be interviewed. Responses from other household members are not acceptable. It is useful, therefore, to start the Household Questionnaire with a mother or primary caretaker. This will minimize the switching of respondents during the interview and may result in more reliable data (responses from mothers or primary caretakers regarding a child's education, for example, are likely to be more accurate than

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[1] Primary caretakers are adults who take primary responsibility for raising a child if the mother of the child is deceased or does not live in the same household with the child. A person can be identified as the primary caretaker only if he/she lives in the same household with the child. Primary caretakers are used in MICS3 to ensure that information can be collected on motherless children. It is important to note that a primary caretaker is not an individual who takes care of the child when the mother is away. For instance, a person caring for a child during the daytime when the mother is at work is NOT a primary caretaker.

those obtained from another adult member of the household, even though they are eligible to supply such information).

All women of reproductive age (15–49 years) living in the household are eligible respondents to the *Questionnaire for Individual Women*.[2] Under no circumstances should a proxy respondent be accepted to answer questions on an eligible woman's behalf. All modules in this questionnaire, including additional and optional modules that may be added to it, are administered to the woman. It is very important to conduct this interview alone with the respondent, since the topics covered are sensitive in nature and answers may be biased in the presence of others. There are, however, modules in this questionnaire that some women will not be asked to respond to. For example, the modules on Tetanus Toxoid and Maternal and Child Health are only administered to women who have had a live birth during the 24-month period preceding the survey. Questions in the additional module on Sexual Behaviour are only asked of women aged 15-24 years.

In the *Questionnaire for Children Under Five*, each mother or primary caretaker is asked about the children under age five in her (or his) care.[3] The questionnaire is designed to ask all questions about all children under five, except in a few cases. This focus on children under five is intended to simplify the job of interviewers, so that they do not have to make too many decisions in the field about a child's age and eligibility for particular questions.

THE MODEL QUESTIONNAIRES

Many of the indicators in MICS3 were also included in Multiple Indicator Cluster Surveys in 1995 and 2000, and the questions for measuring most of the indicators remain unchanged. In a few cases, the questions have changed slightly to conform to international agreement on the best measurement approach. For example, malaria indicators measured by MICS have been expanded and the questions to measure them have been harmonized with other malaria-specific surveys. In this section, we provide a module-by-module description of the current MICS3 model questionnaires. Questions that have been modified and questions that were not included in 2000 receive special attention. The organization and flow of the questionnaires is shown in Table 3.4. Refer to Appendix Two as you read the following sections.

FLOW OF THE HOUSEHOLD QUESTIONNAIRE: CORE, ADDITIONAL AND OPTIONAL MODULES

The Household Questionnaire consists of seven core modules. All of these core modules can be completed with a knowledgeable adult household member (referred to as the main respondent for

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[2] A small number of countries will prefer to ask some of the modules in this questionnaire only to women who are or have ever been married. Although this approach should not be adopted unless absolutely necessary, there are ways of accommodating this additional element of eligibility into the questionnaires, which is discussed later in this chapter.

[3] When the relevant indicator targets narrower age groups, as in the case of breastfeeding and introduction of complementary foods, these narrower age ranges will be selected during data processing and analysis.

sake of convenience), with the exception of the Child Labour module, which has to be completed with the mothers or primary caretakers of children eligible for inclusion in the module.

The Household Questionnaire begins with a cover page, the Household Information Panel, which includes information on the household and should be completed for all sampled households, including those where the interview was not completed. This is followed by the Household Listing, used to collect information on all usual residents of the household, including their age, sex, relationship to the household head as well as questions on orphanhood. This module can be completed with the main respondent, although it is useful if the main respondent is also the mother or primary caretaker of children. The Education module includes questions on the educational attainment of household members who are 5 years of age or over, as well as school attendance for household members aged 5-24 years. The subsequent two modules, Water and Sanitation and Household Characteristics, concern the household and the dwelling and should be completed in all households with the main respondent to the Household Questionnaire. Completion of the next module, the Child Labour module, is to be carried out with the mothers or primary caretakers of children aged 5-14 years living in the household. The Household Questionnaire ends with a module on Salt Iodization, where the result of salt testing is to be recorded. Salt testing is carried out in all households in the sample.

Three additional modules have been designed for inclusion on the Household Questionnaire. Two of these modules, the Extended Household Listing and the Children Orphaned and Made Vulnerable by HIV/AIDS should be included together, since the former includes questions that determine eligibility for the latter. The Extended Household Listing is designed to replace the Household Listing module. The module on Children Orphaned and Made Vulnerable by AIDS is added on to the Household Questionnaire as a separate module and is administered to the main respondent to the Household Questionnaire, collecting information on children aged 0-17 years. In malaria-endemic countries, the module on Insecticide-Treated Nets is to be included as a separate module, and is administered to the main respondent.

The first of six optional modules in the Household Questionnaire, Additional Household Characteristics, consists of questions that should be added on to the core Household Characteristics module. The module on Security of Tenure and Durability of Housing is administered in households in urban areas that have large proportions of slum households, and is added to the end of the Household Characteristics module (or to the additional Household Characteristics module, if that is included). The questions included in the module on Source and Cost of Supplies for Insecticide-Treated Mosquito Nets should be inserted in the Insecticide-Treated Nets module, and should be administered in all households.

The optional modules on Child Discipline and Disability are administered to the mothers or primary caretakers of children eligible for these modules, those aged 2-14 years and 2-9 years, respectively. The final optional module on Maternal Mortality targets all household members aged 15 and over. The module is designed to allow for each of these respondents to answer the questions, but also allows for proxy responses from other adult household members.

FLOW OF THE WOMEN'S QUESTIONNAIRE: CORE, ADDITIONAL AND OPTIONAL MODULES

The Questionnaire for Individual Women is administered to all women aged 15-49 years, and consists of seven core modules. All modules in this questionnaire, including the additional and optional modules, are to be completed with a single respondent – the eligible woman. Under no circumstances should a proxy respondent be allowed to respond on behalf of the woman herself.

As mentioned earlier, some countries may decide to administer this questionnaire to ever-married women only. In some settings, topics such as contraceptive use or sexual behaviour may be considered inappropriate for women who have never been married for cultural reasons, or the incidence of sexual activity or contraceptive use may be negligible. In such cases, it is possible to collect information on the marital status of women in the Household Listing of the Household Questionnaire and modify the eligibility for the women's questionnaire to 'all women aged 15-49 years who have ever been married'. This is not recommended, however, since it introduces a new dimension to the identification of eligible woman, makes analysis more difficult, and relies heavily on the responses from the main respondent to the Household Questionnaire for the identification of the respondent. For these reasons, it is preferable to retain the eligibility criteria used in the model questionnaires, but to obtain information on the marital status of the woman in the Questionnaire for Individual Women and use this information to skip questions or modules that may be considered inappropriate. On the other hand, it is worthwhile to mention that, in many settings, never-married respondents are less reluctant to answer sensitive questions than survey administrators think they are. We therefore recommend that a thorough evaluation concerning the applicability of the questions be carried out and perhaps tested during the pre-test exercise, before a decision is made.

The Questionnaire for Individual Women begins with the Woman's Information Panel, which includes identification codes for the woman, as well as questions on age, date of birth and literacy. The module on Child Mortality is used to collect information useful for estimating infant and under-five mortality rates, as well as information on the timing of women's last birth, if any. This latter information is used to determine whether the woman should respond to questions in the subsequent two modules, on Tetanus Toxoid and Maternal and Newborn Health, which are applied to all women with a live birth within the 2 years preceding the interview. Following this are three modules administered to all women: Marriage/Union, Contraception and HIV/AIDS.

Four additional modules have been designed for the Questionnaire for Individual Women. For malaria-endemic countries, the Maternal and Newborn Health module has been expanded to include questions on intermittent preventive treatment for pregnant women. This additional module should be used to replace the Maternal and Newborn Health module in the core questionnaire. In countries where polygyny is practiced, the Marriage/Union with Polygyny module should be used to replace the Marriage/Union module. In affected countries, the Female Genital Mutilation/Cutting module should be added to the women's questionnaire as a separate module. The module on Sexual Behaviour is only applicable to women aged 15-24 years and

should be added immediately prior to the HIV/AIDS module. The inclusion of the module is advocated in countries where HIV infection rates are high.

Three optional modules have been designed for inclusion in the women's questionnaire. Of these, the modules on Security of Tenure and Attitudes Towards Domestic Violence should be added to the questionnaire as separate modules. The module on Contraception and Unmet Need, if included, replaces the Contraception module.

FLOW OF THE QUESTIONNAIRE FOR CHILDREN UNDER FIVE: CORE, ADDITIONAL AND OPTIONAL MODULES

The Questionnaire for Children Under Five is administered to mothers or primary caretakers of all children under 5 years of age living in the household. All of the modules are applicable to all children for whom the questionnaire is administered. The model questionnaire consists of seven core modules. It begins with the Under-Five Child Information Panel, which, in addition to identification information, includes questions to determine the age and date of birth of the child. This is followed by modules on Birth Registration and Early Learning, Vitamin A, Breastfeeding, Care of Illness, and Immunization. The model questionnaire ends with the Anthropometry module, which is used to record the results of anthropometric measurements, that is, heights/lengths and weights of children.

One additional module, the Malaria Module for Under-fives, has been designed for inclusion in the Questionnaire for Children Under Five. This module is to be included in the questionnaire as a separate module if the country is malaria-endemic.

