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# The Neonatal Verbal Autopsy System (NeVAS)

(VERBAL AUTOPSY FOR NEONATES AGED 0-28 DAYS)

# INTERVIEWER'S MANUAL

NBC Team MCHIP, India  
February 2012

**DISCLAIMER:**

This manual was made possible by active support from the MCHIP'S New Born Care team. The opinions expressed are those of the authors and do not necessarily reflect the views of USAID, MCHIP, Government of India or the United States government.

February 2012

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## 1. INTRODUCTION

### DEMOGRAPHIC SURVEILLANCE

Demographic surveillance is designed to collect accurate demographic data. The initial step is to conduct a baseline census for the areas defined under a system of survey. During the census, information is collected on age, sex, marital status, and educational attainment for people living within the geographically defined area. Information is also collected about family structures and other socioeconomic characteristics. Typically, interviewers who live within the community collect the census data and the data are updated annually.

The data collected in such censuses are used to calculate many indicators. The census data provide accurate population denominators for calculating rates (e.g., mortality rates). The census data also provide a sampling frame for supplementary surveys that are nested within the system.

### MORTALITY SURVEILLANCE WITH VERBAL AUTOPSY

Mortality surveillance is designed to produce accurate community-based information on the levels and causes of death. Mortality surveillance involves continuously and actively identifying all deaths that take place in sample areas soon after they happen. Verbal autopsy interviewers visit households where deaths have occurred and interview relatives or caregivers using the VA forms. Once completed, these forms are used to determine probable causes of death.

The data collected by the mortality surveillance techniques are used to calculate many indicators. Among the most important are mortality by age, sex, and specific causes of death. This information can be used at many levels of the health system for planning, reporting, monitoring, evaluating, and priority setting.

. Complete coverage and participation by all communities and the individuals residing in sample areas is extremely important.

### WHAT IS VERBAL AUTOPSY?

Verbal autopsy, or VA, is a questionnaire administered to caregivers or family members of deceased persons to elicit signs and symptoms and their durations, and other pertinent information about the decedent in the period before death. VA Survey uses international standards for verbal autopsy forms, death certification and ICD coding procedures developed in collaboration with WHO, the Health Metrics Network, and other stakeholders. Separate verbal autopsy forms are used for the following age groups:

- perinatal and neonatal mortality 0-28 days questions
- post-neonatal child mortality 29 days to 14 years
- and adult mortality 15 years and above questions

All forms used to conduct these interviews include an open narrative section and a structured symptom duration checklist. There are also questions about the health and status of mothers (in the

case of perinatal, neonatal, and child deaths), and questions that specifically relate to all women (14 years of age or older). Additional information is collected about previously diagnosed conditions, medications used, health services used, place of death, and behavioral and environmental risk factors. After the administration of the VA interview, a panel of physicians reviews the forms and assigns a probable cause of death using a method that conforms to international convention.

The purpose of VA is to describe the cause structure of mortality at the community or population level where no better alternative sources exist. VA is not intended to diagnose cause of death at the individual level. While VA has some serious limitations, the shortcomings of the tool are known and quantifiable. These deficiencies, however, should not prevent countries requiring information on causes of death from benefiting from the use of VA when no practical alternative for obtaining these data exist.

This verbal autopsy resource kit has been completely harmonized with WHO recommended tools and procedures. It is understood that there will be a need to carry out a small degree of local adaptation to these materials in each country setting in which they are applied.

#### HOW DIFFERENT IS THIS VERBAL AUTOPSY FROM THE ONES CONDUCTED ELSEWHERE?

The usual verbal autopsies are conducted as part of a data gathering system which collects a wide range of health data in addition to the verbal autopsies. The data is collected from a designated sample area within a sample frame. The usual method is to adopt a sampling technique and select households and go for data collection.

But in the verbal autopsy that we are conducting (NeVAS), data will be collected from all households which have reported the neonatal deaths. So data collection may be confined to a certain geographical area, but not to any sampled areas. The purpose of our verbal autopsy is to reach each and every neonatal death within a specified geographical area. The tracking of the neonatal deaths can be done from the MCH register that is usually available with the ANMs, or the register maintained by the AWWs for Village Health & Nutritional Days. Tracking can also be done directly by the ASHAs who go to the households for Home Based Newborn Care activities [3,7,14,21,28,42 days for institutional deliveries and 0,3,7,14,21,28,42 days for home deliveries].