Four optional modules are available for inclusion in this questionnaire. The first of these is a module on Child Development, to be added to the questionnaire as a separate module. The remaining three modules are all on sources and costs of supplies, each of which is composed of a number of questions that are to be inserted in the relevant modules. The module on the Source and Cost of Supplies of ORS Packets, and the module on the Source and Cost of Supply for Antibiotics for Suspected Pneumonia are both inserted into the Care of Illness module, while the module on Source and Cost of Supply of Antimalarial Medicines is to be inserted in the additional module on Malaria for Under-fives, if this module is used.

Table 3.4 outlines the Household, Women's and Children Under Five Questionnaires, when all core, additional and optional modules have been included. The table should be used as a key to understand the place in which each additional or optional module should be added.

SALT TESTING, ANTHROPOMETRY AND GEOGRAPHIC POSITIONING SYSTEMS

As indicated above, the administration of the questionnaires is accompanied by three types of measurements. First, as part of the Household Questionnaire, the salt used in the household for

cooking is tested for iodine content, by using salt testing kits. Salt testing is to be carried out at the time the Household Questionnaire is administered.

Second, the Questionnaire for Children Under Five includes a module on anthropometry, which is used to record the heights/lengths and weights of children. Use of standard equipment for this purpose is recommended. The recommended boards and scales are described in Appendix Five. In households where there is more than one child under age five, it is recommended that all measurements be carried out after completing all interviews, for logistical reasons.

Finally, UNICEF recommends the use of Geographic Positioning Systems (GPS) in MICS3. Such devices can be used to enhance the quality of data collected, open new avenues for data analysis, and aid fieldwork by making possible the easy identification of sample points. Uses of GPS devices in MICS3 are discussed in Chapter 5. Information on GPS equipment can be found at www.childinfo.org.

Table 3.4
Flow of MICS3 Questionnaires: Core, Additional and Optional Modules

Household Questionnaire	Questionnaire for Individual Women	Questionnaire for Children Under Five
HOUSEHOLD INFORMATION PANEL	**WOMEN'S INFORMATION PANEL**	**UNDER-FIVE CHILD INFORMATION PANEL**
Extended **HOUSEHOLD LISTING FORM**	**CHILD MORTALITY**	**BIRTH REGISTRATION AND EARLY LEARNING**
EDUCATION	**TETANUS TOXOID**	*Child Development*
WATER AND SANITATION *Additional* **HOUSEHOLD CHARACTERISTICS** + *Security of Tenure and Durability of Housing* Insecticide-Treated Nets with *Source and Cost of Supplies for Insecticide-Treated Nets*	**MATERNAL AND NEWBORN HEALTH** with Intermittent Preventive Treatment for Pregnant Women	**VITAMIN A**
	MARRIAGE/UNION + Polygyny	**BREASTFEEDING**
Children Orphaned and Made Vulnerable by HIV/AIDS	*Security of Tenure*	**CARE OF ILLNESS** + *Source and Cost of Supplies of ORS and Antibiotics*
CHILD LABOUR	**CONTRACEPTION** *and Unmet Need*	Malaria + *Source and Cost of Supply of Antimalarials*
Child Discipline	*Attitudes Towards Domestic Violence*	**IMMUNIZATION**
Disability	Female Genital Mutilation/Cutting	**ANTHROPOMETRY**
Maternal Mortality	Sexual Behaviour	
SALT IODIZATION	**HIV/AIDS**	

Core modules of the model questionnaires are shown in bold; additional modules are shown in normal text; optional modules are shown in italics.

HOUSEHOLD QUESTIONNAIRE

The Household Questionnaire contains questions to obtain data on household composition, education, household characteristics, water and sanitation, child labour, and salt iodization. For the purposes of MICS3, adults are defined as household members over the age of 15. Questions about current school attendance cover children and young adults aged 5 through 24 years. All countries should retain this age range. An age range of 5-14 years is set for the child labour indicators, but data may be collected for older children to accommodate country policies.

HOUSEHOLD INFORMATION PANEL

The Household Questionnaire begins with a Household Information Panel, which contains space to record key information needed to link household information with information on individual women and children under five. Each country coordinator will need to write a short introduction that survey teams will use to explain why they wish to interview members of the household. A sample introductory sentence is provided on the model questionnaire, which should be customized to the country situation. *The introduction should contain an assurance that the information provided during the interview will remain confidential, and that respondents will not be penalized in any way if they refuse to participate. Respondents must be given the opportunity to refuse to participate if they so choose.* Other elements that should be included in the introduction are the name of the implementing agency, the approximate duration of interviews, the theme of the survey, and the fact that adults, including mothers or primary caretakers, will be interviewed.

The Household Information Panel consists of an upper and a lower panel. Most of the information to be recorded in the upper panel is known before the household is approached; this information relates to codes assigned to the household to identify it in the sample. The combination of cluster and household numbers assigned to the household before the interview begins is unique to each household in the sample. Identifying the supervisor and the interviewer is useful for monitoring and evaluating fieldwork. The date of the interview is also recorded here. It is important to ensure that this Information Panel stays attached to the rest of the questionnaire since it contains vitally important identification information for each household.

The lower panel provides space to record the results of the household interview and contains items that help to account for questionnaires for all eligible respondents in the household. There is also space for the data entry clerk to enter his or her identifying number.

Space is also provided on this page for notes about the interview. Here, the field supervisor will indicate an appointed time for the survey team to return to the household if no one is at home. When the interview is complete, this is marked on the information panel or the reason for non-completion noted.

HOUSEHOLD LISTING FORM

Monitoring international goals means that adults, as well as children, become important targets for several survey modules. To ensure that the relevant respondents are identified, the questionnaire begins by listing all household members – that is, persons who usually live in the household[4] – adults and children. A household is a person or group of persons who usually live and eat together. Adapt this definition to fit the definition of a household in use in your country. It is very important that this household list includes children who reside in the household and do not live with their biological parents. The total number of household members is later used to compute indicators for water and sanitation. Basic demographic information – age, sex and relationship to the household head – is obtained in this module.

Information on age and sex is very important, since eligibility of household members for administration of the individual questionnaires, as well as for several modules, is based on age and sex. Information on age is in terms of completed ages.[5] The process of listing household members can be time-consuming, especially in households with very old individuals who do not know their ages. For this survey, the precise age of adults outside the prime reproductive and working years is not as vital as in other surveys. To conserve interview time, the code '98' is provided for those older than 50 years of age whose precise age is not known.[6]

Eligibility for the Questionnaire for Individual Women, for the Child Labour module, and for the Questionnaire for Children Under Five has already been emphasized (Household Listing questions 6-8, or HL6-8). Children are linked to their mother or primary caretaker through the mother's or primary caretaker's line number from the household list.

Finally, there are questions to measure two important indicators: children's living arrangements and prevalence of orphans living in households. For all household members under age 18, the questions ask if the biological mother and father are still alive and, if so, whether they live in the same household (HL9-12). These indicators are especially important in countries where adult mortality from AIDS poses severe threats to family well-being. It may also be possible to examine whether these children are more disadvantaged with respect to other indicators, such as education, than children living with their biological parents.

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[4] In MICS3, only *de jure* members (individuals who usually live in the household) are recorded in the household listing. Some countries may opt for a *de facto* sample, including all usual members as well as visitors to the household (determined by using a standard definition of a visitor, such as those who slept in the household the previous night), and selecting for analysis only the *de facto* household members. Both approaches have advantages and disadvantages.

[5] The total number of full years that an individual has lived.

[6] As mentioned earlier in this chapter, in a small number of countries marital status is needed to determine eligibility for the women's questionnaire. Although this approach is not recommended, information on marital status can be obtained through the household listing. In such cases, a separate column should be added to the household listing.

EDUCATION MODULE

The Education module begins with questions to assess the education level of household members who are 5 years of age and older, including all adults (Education module questions 2-3, or ED2-3). These questions are not needed to estimate MICS3 indicators, but can help to characterize the social status of the household. This information will be useful if the data are analysed further. Responses to these questions can be obtained from those at home at the time of the interview. However, the main respondent to the Household Questionnaire can also provide proxy responses to these questions.

> **EXAMPLE:**
> You may want to discover if messages about National Immunization
> Days (NID) are reaching mothers with little or no schooling. Children who
> participated in the last NID can be tabulated according to the number of
> years their mothers or caregivers attended school.

Current and recent school attendance of children and young adults aged 5 to 24 years is also obtained through questions in the Education module (ED4-8). You will need to adapt the school year referred to in these questions to match your country's school year. These questions about school attendance should be asked about anyone who has reached age five, even if the usual age for entering school is later, up to and including age 24. We include persons up to age 24 in order to measure an MDG indicator, 'Female to male education ratio in primary, secondary and tertiary education'.

Children age five and above who are not yet in primary school may be attending pre-school or kindergarten, and this information is also obtained through the Education module. Response categories are provided for children age five and above who are attending pre-school and for children attending schools with non-standard curricula, such as schools that teach only the Koran or religious studies. To calculate education indicators, students attending schools that do not teach a standard curriculum must be excluded.

Note that questions ED4-8 are about school attendance during both the current and previous school year. Information on current school attendance is needed to calculate indicators related to enrolment and attendance. Information on attendance during the previous school year is needed to calculate transitions between school years, dropouts and repetitions.

WATER AND SANITATION MODULE

Indicators to monitor the progress of water and sanitation programmes and progress towards MDG goals have been refined since the 2000 monitoring exercise. Accordingly, questions to monitor these indicators have changed slightly. The WHO-UNICEF Joint Monitoring Programme on Water Supply and Sanitation (JMP) has prepared detailed guidelines for measuring progress towards water and sanitation goals.[7]

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[7] The guidelines are available at www.wssinfo.org

In the MICS3 questionnaire, the response categories for questions about the source of drinking water and type of toilet facility have been adjusted to reflect new standardized definitions of 'improved' sources of drinking water and 'improved' sanitary means of excreta disposal. The following sources of drinking water are now defined as improved: water that is piped into a dwelling, yard or plot; public tap or standpipe; tube-well or borehole; protected dug well or protected spring; and rainwater collection. Bottled water is not considered an improved water source; it is only considered improved if water used for other purposes (Water and Sanitation module, question WS2) is also from an improved water source.

A question about how much time it takes to collect water is also provided in the module. To assess whether gender and generational differences exist among the persons who are usually responsible for hauling water for the household, WS4 is asked.

As programmes begin to promote home treatment of water to make it safer to drink, countries will want to monitor their success. To provide a baseline measure of home treatment of drinking water, two questions are asked (WS5-6).

The international indicator for measuring achievement of sanitation goals is the 'proportion of population with access to improved sanitation'. For this international indicator, the new, standardized definition of an acceptable 'sanitary facility' is a flush facility that flushes to a piped sewer system, septic tank, or pit (latrine); a ventilated improved pit latrine; or a pit latrine with a slab. Only a latrine that has a squatting slab, platform or seat that is firmly supported on all sides and is easy to clean and raised above ground level (to prevent surface water from entering the pit) is considered acceptable. The new categories for WS7 make it easier to identify the type of toilet facility used by members of the household.

Definitions of each water source and type of sanitary facility listed are found in Appendix Three: Instructions for Interviewers. Pictorial aids are also available on the Internet to use when training fieldworkers.[8] Note that these pictorials aids should not be shown to respondents and should be used only for training interviewers.

The purpose of questions WS8 and 9 is to learn whether the household shares its sanitation facility with other households. The shared status of a sanitation facility is important because shared facilities can be less hygienic than facilities used by only a single household. Unhygienic conditions (faeces on the floor, seat or wall, and flies) may discourage use of the facility.

Survey coordinators will need to pre-test these questions to determine whether additional water sources, sanitary facilities, or types of home water treatment not already listed but typically used in the country need to be added to this list. *However, be sure to retain the categories shown in the model questionnaire.*

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[8] http://www-staff.lboro.ac.uk/~cvrjs2/JMP-Final-Report.htm

If you need more information about measuring the water and sanitation-related indicators, consult the Joint Monitoring Programme's *Guide for Water Supply, Sanitation and Hygiene Related Survey Questions,*[9] which provides more detailed information.

HOUSEHOLD CHARACTERISTICS MODULE

For monitoring the Millennium Development Goals, it is very important to obtain information that will permit indicators to be disaggregated by socio-economic status. Such information will also be invaluable for later in-depth analysis. Further analyses will allow you to evaluate the equity of health programme coverage in your country, differentials in behavioural patterns by socio-economic status, and to assess disparities by wealth. If the data can identify population subgroups or geographic areas in need of special effort, programmes can be re-designed to help reach these groups and keep them on target.

> **Evaluate the equity of health programme coverage by tabulating your results according to socio-economic status.**

The questions in this module require that response categories be adapted for specific country settings (HC1A–HC1C) and allow for local construction materials (HC3-5). Several questions are included that can be used to construct an index of household wealth[10] and can also be used to monitor a MDG indicator on use of solid fuels. In addition, information about cooking arrangements obtained in HC7 and HC8 can be combined with information about type of fuel (HC6). This information can be used to monitor child survival programmes that aim to prevent respiratory illnesses.

Finally, there are two questions to record possessions owned by the household and its members. These are also used to construct an index of household wealth. Additional questions that can improve the index, especially to make it more useful for identifying disparities in rural areas, are available in an optional module entitled Additional Household Characteristics, which is reviewed later in this chapter.

CHILD LABOUR MODULE

A module to obtain information to monitor one of the child protection indicators, prevalence of child labour, is addressed to the caretakers of each child aged 5 through 14 years. The age of the target group may be adapted to the individual country situation, but should *include* children aged 5 through 14 years for reporting on the global indicator. Like all modules in this questionnaire, it is important to translate and pre-test these questions before printing the final questionnaire.

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[9] http://www.wssinfo.org

[10] See also Filmer, D., and L. Pritchett. March 1999. 'The Effect of Household Wealth on Educational Attainment: Evidence from 35 countries'. *Population and Development Review* 25(1): 85-120; Rutstein, S.O., and K. Johnson. 2004. 'The DHS wealth index'. DHS Comparative Reports No. 6. Calverton, Maryland: ORC Macro.

Although it would be desirable to assess the risks working children face, such as whether they work in a hazardous occupation, this module contains only a minimum set of questions. With these questions you will be able to estimate – for children living in households – the prevalence of paid and unpaid employment outside the home. Responses to these questions can also be analysed in combination with information on school attendance from the Education module and with information on orphans from the Household Listing.

SALT IODIZATION MODULE

Iodine deficiency disorder is the world's leading cause of preventable mental retardation and impaired psychomotor development in young children. In its most extreme form, iodine deficiency causes cretinism. It also significantly raises the risks of stillbirth and miscarriage for pregnant women. It is most commonly and visibly associated with goitre. Iodine deficiency disorder takes its greatest toll in impaired mental growth and development, contributing in turn to poor school performance, reduced intellectual ability and impaired work performance.

Iodization of salt is a key strategy for achieving the goal of eliminating iodine deficiency. This module is used to test the iodine content of salt used for cooking in the household.

There are two methods of iodizing salt: with potassium iodate or with potassium iodide. You will have to find out which method is used in your country for salt iodization at the production stage, and purchase the appropriate salt testing kit (see www.childinfo.org for more information). The tested level of iodization must be 15 parts per million or more.

ADDITIONAL MODULES: EXTENDED HOUSEHOLD LISTING AND CHILDREN ORPHANED AND MADE VULNERABLE BY HIV/AIDS

Many countries have seen a rapid increase in the number of children who are orphaned or made vulnerable due to AIDS, conflict or other causes. When parents die from AIDS, or families are separated by conflict, communities are usually the first to respond. However, governments have the wider responsibility to make sure that safety nets are in place. The module on Children Orphaned and Made Vulnerable by AIDS obtains information to measure five key indicators that can be used to monitor the national response to children who have been orphaned or are especially vulnerable because of AIDS. For more detailed information about indicators measured and questions used in this module, see *Guide to Monitoring and Evaluating the National Response to Children Orphaned and Made Vulnerable by AIDS*, which can be found at www.childinfo.org, or under the monitoring and evaluation section of the UNAIDS website, www.unaids.org.

The indicators compare the well-being of children orphaned and made vulnerable by HIV/AIDS (OVC) to non-orphaned and non-vulnerable children. For these calculations to be useful, there needs to be a large enough number of OVCs recorded in the survey – at least 50 such children, at a minimum. To test whether your country should include this module, survey coordinators

should find out from previous surveys or knowledgeable professionals the expected proportion of children that have lost at least one parent. If this proportion is thought to be more than 8 per cent of all children living in households, then you can expect to obtain reliable results using this module. If the proportion of orphaned children is 8 per cent or less, you should not include the OVC module since the sample sizes are not likely to be large enough. In addition, if HIV prevalence among adults is less than 5 per cent, the children classified as OVC are not likely to be affected by AIDS, but are more likely to be affected by other causes of adult morbidity and mortality.

The eligibility of children for this module is ascertained by using both the Extended Household Listing and the Children Orphaned and Made Vulnerable by HIV/AIDS module. The Extended Household Listing module should replace the Household Listing module. By using these modules, the children who are considered orphaned or vulnerable can be identified as the following:
- Children under 18 years of age who have lost one or both parents
- Children under 18 years of age whose parent or parents have has been ill for 3 of the past 12 months
- Children under 18 years of age who live in a household in which an adult (aged 18-59 years) has been ill for 3 of the past 12 months
- Children under 18 years of age who live in a household in which an adult (aged 18-59 years) has died during the past year and was ill for 3 of the past 12 months.

All children in a household where any child meets these criteria will be listed in the module on Children Orphaned and Made Vulnerable by HIV/AIDS, and questions about external support for them will be asked.

ADDITIONAL MODULE: INSECTICIDE-TREATED NETS

Malaria is a growing threat across the world, and its control is specifically mentioned in the Millennium Development Goals. One of the three key strategies for combating malaria identified by the Roll Back Malaria Partnership is vector control through insecticide-treated mosquito nets (ITNs). Nets used for sleeping that have been treated with an insecticide to repel or kill mosquitoes can substantially reduce malaria transmission, and programmes to provide access to ITNs are under way in many countries. This module provides questions to measure a key indicator, 'proportion of households that possess at least one ITN'.

The Roll Back Malaria Partnership considers malaria to be endemic in 106 countries. Some of those countries report that no transmission is currently occurring, or very few cases, and the use of this module is not appropriate in those countries. However, in areas at risk of malaria and in malaria-endemic countries where malaria transmission is known to be occurring, this module (and two additional malaria modules for women and children under five) should be included in the questionnaire.

A net treated with insecticide is effective in repelling or killing mosquitoes before they have the chance to bite. Various types of nets can be purchased. 'Long-lasting Insecticidal Nets' are ready-to-use, factory-pretreated nets that require no further treatment for 4 to 5 years. Efforts are now being made to scale up their production. Other types of nets require treatment with an insecticide every 6 to12 months. These nets can be purchased already pre-treated with an insecticide or untreated, and can be treated or re-treated later.