## **2. ABOUT THIS MANUAL**

This manual has been developed to gather data of neonatal deaths (0-28 days) using the standard schedule. The schedule has been adapted to meet the requirements of working in the state of Jharkhand, India. But it can also be used elsewhere in India. The changes made to the standard WHO schedule are compatible with the local factors prevailing in India which affect the health status of its people. This manual is a data collector's guide and shows the way for extracting the maximum amount of information pertaining to deaths of neonates. This manual is a word to word guide for data collection of neonatal deaths which is a very difficult job to do, as death of any individual is a very serious and sensitive issue. And the death of a neonate is an extremely sensitive issue with high emotional overtures. Nevertheless this manual guides the data collectors through this issue with the use of structured questions. The questions framed are simple and direct. This manual is so designed so as to train people with limited or no knowledge of medical science to be able to extract the maximum information from the respondents, which takes care of avoiding knowledge bias to distort the information being gathered.

### 3.CONDUCTING AN INTERVIEW

*Successful interviewing is an art and should not be treated as a mechanical process. Each interview is a new source of information, so make it interesting and pleasant. The art of interviewing develops with practice but there are certain basic principles that are followed by every successful interviewer. In this section you will find a number of general guidelines on how to build rapport with a respondent and conduct a successful interview.*

#### A. BUILDING RAPPORT WITH THE RESPONDENT

The supervisor will assign an interviewer to make the first contact with each of the households selected for the verbal autopsy. As an interviewer, your first responsibility is to establish a good rapport with a respondent. At the beginning of an interview, you and the respondent are strangers to each other. The respondent's first impression of you will influence their willingness to cooperate with the survey. Be sure that your manner is friendly as you introduce yourself. Before you start to work in an area, your supervisor will have informed the local leaders/ANM/ASHA, who will in turn inform selected households in the area that you will be coming to interview them.

##### 1. Make a good first impression.

When you arrive at the household, do your best to make the respondent feel at ease. With a few well-chosen words, you can put the respondent in the right frame of mind for the interview. Open the interview with a smile and greeting such as “Namaste/ Aadaab” and then proceed with your introduction.

##### 2. Obtain respondent(s) consent to be interviewed.

You must obtain a respondent's informed consent for participation in the survey before you begin an interview. A special statement is included at the beginning of the VA Schedule. These statements explain the purpose of the survey. They also assure a respondent that participation in the survey is completely voluntary and that it is their right to refuse to answer any questions or stop the interview at any point. Be sure to read the informed consent statement exactly as it is written before asking a respondent to participate in the individual interview.

##### 3. Always have a positive approach.

Never adopt an apologetic manner, and do not use sentences such as “Are you too busy?” Such questions invite refusal before you start. Rather, tell the respondent, “I would like to ask you a few questions” or “I would like to talk with you for a few moments.”

##### 4. Emphasize confidentiality of responses when necessary.

If the respondent is hesitant about responding to the interview or asks what the data will be used for, explain that the information you collect will remain confidential, no individual names will be used for any purpose, and all information will be grouped together to write a report.

Also, you should never mention other interviews or show completed questionnaires to the supervisor or field editor in front of a respondent or any other person.

**5. Answer any questions from the respondent frankly.**

Before agreeing to be interviewed, the respondent may ask you some questions about the survey or how he or she was selected to be interviewed. Be direct and pleasant when you answer.

The respondent may also be concerned about the length of the interview. If they ask, tell respondents that individual interview will take about 30-45 minutes. Indicate your willingness to return at another time if it is inconvenient for the respondent to answer questions then.

Respondents may ask questions or want to talk further about the topics you bring up during the interview. It is important not to interrupt the flow of the interview so tell them that you will be happy to answer their questions or to talk further after the interview.

**6. Interview the respondent alone.**

For the questionnaire, the presence of a third person during an interview can prevent you from getting frank, honest answers from a respondent. It is, therefore, very important that the individual interview be conducted privately and that all questions be answered by the respondent.

If other people are present, explain to the respondent that some of the questions are private and ask to interview the person in the best place for talking alone. Sometimes asking for privacy will make others more curious, so they will want to listen; you will have to be creative. Establishing privacy from the beginning will allow the respondent to be more attentive to your questions.

If it is impossible to get privacy, you may have to carry out the interview with the other people present. However, in such circumstances, it is important that you remember that:

You must omit certain questions which you are instructed in the questionnaire to ask only if you have total privacy

Extra effort should be made to gain privacy if the other person is of the opposite sex, particularly the husband.

In all cases where other individuals are present, try to separate yourself and the respondent from the others as much as possible.

**B. TIPS FOR CONDUCTING THE INTERVIEW**

**1. Be neutral throughout the interview.**

Most people are polite and will tend to give answers that they think you want to hear. It is therefore very important that you remain absolutely neutral as you ask the questions. Never, either by the expression on your face or by the tone of your voice, allow the respondent to

think that she has given the “right” or “wrong” answer to the question. Never appear to approve or disapprove of any of the respondent’s replies.