If you plan to include the malaria modules in MICS, you should contact the national malaria control programme in your country to obtain information on the different brands of nets used in the country.

Survey coordinators must work closely with knowledgeable professionals in the national malaria control programme to identify all brands of treated mosquito nets that are available in the country, as well as prevention and treatment policies (covered in the other two malaria modules, for women and children under five).

This module contains questions to identify if a household possesses at least one insecticide-treated mosquito net. This is accomplished by using questions about the brands of treated and untreated nets available in the household, the length of time that the household has owned a pre-treated net, and, if applicable, when the most recent treatment of a net occurred.

Sometimes respondents do not know the brand name of the net or nets the household owns, and interviewers may attempt to examine the net to identify the brand. It is often difficult to actually observe nets used for sleeping, because families are concerned about the privacy of their sleeping quarters. In this case, the interviewer may try to identify the brand of net using pictorial aids. Survey coordinators will need to arrange to have photographs of each brand's logo, if there is one, or the packaging in which the treated nets are sold to help with identification. Each interviewer should be given a copy of these photographs to show to respondents to assist them in identifying different brands of nets in the field.

OPTIONAL MODULE: ADDITIONAL HOUSEHOLD CHARACTERISTICS

The discriminatory power of the wealth index[11] improves when increased numbers of household and personal items are included in the Household Characteristics module. The additional

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[11] Filmer, D., and L. Pritchett. 1998. 'Estimating Wealth Effects Without Expenditure Data – or Tears: An application to educational enrolments in states of India'. *World Bank Policy Research Working Paper No. 199.* Washington, D.C.: The World Bank.
http://www.worldbank.org/html/dec/Publications/Workpapers/WPS1900series/wps1994/wps1994.pdf

Filmer, D., and L. Pritchett. March 1999. 'The Effect of Household Wealth on Educational Attainment: Evidence from 35 countries'. *Population and Development Review* 25 (1): 85-120.

Rutstein, S.O., and K. Johnson. 2004. 'The DHS Wealth Index', DHS Comparative Reports No. 6. Calverton, Maryland: ORC Macro.

questions suggested in this module provide a standardized way to include more items in the MICS3 questionnaire.

Recent research has shown that the inclusion of information on ownership of land and animals can increase the power of the index to distinguish the poor from the very poor in rural areas. It is recommended that countries add at least four additional household appliances so that the list includes at least three items that even a poor household may have, at least three items that a middle-income household may have, and at least three items that a high-income household may have. Some possible additions are clock, water pump, grain grinder, fan, blender, water heater, electric generator, washing machine, microwave oven, computer, VCR or DVD player, cassette or CD player, camera, air conditioner or cooler, colour TV, sewing machine.

OPTIONAL MODULE: SECURITY OF TENURE AND DURABILITY OF HOUSING

Reducing poverty – and improving the lives of slum dwellers – is a major focus of the Millennium Declaration.[12] Slums are characterized by inadequate housing and access to public services. Security of tenure is an essential element to be addressed in improving the lives of slum dwellers. Information obtained with this module will be used to measure indicators relating to security of tenure and the durability of housing. Several items in this module, evaluated together with characteristics of the household in terms of crowding, sanitation and source of drinking water help to determine whether the household is a slum.

More specifically, a household is considered a slum on the basis of five characteristics. A structure is considered non-durable if the flooring material is natural and, at the same time, there are two or more poor conditions identified with the dwelling, or if it is vulnerable to accidents, or if the dwelling is located in a hazardous area. A household is considered overcrowded if the ratio of household members to the number of rooms used for sleeping is more than three. In cases when household members do not have formal documentation for the residence (such as title deeds or tenants contracts), or if household members feel at risk of eviction from the dwelling, the household is considered to lack security of tenure. Lack of improved sanitation facilities and drinking water sources complete the five components of the definition of 'slum'. If the household bears one or more of these characteristics and is located in an urban area, it is considered a slum household. In other words, in MICS3, households are categorized as slums or non-slums after the data is collected and analysed.

This module should only be administered in urban areas, since slums are an urban phenomenon. The inclusion of the module does not only have implications for the questionnaire, but also the sample size, especially in areas where the module is to be administered. To be able to observe sufficient numbers of slum and non-slum households so that the lives of slum dwellers in comparison to non-slum dwellers can be evaluated, sample sizes in these areas will have to be increased.

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[12] United Nations Human Settlements Programme. May 2003. *Guide to Monitoring Target 11: Improving the lives of 100 million slum dwellers: Progress towards the Millennium Development Goals.* Nairobi: UN-HABITAT.

OPTIONAL MODULE: SOURCE AND COST OF SUPPLIES FOR INSECTICIDE-TREATED NETS

The questions in this module are for use by countries that want to monitor provision of free or subsidized supplies of insecticide-treated mosquito nets (ITNs). The questions are designed to be inserted into the additional module on ITNs, if used. The addition of these questions to MICS3 can provide a population-based assessment of the reach of such programmes, and the extent to which particular target groups may be covered by them.

The module provides questions tailored to obtain information about the source and cost of insecticide-treated mosquito nets. Many countries are now instituting programmes that promote the use of ITNs and make them available through various outlets. The price of an insecticide-treated net can be a barrier to ownership, and some programmes may provide nets free of charge. Programme managers may find it useful to obtain information about the source and cost of the net identified in the ITN module. When nets are available from both public and private outlets, information about the relative importance of each source may also be useful to programme planners.

OPTIONAL MODULE: CHILD DISCIPLINE

Physical violence towards children has been associated with behavioural and emotional problems as well as poor school performance. Family-support interventions designed to teach parents to use non-violent, non-abusive methods of discipline have been effective in reducing maltreatment of children and improving family functioning.

Documentation of child maltreatment is an important step towards implementing programmes to reduce family violence, but information from a wide range of countries about parental disciplinary practices is extremely limited. Data from large population-based sample surveys, which can be compared internationally, are scarcer still.

The purpose of this module is to obtain information to assess the use of a variety of physical and verbal ways of disciplining children. The questions were adapted from the Parent-Child Conflict Tactics Scale (CTS-PC) – an epidemiological instrument widely used to assess the treatment of children[13] – and are based on the WorldSAFE survey questionnaire, which has been used in developing countries to assess family violence.[14] This module, like the CTS-PC, includes items to measure a range of responses, from non-violent forms of discipline to psychological aggression to severe physical means of disciplining and punishing children. The scale has been

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[13] Straus, M.A., S.L. Hamby, D. Finkelor, D.W. Moore, and D. Runyan. 1998. 'Identification of Child Maltreatment with the Parent-Child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse and Neglect* 22(4): 249-270.

[14] Sadowski, L.S., W.M. Hunter, S.I. Bangdiwala, and S.R. Munoz. 2004. 'The World Studies of Abuse in the Family Environment: A model of a multi-national study of family violence'. *Injury Control and Safety Promotion* 11(2) 81-90.

tested in different parts of the world and found to provide valid results when careful field procedures are followed.[15,16,17]

OPTIONAL MODULE: DISABILITY

For many years there has been strong international interest in obtaining good estimates of the prevalence of disability, particularly childhood disability.[18] Such estimates would provide excellent support for advocacy efforts on behalf of disabled children. The questions found in this module provide a simple screening test for children with disabilities. This screening instrument, the 'Ten Questions', is fairly easy to administer and has performed well in three different cultural settings to identify potential 'cases' of childhood disability.[19] Though the estimated sensitivity of the test (its ability to detect cases and not miss children later found to have a disability) is high and uniform across different conditions, the specificity of the test (its ability to exclude false positive cases – those children later found on examination not to have a disability) varies considerably by type of disability and among populations. These differences may stem from differences in parental perceptions, in the number of children actually attending school, and even differences in survival of seriously disabled children. This does not invalidate the usefulness of the Ten Questions as a screening device, but does mean that it should *not be used to measure even potential prevalence of disability* cross-culturally.[20]

The screening test should be followed by a second-stage study in which children identified as disabled, and a random sample of children who were screened and identified as not having a disability, undergo clinical evaluation. The results of the clinical evaluations will identify cases of disability (1) for estimating overall prevalence of serious disability and (2) to identify children in need of referral to community-based rehabilitation services.

Survey coordinators wishing to include this module to obtain information about childhood disabilities should consult the references listed (and posted on the World Wide Web at: http://www.childinfo.org). The follow-up evaluation of cases identified by screening to determine actual cases of disability must be done by a qualified clinician. Only then can a valid estimate of the prevalence of various types of disability be made. Please note: Vision and hearing

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[15] Theodore, A.D., J.J. Chang, D.K. Runyan, W.M. Hunter, S. Bangdiwala, and R. Agans. 2005. 'Epidemiologic Features of the Physical and Sexual Maltreatment of Children in the Carolinas. *Pediatrics* 115(3): e331-337.

[16] Runyan, D.K., C. Wattam, R. Ikeda, F. Hassan, and L. Ramiro. 2002. 'Child Abuse and Neglect by Parents and Other Caretakers. In: *World Report on Violence and Health,* edited by Krug, E, L. Dahlberg, J. Mercy, A. Zwi, R. Lozano. Geneva: World Health Organization.

[17] Hunter, W.M., L.S. Sadowski, F. Hassan, D. Jain, C.S. DePaula, B. Vizcarra, and M.L. Amarilla. 2004. 'Training and Field Methods in the WorldSAFE Collaboration to Study Family Violence. *Injury Control and Safety Promotion* 11(2): 91-100.

[18] Chamie, M. 1994. 'Can Childhood Disability be Ascertained Simply in Surveys?' *Epidemiology* 5(3):273-275.

[19] Zaman, S.S., et al. 1990. 'Validity of the "Ten Questions" for Screening Serious Childhood Disability: Results from urban Bangladesh. *International Journal of Epidemiology* 19(3): 613-620.

[20] Durkin, M.S., et al. 1994. 'Validity of the "Ten Questions" Screen for Childhood Disability: Results from population-based studies in Bangladesh, Jamaica and Pakistan. *Epidemiology* 5(3): 283-289.

disabilities must be assessed by another method. The 'Ten Questions' instrument does not provide a sensitive screening for these types of disabilities.

OPTIONAL MODULE: MATERNAL MORTALITY

An optional module is provided for those countries wanting to estimate the maternal mortality ratio. The MICS3 module is unchanged from MICS2, and uses the indirect 'Sisterhood' method, which relies on a simple set of questions posed to all adults about the survival of their sisters. As simple as these questions are, measuring maternal mortality poses considerable difficulty. Because maternal deaths are rare events, even in countries with very high risk, large samples are usually required. Even with very large surveys it is difficult to estimate time trends in maternal mortality. Furthermore, maternal mortality is usually underreported. The estimates generated by the measurement techniques currently available are too imprecise to permit meaningful monitoring of maternal mortality over time. *Countries should not attempt to measure the maternal mortality ratio more often than every 10 years or so.* In the short term, indicators of health service use and quality of care are preferred for monitoring progress towards the MDGs.

> **EXAMPLE:**
> The care a woman receives at the time of delivery is linked to improved health outcomes. Attendance at delivery by skilled health personnel can be used as a proxy indicator of the impact of programmes to reduce maternal mortality. This indicator is measured in the MICS3 questionnaire.

The sisterhood method is *not* appropriate for use in countries likely to have a low maternal mortality ratio or where fertility is very low. It is also important to mention here that the sisterhood method used in MICS3 is an indirect method, which produces estimates centred on 10 to 12 years before the survey is carried out, an issue that countries should evaluate in regard to the usefulness of maternal mortality estimates.

If administered, the module is placed in the household questionnaire and all adults are target respondents for the questions. The main advantage is that each household is likely to have more than one adult respondent, each with different siblings. Thus, a somewhat smaller sample of households is needed to obtain a sufficient number of adult respondents.[21]

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[21] As a general guide (assuming two adults per household), a sample size of 5,500 households can be used to estimate a maternal mortality ratio expected to be around 500 per 100,000 births, where the total fertility rate is about 4.7.

QUESTIONNAIRE FOR INDIVIDUAL WOMEN

The modules in the women's questionnaire are directed only to women aged 15-49 years. The questionnaire covers some very sensitive topics, and only female interviewers should be used. Special precautions should be taken to guard the confidentiality of women's responses.

The women's modules measure indicators of contraceptive use (an MDG indicator); access to skilled attendants at delivery (an MDG indicator); incidence of low birthweight (a World Fit for Children goal); post-partum vitamin A supplementation (a World Fit for Children goal); and tetanus toxoid coverage of infants (a World Summit for Children goal). Knowledge of HIV/AIDS is also obtained in a separate module (an MDG indicator). Questions to measure under-five and infant mortality rates (both MDG indicators) are also included in the Women's Questionnaire. An additional module of questions relevant to HIV prevention programmes is included to monitor changes in young women's sexual behaviour (an MDG indicator). This module is administered only to women 15-24 years of age and should be included in the core questionnaire where possible. Questions concerning sexual behaviour are sensitive in all countries and require skilled interviewers to administer these modules appropriately. Some survey coordinators may decide that the interviewer's training is not sufficient to address these sensitive issues. Survey coordinators and the MICS3 national steering committees must make the final decision about inclusion of this module.

The following section summarizes the most important things to note about modules in the Questionnaire for Individual Women.

WOMEN'S INFORMATION PANEL

The women's questionnaire begins with a Women's Information Panel, which contains space to record key data needed to link information about individual women with information on her household and the children she cares for. The introductory sentence provided on the questionnaire should be customized to country circumstances. There will be no need to repeat these sentences to women who have already been respondents to the household questionnaire.

Cluster, household, woman's line number and interviewer identification is entered on the Women's Information Panel. It is important to ensure that this panel is not separated from the rest of the women's questionnaire, since it contains vitally important identification linking the woman to her household. This panel also provides space to record the results of the woman's interview.

Next, we obtain the woman's age, taking care to ascertain her true age. Further analysis of MICS3 data is possible, but will rely on accurate estimates of women's ages.

In this section we also obtain information on individual women's education, and, for women who did not attend school or attended only primary school, we test their ability to read a simple sentence. This literacy test is new to MICS3. This information will be used to measure MDG

indicator 8, on literacy. Survey coordinators should adapt the sentences provided as examples for the literacy test to sentences that are meaningful in their country, and translate them into relevant languages.

The sentences in each language should be printed on a separate card so that interviewers can choose the card with the appropriate language and show it to each respondent. There are several sentences on the card, so that if there is more than one respondent in a household, each one can be asked to read a different sentence. This will help to avoid one respondent overhearing the answers of the first, and simply repeating the sentence, even if she herself cannot read.

CHILD MORTALITY MODULE

One of the overarching goals of the MDGs and the World Fit for Children is to reduce infant and under-five mortality. Monitoring progress towards this goal is an important but difficult objective. Measuring childhood mortality may seem easy, but attempts using direct questions, such as "Has anyone in this household died in the last year?" give inaccurate results. And using direct measures of child mortality from birth histories is time consuming and complicated. Demographers have therefore had to devise ways to measure childhood mortality indirectly. These 'indirect methods' minimize the pitfalls of memory lapses, inexact or misinterpreted definitions, and poor interviewing technique.

One of the most reliable methods is known as the 'children ever born/children surviving' (CEB/CS), or Brass, method of mortality estimation. This method uses data from a few simple questions about the number of live births a woman has ever had and the number of those children who have died to derive estimates of infant and under-five mortality. It does not require respondents to provide dates of birth or death, so the data can be gathered quickly.

The original version of the CEB/CS method – referred to in this manual as the 'age-based' method – relies on women's reports of their ages to estimate the length of time that children have been exposed to the risk of dying. This is the main method that should be used in the current MICS; the Child Mortality module in the model questionnaire includes the necessary questions for it.

However, in countries where pregnancy outside marriage is rare, there is sometimes sensitivity about asking unmarried women about any births they may have had. Where questions on children's births and deaths can only be asked of women who have ever been married, estimates of child mortality using the 'age-based' method becomes more complicated. In these countries, which are relatively few in number, the 'marriage duration' variant of the method should be used, based on questions from the Marriage/Union module. Before designing the questionnaire, survey coordinators and their technical advisers need to decide which version of the CEB/CS method to use.

Data collection, calculation and interpretation of mortality estimates are complex undertakings**.** *You should enlist the help of a local demographer or statistician who is conversant with these methods before you conduct the survey.* You should also obtain the recommended publications to assist you and your consultant demographer to collect, analyse and interpret these findings. [22]

It is important to note that if a woman has had no live births, the rest of the child mortality module and the next two modules are skipped over and the interviewer goes on to the Marriage/Union module. If she has ever had a live birth, the interviewer goes on to administer the entire Child Mortality module. The information from this module is combined with information on her age to make the estimates. The final segment of this module (CM11-12) inquires about live births within the past 2 years and has to be retained (along with CM1), even if the Child Mortality module is omitted, to determine eligibility for the Tetanus Toxoid module and the Maternal and Newborn Health module.

TETANUS TOXOID MODULE

To estimate tetanus toxoid (TT) coverage among children under 1 year of age, mothers who have given birth in the 2 years preceding the survey must be identified (through questions CM11-12). The biological mother is then asked about her own tetanus toxoid immunizations. (Mothers often do not possess a card on which their own immunizations are recorded, but their recall is usually adequate.)

The questions in this module provide a proxy measure of the infant's protection against tetanus. Experimental at the time of the first MICS in 1995, these questions have now been validated. They performed very well, eliciting responses that matched results when infants were tested for tetanus antibodies.[23] The Demographic and Health Surveys (DHS) project has harmonized its questions about tetanus toxoid to match the MICS3 questions. This harmonization of questionnaires will enable the indicator for this international goal to be compared across many more countries than has been possible in the past.

This indicator has traditionally been calculated only for children under one still living at the time of the survey. The questions supplied in this MICS3 questionnaire will enable the calculation to be made for children under age one who are still living, and also for all children born in the year preceding the survey, whether they are still living or have died. To simplify the job of interviewers, all women who gave birth in the 2 years prior to the survey will be asked all questions in the Tetanus Toxoid and Maternal and Newborn Health modules. The selection of children born in the year before the survey will be made during data analysis.

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[22] The estimation method is explained more fully in: United Nations Department of Economic and Social Affairs. 1990. *A Step-by-Step Guide to the Estimation of Child Mortality.* Information on data collection and training can be found in: David, Bisharat, and Hill. 1990. *Measuring Childhood Mortality: A Guide for Simple Surveys.* Amman: UNICEF's Middle East and North Africa Regional Office.

[23] Deming, M.S., J.-B. Roungou, I. Heron, A. Yango, A. Guenengafo, and R. Ndamobissi. 2002. Tetanus Toxoid Coverage as an Indicator of Serological Protection Against Neonatal Tetanus. *Bulletin of the World Health Organization* 80(9):696-703.

MATERNAL AND NEWBORN HEALTH MODULE

In this module, women who have had a live birth in the 2 years preceding the survey are asked about supplementation with vitamin A in the post-partum period. They are also asked about providers of antenatal care during the last pregnancy, procedures that were carried out during antenatal care, including counselling and testing for HIV, and delivery care. In the MICS3 questionnaire, one of the new additions concerns the place of delivery, which programme managers may find to be very useful information. Two short questions have been added to MICS3 to measure the prevalence of timely breastfeeding initiation (MN12-13). Putting an infant to the mother's breast – preferably within an hour after birth – helps forge a bond between mother and child and establish the practice of breastfeeding. This is an important indicator of newborn care, included for the first time in MICS3.

The last three questions in this module are used to estimate the incidence of low birthweight. Mothers are asked to give the numerical birthweight of their children, as well as to assess the relative size of their babies at birth. The relationship between mothers' assessment of relative size and the numerical weight for babies who were weighed at birth is then used to estimate the weight of infants for whom only relative size is available. They produce data to make a good estimate, in the aggregate, of the prevalence of low birthweight even for countries where many newborns are not weighed at birth.[24] These questions also enable one to calculate the proportion of babies not weighed at birth.

MARRIAGE/UNION MODULE

This module is new to MICS3 and is included to obtain more detailed information about marital status. Data from questions in this module will permit measurement of several World Fit for Children indicators on child protection, including an estimate of the prevalence of early marriage (marriage before age 15 and age 18) and age differences between women and their spouses.

CONTRACEPTION MODULE

This module obtains information to estimate the prevalence of contraceptive use among couples and contains three questions. (A few countries may restrict these questions to women who have ever been married, as previously discussed). The questions are designed to obtain information to estimate the prevalence of contraceptive use among women. These questions are personal and need to be introduced carefully by the interviewer.

The woman is asked if she knows a method to delay or avoid pregnancy, and, if so, which method she is currently using. For obvious reasons, pregnant women are not asked the current use question. A list of contraceptive methods is provided as possible responses, but responses

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[24] Boerma, T., K. Weinstein, S.O. Rutstein, and E. Sommerfelt. 1996. 'Data on Birth Weight in Developing Countries: Can surveys help?', *WHO Bulletin OMS* 74:209-216.

should *never* be prompted. Only spontaneous responses should be recorded. Multiple responses are allowed, as women might be using more than one method at the time of the survey.

HIV/AIDS MODULE

The final module in the women's questionnaire aims to examine knowledge about HIV transmission and AIDS, attitudes towards persons living with HIV, and HIV testing (practice and knowledge). The purpose of this module is to obtain information to help programme managers and policy makers plan more effective programmes to prevent the spread of HIV.

The module is meant to be used in all countries, but there are notes on the questionnaire showing where and how several questions may need to be adapted locally. The wording of some of these questions has changed slightly since MICS2, because of testing and refinement in measuring key knowledge and stigma indicators by UNAIDS. For countries where injecting drug use is a common means of HIV transmission, an additional question about knowledge of this mode of transmission is provided in the module. The questions and the indicators that can be constructed from the data they provide were developed by UNAIDS and partners. They are part of a set of indicators used to help monitor changes in knowledge, attitudes and practices that are being promoted in HIV prevention programmes around the world.

First, questions are asked to determine the respondent's basic knowledge about HIV transmission. Questions are asked about ways to avoid HIV infection and to assess the prevalence of misconceptions about how HIV is transmitted.

Three questions aim to determine whether a woman knows that the AIDS virus can be transmitted from mother to child. Negative attitudes and discrimination against persons living with HIV affect efforts to prevent transmission and to care for infected individuals. Several questions are asked to obtain information about discriminatory attitudes and practices.

The purpose of the last four questions is to obtain information about the level of unmet need for HIV testing. They first ask about experience of HIV testing. Voluntary testing and counselling are now encouraged, in the belief that if a person knows his or her HIV status, he or she is more likely to adopt behaviours to prevent contracting the virus or, if positive, of transmitting it. Many of those who do get tested do not return to learn the results, but the proportion of those who do return should rise as the quality of pre-test counselling improves. To monitor the level of demand for such services, a question is included to obtain an estimate of the number of those tested who return to learn the result. A question to determine whether a woman requested the test or was required to take it is also included in MICS3. Finally, for those who have not previously been tested, respondents are asked if they know of a place where an HIV test can be performed.

As with all the modules in this questionnaire, it is important that interviewers administer this module with care. It is especially important that they be trained to read out each question in this

module exactly as it is written, and to ask questions in the order in which they appear. It is essential that the interview be conducted in a confidential setting.

ADDITIONAL MODULE: MATERNAL AND NEWBORN HEALTH WITH INTERMITTENT PREVENTIVE TREATMENT FOR PREGNANT WOMEN

In malaria-affected countries, several questions are added to the Maternal and Newborn Health module to estimate the effectiveness of programmes to provide pregnant women with intermittent preventive treatment for malaria.

Malaria infections can cause several pregnancy-related complications, malaria-related severe anaemia, and can even result in maternal death. In addition, malaria may cause adverse outcomes for the foetus, including low birthweight, spontaneous abortion and neonatal death. Interventions to reduce the risks of malaria-related pregnancy complications include the use of antimalarial drugs during pregnancy. The current recommendation from the Roll Back Malaria Partnership is to provide all pregnant women in areas with stable malaria transmission with at least two preventive treatment doses of an effective antimalarial drug (usually SP/Fansidar, a combination of sulfadoxine and pyrimethamine) during routine antenatal clinic visits. Three questions to estimate the use of intermittent preventive treatment are included in this module for areas where there is a malaria risk and countries where malaria is endemic (http://rbm.who.int/wmr2005/).

The appropriateness of including these questions in the MICS will depend upon your country's policy regarding intermittent preventive treatment. Survey coordinators must work closely with knowledgeable professionals in the national malaria control programme to decide if these questions should be included.

ADDITIONAL MODULE: MARRIAGE/UNION WITH POLYGYNY

Polygyny is the practice of a man having more than one wife. It is considered a harmful traditional practice for a young woman to have to enter into a polygynous union. In countries where polygyny is practised, this module is used to replace the core Marriage/Union module. It has several questions added to it to ascertain the prevalence of polygynous unions and the average number of partners in these unions.

ADDITIONAL MODULE: FEMALE GENITAL MUTILATION/CUTTING

Female genital mutilation/cutting (FGM/C) involves total or partial removal of the external female genitalia. The operation is performed on young girls, usually before they reach puberty, by traditional midwives and/or circumcision practitioners and frequently without anaesthesia.

Female genital mutilation/cutting can have severe physical and psychological effects. As a result, UNICEF and other international agencies are seeking to eradicate the practice and make the abolishment of FGM/C a human rights issue. Despite these efforts, the practice persists in many

countries, although to what extent is often unknown. The Female Genital Mutilation/Cutting module is designed to collect data on a woman's own experience of FGM/C as well as that of her daughter (if she has more than one daughter, the one most recently circumcised). These data will enable researchers to track intergenerational changes in the practice of FGM/C. Finally, a question to assess the woman's attitudes towards the practice is included. The module should be added to the Questionnaire for Individual Women following the Marriage/Union module, and should be addressed to all women aged 15-49 eligible for the survey.

ADDITIONAL MODULE: SEXUAL BEHAVIOUR

As the HIV epidemic spreads globally, it is increasingly clear that young people are at especially high risk. One of the reasons for this increased risk is that young people often do not have the information or the skills they need to protect themselves. Prevention programmes aim at persuading young women to delay their first sexual experience, to restrict the number of partners they have, and to use condoms with their partner each time they have sex.

In MICS3, a module is included to help countries obtain better information to develop or improve HIV prevention programmes for young people. This module, administered only to women aged 15 to 24 years (regardless of marital status), is designed to obtain information about young women's sexual behaviour. *It is extremely important that your interviewers ensure absolute privacy when administering this module.* It is also important that the women consent to answering these questions. It must be clear to every woman interviewed that she is *free to refuse* to respond to these questions if she is uncomfortable answering them. Special care must be taken to train interviewers (who must be female) to administer this module, so that their assurance to the woman that her answers are completely confidential can, in fact, be realized.

In some countries, the survey coordinators may feel that the questions on sexual behaviour are too sensitive to be included in a general household survey. If survey coordinators are concerned that including this module will jeopardize the quality of data gathered in other MICS modules, or that the interviewers will not be able to ask these questions easily, do not include this module. In some countries, you may decide to obtain parental consent before administering the questionnaire to women under age 18. Survey coordinators and the MICS3 national steering committees must decide if the module is suitable for inclusion.

It is extremely important that your interviewers ensure absolute privacy when administering the Sexual Behaviour module. **You should provide extra training to interviewers if you plan to include this module in your survey.**

The module begins with questions about the respondent's first experience of sexual intercourse, which is used to measure the prevalence of women having sex before age 15. This is followed by questions concerning the relationship she had to the man with whom she last had sex and condom use at that time. The prevalence of 'high-risk' sex among young women is measured as the proportion of these women who had sex with a partner to whom they were not married or

cohabiting with. An important indicator for programmes is the proportion of these women who used a condom when having 'high-risk' sex. This is a Millennium Development Goal indicator.

Sex between young women and older men can be especially risky since young women often lack the skills to effectively negotiate safe sex. Moreover, older men are more likely than younger men to be infected with HIV, because they have presumably been sexually active for a longer period of time. The module contains questions about the age of a woman's last sexual partner, even if she does not know his exact age, in order to estimate the extent of 'age-mixing' in sexual relationships. As women better understand the risks, changes in their behaviour will be reflected in this indicator.

More information about these indicators and the methods for administering questions in this module can be found in *National AIDS Programmes: A guide to indicators for monitoring and evaluating national HIVAIDS prevention programmes for young people.* The guide can be found on the UNAIDS website at:
http://www.unaids.org/en/in%2Bfocus/monitoringevaluation/m_e+library.asp

OPTIONAL MODULE: SECURITY OF TENURE FOR THE WOMEN'S QUESTIONNAIRE

The Security of Tenure module for the women's questionnaire consists of only one question, designed to determine whether women feel secure from the risk of eviction. It is known that insecurity of tenure can be more pronounced with women, since women constitute a more vulnerable segment of society.

OPTIONAL MODULE: CONTRACEPTION AND UNMET NEED

This module adds several questions to the basic Contraception module used in the core questionnaire, and should replace that module. The expanded module provides a simplified approach to estimating the 'unmet need for contraception' in a country, as well as the 'proportion of demand (for contraceptives) satisfied'. Unmet need is an indicator used by WHO and UNFPA, among others, to assess access to reproductive health services. Both indicators are useful for planners of family planning programmes since they measure the estimated proportion of couples in need of family planning methods. Using survey data, the proportion of women who have a potential need for some form of contraception, as well as the proportion in need of more effective modern methods of contraception (oral contraceptives, condoms, IUDs, sterilization), can be calculated.

Using the streamlined set of questions supplied in this module, women with unmet need are defined as those who are fecund (capable of getting pregnant), wish to avoid another birth or wait at least 2 years before the next birth, and are not using a method of contraception. Unmet need for modern contraception is calculated by adding to this definition all women who meet these requirements and are using traditional methods of contraception (periodic abstinence or withdrawal, which have low levels of effectiveness, or other ineffective traditional methods).

OPTIONAL MODULE: ATTITUDES TOWARDS DOMESTIC VIOLENCE

Women are vulnerable to abuse by their spouses and other household members, especially in countries where gender inequality persists. In many – if not most – countries, the problem of domestic violence is a hidden one. Discussion of the problem is infrequent, and the range of different attitudes of both men and women is often unknown. This lack of discussion and information often means that the problem of domestic violence is ignored. The following module – a single set of prompted attitudinal questions – is included as an option in MICS3 to shed light on the development of programmes to prevent domestic violence and to aid victims. It is designed to provide an assessment of what women of reproductive age (in this case, respondents to the women's questionnaire) consider normative behaviour with regard to domestic abuse.

QUESTIONNAIRE FOR CHILDREN UNDER FIVE

The Questionnaire for Children Under Five is addressed to all caretakers of young children living in the household. The modules measure:
- prevalence of birth registration
- indicators of early childhood development
- vitamin A programme coverage
- breastfeeding
- care of diarrhoea
- care of suspected pneumonia
- malaria treatment and use of insecticide-treated nets
- immunization coverage
- nutritional status (anthropometry).

The inclusion of a separate Questionnaire for Children Under Five in MICS3 makes it possible to collect data on children whose mothers may have died or are living elsewhere. Such children usually constitute a more vulnerable group and it is important to obtain information on them. In many other similar surveys, such as the Demographic and Health Surveys (DHS), information on children under five is normally collected only if the mother is interviewed. Identification of a primary caretaker (through the Household Questionnaire) is essential, since he or she is a source of valuable information on these motherless children. Interviewers should take utmost care to ensure that the correct household member is identified as the caretaker.

UNDER-FIVE CHILD INFORMATION PANEL

The Questionnaire for Children Under Five begins with a Child Information Panel containing space to record key information needed to link each child's information with information on his or her household and mother or primary caretaker. The introduction is repeated here to be read to caretakers of children who have not been respondents to the Questionnaire for Individual Women. *The child's mother or primary caretaker must be given the assurance that the information given during the interview will remain confidential, and that the respondent will not be penalized in any way if she/he refuses to participate. Respondents must be given the opportunity to refuse to participate if they so choose.*

Cluster, household, child, mother/caretaker and interviewer identification is entered on the Under-Five Child Information Panel. It is important to ensure that this panel stays attached to the rest of the questionnaire, since it contains vitally important identification information linking the child to household and caretaker information. This panel also provides space to record the results of the under-five child interview.

The children's questionnaire then begins with questions to obtain a precise birth date and age. Interviewers will have to probe, if necessary, to make sure that the child's date of birth is obtained as month and year, so that later on the child's age in months can be calculated (this is

important in estimating certain indicators, such as anthropometry, which rely on precise age calculations). Advantage is taken here of the fact that the child's mother or primary caretaker is likely to have the best information about the child's age. These questions also provide a good introduction to questions about birth registration.

BIRTH REGISTRATION AND EARLY LEARNING MODULE

If there is a legal obligation to register births, these questions about registration may be perceived as threatening and must be administered with care. It is important that respondents understand that the information they provide is confidential and that individual data will not be disclosed to government authorities. The aim of the questions is to identify the extent of the problem of non-registration and obstacles to registration. You will need to pre-test these questions, and adjust to local needs the response categories regarding reasons for non-registration (BR3).

Two questions are provided to obtain information about attendance at organized early childhood education programmes. These questions only concern children aged 3 and 4 years. These questions are meant to obtain information about programmes that provide learning activities for pre-school children. Child-minding or babysitting alone does not qualify as an 'organized, early learning programme'. Survey coordinators should work together with UNICEF and government education advisers to translate this question, and train interviewers to effectively obtain the desired information.

A new addition to MICS3 is a series of questions to assess several indicators of support for early childhood learning and preparation for school. These questions concern all children under age five. Young children's readiness for schooling depends very much on a family environment that encourages the child's learning and development. Many studies in different parts of the world have shown that children from homes in which they are exposed to a variety of learning experiences, interacting with adult family members on a regular basis, are more likely to be successful in their early schooling. Moreover, experience has shown that it is possible to encourage and support parents' efforts to provide such experiences for their young children through appropriate intervention strategies.

The information provided by questions BR8A-F will enable you to assess the adequacy of the child's home learning environment. The extent of the father's engagement in a child's learning can also be estimated through the answers to these questions. The questions ask if any adult member of the household (that is, anyone over the age of 15) has engaged in a series of specific activities with the child that are developmentally stimulating.

VITAMIN A MODULE

This question module is provided to monitor vitamin A supplementation programmes. All countries that have under-five mortality rates of 70 deaths per 1,000 or higher, or a vitamin A-deficiency problem of public health significance, are asked to include this module. A question to obtain data on where children usually receive the vitamin A dose is also provided for countries

that have supplementation programmes. Survey coordinators should provide interviewers with capsules or dispensers for different doses to help respondents remember which doses were administered. For children aged 6-11 months, doses of 100,000 International Units (IU) are used; for children aged 12-59 months, the prescribed dose is 200,000 IU.

When vitamin A deficiency is close to elimination, countries may measure the prevalence of low serum retinol by testing a subsample of the national sample or conducting a special survey. Guidelines for such a survey may be obtained from UNICEF's Nutrition Section.

> **The vitamin A module is designed to monitor programme coverage. Countries with a known or likely vitamin A deficiency problem of public health significance should use the module.**

BREASTFEEDING MODULE

This module provides five measures of infant feeding patterns, including exclusive breastfeeding, continued breastfeeding and timely complementary feeding rate, as well as frequency of complementary feeding.

As in the two earlier MICS, the 'current status' approach is used to assess current breastfeeding practices at the time of the survey. This approach, which asks about feeding practices in the 24 hours preceding the interview, is the *only* reliable method to obtain information about duration of breastfeeding in a cross-sectional survey. The numbers of children encountered in the age ranges of interest are likely to be quite small: children aged 0–3 months, 0-5 months, 6–9 months, 12-15 months and 20–23 months. In order to stay within feasible sample sizes, the precision with which breastfeeding indicators are measured may be less than that of some other indicators.

CARE OF ILLNESS MODULE

In June 2004, UNICEF and WHO held a joint meeting with other key agencies to reach inter-agency consensus on a minimal set of indicators for monitoring progress towards goals related to child survival. One of the main aims was to maintain continuity with the established indicators used during the 1990s to track progress related to the World Summit for Children, as well as to harmonize the indicators with those already agreed upon by the international community, including those used in the MDGs.

For MICS3, this revised module incorporates almost all of the questions about diarrhoea treatment that were contained in the earlier MICS questionnaires. The questions ask about drinking and eating patterns during episodes of diarrhoea in the 2 weeks prior to the survey. A new indicator was agreed upon and has been added for oral rehydration therapy (ORT), which combines indicators on oral rehydration and home management of diarrhoea: 'ORT or increased fluids AND continued feeding received'.

Questions CA6-7 aim to identify a case of suspected pneumonia or other acute respiratory infection *needing assessment* by an appropriate health provider (as defined by WHO/UNICEF). The questions are limited to illness episodes that occurred in the 2 weeks prior to the survey.

For survey identification, the World Health Organization defines these suspected cases of pneumonia as children reported to have had an illness with a cough accompanied by fast and/or difficult breathing. A second question is used to filter out simple cases of a cold with a blocked nose: "Were/are these symptoms due to a problem in the chest or a blocked nose?" If a local term for 'rapid breathing' exists, using that term may be the simplest way to obtain cases of acute lower respiratory tract infection that should be seen by a health care provider.

Questions CA8-9 ask whether the caretaker sought care outside the household, and if so, where. The definition of 'appropriate health care provider' is usually agreed upon at the country level. A key strategy for reducing the number of suspected cases of pneumonia is prompt treatment with an appropriate antibiotic. For this reason, questions are also added to the MICS3 questionnaire to assess whether the child with suspected pneumonia was treated with an antibiotic.

Improper disposal of the faeces of young children poses a risk of diarrhoeal disease. A specific question has been included in the Questionnaire for Children Under Five to provide information about disposing of the waste of young children in the household (CA12).

Finally, question CA13 asks caretakers to name the signs of serious illness that would prompt them to seek immediate treatment for the child at a health facility. Parents or caretakers should be able to name at least two signs of serious illness. Some common responses are provided in the list. Other responses are also recorded. Responses should *never* be prompted. These data will enable you to calculate an indicator to monitor the success of this educational aspect of the Integrated Management of Childhood Illness (IMCI) programme.

IMMUNIZATION MODULE

The questions on immunization remain virtually unchanged from the earlier MICS. However, the module must still be adapted to reflect vaccines and doses as specified on government-approved vaccination cards. Several vaccines that have come into more common use in countries have been added to the list of potential vaccines.

> **EXAMPLE:**
> In countries where the combined measles, mumps and rubella vaccine (MMR) is used instead of measles vaccine alone, MMR should replace 'measles' in the list, just as it appears on the vaccination card. If both vaccines are in use, retain both items.

Other antigens may also be used in national immunization programmes, and several possible ones are also listed in the model questionnaire. Remove any that do not appear on vaccination cards and are not in use in your country.

EXAMPLE:
Measles vaccine is normally given as an injection in the arm at the age of 9 months. In some countries, measles vaccine is now given at 12 months or 15 or 18 months. In some countries, children may receive the vaccine as an injection in the thigh. Question IM17 will need to be adapted to reflect the usual age recommended for measles vaccine.

Vitamin A doses are now sometimes included on a child's vaccination card, especially if the supplements are delivered in routine child health clinic visits. We have included space for recording the dates of the two most recent doses of vitamin A, if recorded on your country's vaccination cards. If routine doses of vitamin A are indicated on vaccination cards in your country, you will be able to make some assessment of the regularity of dosing. Correct dosing is an important component of supplementation programmes, because children who are deficient in vitamin A need to receive supplements every 4 to 6 months – at least twice a year.

A question is also included that asks if any doses not shown on the card were given to the child, including vaccines received during a National Immunization Day. This includes campaigns that provide vaccines other than polio, such as measles immunization campaigns.

In some countries, vaccination cards are kept at health centres and are not given to mothers. In these countries, an additional page identical to the first page of the Immunization module in the questionnaire should be produced, and if necessary, health centres should be visited to record information from the child's health card. The module should be used in its entirety during the interview, however.

When no vaccination card is available, the caretaker is asked a series of probing questions (IM10-18) to ascertain the type of vaccine and the number of doses, or additional doses received. Lastly, participation in National Immunization Days can be obtained by inserting the dates of the most recent national campaigns (including non-polio campaigns and 'vitamin A days') in IM19 of the module. If possible, include the season of each campaign to help jog the memory of caretakers who cannot recall specific dates. Vaccine coverage rates are calculated based on card records and/or mothers' responses to probing questions; responses to the question on participation in National Immunization Days will *not* be added to the calculation of coverage.

ANTHROPOMETRY MODULE

Good nutrition is the cornerstone for survival, health and development of current and future generations. Well-nourished children perform better in school, grow into healthy adults and, in turn, give their children a better start in life. Undernutrition is implicated in more than half of all child deaths worldwide. Undernourished children have lowered resistance to infection, they are more likely to die from common childhood ailments like diarrhoeal diseases and respiratory infections; for those who survive, frequent illness saps their nutritional status, locking them into a vicious cycle of recurring sickness and faltering growth. The key indicators for monitoring the nutritional status of a child are underweight (weight for age – an MDG indicator), stunting

(height for age) and wasting (weight for height). These can be measured by obtaining the height or length and weight of the child along with the age in months.

The process of weighing and measuring children can be disruptive, and is best left until all the questionnaires for the household are complete. Weight and height or length (children under age two must be measured in recumbent position) are obtained last. To take these measurements properly, enlist the help of local experts to help design and conduct the training for measurers.

The training programme for measurers is crucial. Consult Appendix Five, Anthropometric Techniques, for more guidance. The training programme should always include practice weighing and measuring real children; you should obtain permission and make arrangements to carry out practice sessions at a local day-care or other facility where children are found. Be sure to make arrangements early to obtain the necessary equipment, so that you have it in place and ready for the field staff training (see Chapter 5, Preparing for Data Collection).

ADDITIONAL MODULE: MALARIA FOR UNDER-FIVES

This module contains questions that will provide the basic data to calculate indicators for malaria treatment and use of insecticide-treated mosquito nets. Cases of fever in the 2 weeks preceding the survey are identified. Caretakers are asked if any medicines were given to the child for fever or malaria, and if so, which ones were taken. The options include both anti-fever medications (antipyretics) such as paracetemol, and antimalarials.

The list of antimalarials must be formulated at country level, and country coordinators should work closely with the national malaria control programme to decide which malaria medicines are available and should be listed in the questionnaire. To facilitate identification, survey coordinators should also arrange to print photographs of packages of each common, locally used medicine. These photographs can be carried by the survey team and displayed to caretakers who may not know the names of drugs administered.

A new – and key – question regarding promptness of treatment has been added to this module for MICS3. Question ML9 asks about the time interval between the onset of the fever and when the child took the first dose of an antimalarial medication. This information is important to programmes because the most severe types of malaria progress very quickly and children must be treated promptly at onset of a fever. In MICS3, treatment received the same day or the next day is considered prompt treatment.

Several additional questions are also included in the malaria module. These ask whether the child received treatment at a health facility, and whether the child was treated at home before being taken to the facility. These questions provide information about the significance of caretakers compared to health workers as providers of antimalarial treatment. The information is essential for knowing where to intervene, although there are considerable differences among countries.

Finally, information on the use of insecticide-treated mosquito nets by children is obtained by asking the questions provided (ML10-15). With this information, an important global indicator to monitor changes in the use of such nets by children under five can be calculated.

OPTIONAL MODULES: SOURCE AND COST OF SUPPLIES FOR ORAL REHYDRATION SOLUTION PACKETS, ANTIBIOTICS FOR SUSPECTED PNEUMONIA, AND ANTIMALARIAL MEDICINES

Three modules can be added on to the Questionnaire for Children Under Five to collect information on the sources and costs of supply for oral rehydration solution (ORS) packets, antibiotics for suspected pneumonia, and antimalarial medicines. As with the similar module on Insecticide-treated Nets, these modules are designed to provide population-based estimates of the reach of programmes on pneumonia, malaria and diarrhoea. Each of these modules consists of two simple questions that are inserted into the relevant modules. The questions relate to where the supplies were obtained and the amount paid for them.

OPTIONAL MODULE: CHILD DEVELOPMENT

A young child's readiness for formal schooling depends very much on a family environment that encourages the child's learning and development. It is now well recognized that a period of rapid brain development occurs in the first 3 to 4 years of life – and the quality of the home environment is the major factor determining the child's development during this period. Many studies in different parts of the world have shown that children from homes where they are exposed to a variety of learning experiences and learning materials are more likely to be successful in their early schooling than children who lack these experiences.

Moreover, it has also been shown that it is possible to encourage and support parents' efforts to provide such experiences for their young children through appropriate intervention strategies. The information provided in this module will allow you to estimate the amount of developmentally stimulating activity that the child is engaged in. Several items in this module are components of the Home Scale, which was developed to measure support for learning in the household.[25] The results can be used to evaluate the adequacy of the young child's learning environment in the home. The data from this module should be useful in monitoring UNICEF's major new effort to put books into the hands of young children around the world.

An association has been found between having books in the household, including children's books, and stunting, vocabulary scores and the measure of a child's IQ. Exposure to books in the early years not only provides the child with greater understanding of the nature of print, but may also give the child opportunities to see others reading, such as older siblings doing school work. It is a simple measure to include and is important for later school performance.

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[25] Bradley R.H., R.F. Corwyn, H.P. McAdoo, C. Garcia Coll. 2001. 'The Home Environments of Children in the United States Part I: Variations in age, ethnicity, and poverty status'. *Child Development* 72 (6): 1844-1867.

The module includes questions on the variety and complexity of the child's play materials. Young children learn by manipulating objects – testing relationships, sequences and developing a sense of roles and functions in society. They imitate the activities of adults with things, learn social interactions, and keep working on problems (like how to make a simple car) until they can master them. Learning materials need not be purchased. Children enjoy not only store-bought items, but also objects from the household and outside the home. In fact, having learning materials made by family members is more likely to be predictive of later school performance, since it may tell us that the household has a greater recognition of the child's right to play, and makes a special effort to see that this right is exercised. These home-made toys require no money, but may involve skill and time – such as a ball made out of banana leaves or a doll from sticks tied together. Poverty probably reduces the number and availability of toys, time to play with them, and the child's energy to engage with the materials. Conversely, these activities can reduce the effects of poverty on children.

The module is also designed to collect information on two measures of potentially unsafe care-giving environments: children left alone, and children left in the care of young caregivers when their mothers are out. There is evidence that these potentially risky care situations may have less positive outcomes than when children are left with more mature caregivers, and are probably associated with an increase in accidents.