The questions are all carefully worded to be neutral. They do not suggest that one answer is more likely or preferable to another answer. If you fail to read the complete question, you may destroy that neutrality. Consider, for example, the following question: “Is your husband living with you now or is he staying elsewhere? It is a neutral question. However, if you only ask the first part—“Is your husband living with you now?”—you are more likely to get a “YES” answer. This is what we call a “leading question.” That is why it is important to read the whole question as it is written.

If the respondent gives an unclear answer, try to probe in a neutral way, asking questions such as the following:

“Can you explain a little more?”

“I did not quite hear you; could you please tell me again?”

“There is no hurry. Take a moment to think about it.”

## 2. **Never suggest answers to the respondent.**

If a respondent’s answer is not relevant to a question, do not prompt her by saying something like “I suppose you mean that. . . Is that right?” In many cases, she will agree with your interpretation of her answer, even when that is not what she meant. Rather, you should probe in such a manner that the respondent herself comes up with the relevant answer. **You should never read out the list of coded answers to the respondent, even if he/she has trouble answering.**

## 3. **Do not change the wording or sequence of questions.**

The wording of the questions and their sequence in the questionnaire must be maintained. If the respondent has not understood the question, you should repeat the question slowly and clearly. If there is still a problem, you may reword the question, being careful not to alter the meaning of the original question. Provide only the minimum information required to get an appropriate response.

## 4. **Be tactful to hesitant respondents.**

There will be situations where the respondents say, “I don’t know,” give an irrelevant answer, act very bored or uninterested, or contradict something they have already said. In these cases, you must try to re-interest them in the conversation. For example, if you sense that they are shy or afraid, try to remove their shyness or fear before asking the next question. Spend a few moments talking about things unrelated to the interview (for example, their town or village, the weather, their daily activities, etc.).

If the respondent is giving irrelevant answers, do not stop the person abruptly or rudely, but listen to what he or she has to say. Then try to guide the person gently back to the original question. A good atmosphere must be maintained throughout the interview. The best atmosphere for interviews is one in which the respondents see the interviewer as a friendly, sympathetic, and responsive person who is not intimidating and to whom they can say anything without feeling shy or embarrassed. As indicated earlier, a major problem in gaining

the respondent's confidence may be one of privacy. This problem can be prevented if you are able to obtain a private area in which to conduct the interview.

If the respondent is reluctant or unwilling to answer a question, explain once again that the same question is being asked of women or men all over India and that the answers will all be merged together. If the respondent is still reluctant, simply write REFUSED next to the question and proceed as if nothing had happened. Remember, the respondent cannot be forced to give an answer.

**5. Do not form expectations.**

You must not form expectations of the ability and knowledge of the respondent. For example, do not assume women and men from rural areas or those who are less educated or illiterate do not know about maternity care or various other health issues.

**6. Do not hurry the interview.**

Ask the questions slowly to ensure the respondent understands what is being asked. After you have asked a question, pause and give the respondent time to think. If the respondent feels hurried or is not allowed to formulate his or her own opinion, he or she may respond with "I don't know" or give an inaccurate answer. If you feel the respondent is answering without thinking just to speed up the interview, say to the respondent, "There is no hurry. Your opinion is very important, so consider your answers carefully."

## **C. LANGUAGE OF THE INTERVIEW**

The questionnaires for the Verbal Autopsy have been translated into Hindi in which interviewing will be carried out. One of the first things you will do when you approach a household to do an interview is to find out which language or languages are spoken there.

However, in some cases, it will not be possible for you to find a language which both you and the respondent speak. In this case, try to find out if the respondent speaks a language which can be spoken and understood by some other person like the Sahiyya, AWW, ANM who can act as an interpreter. If at all possible, try to avoid using interpreters since this not only lowers the quality of the interview. Using a translator also makes an interview take longer to complete. However, if the respondent does not speak a language which any of your team members speak, you will need to rely on a third person to translate for you. Since the interview involves some sensitive topics, it is best if you can find another woman to act as an interpreter if you are conducting the woman's interview. **You should not use the respondent's husband as an interpreter under any circumstances. Children are also unsuitable interpreters.**

It is very important not to change the meaning of the question when you rephrase it or interpret it into another language.

## **4. IDENTIFYING A VA RESPONDENT**

A “respondent” is the principal person who will provide information about the deceased. You should try to identify the primary care giver (usually a family member) who was with the deceased in the period leading to death. This individual is most likely to know about the deceased person’s signs and symptoms during the period just before death.

People often assume that the head of the household (the person who makes daily decisions for the household) or this person’s spouse is the person who should be interviewed. This is not necessarily so. For example, a male household head may not know the signs and symptoms of an illness suffered by a woman during the pregnancy and/or during delivery. You should try to determine who was with the deceased and caring for the neonate in the period leading to death.

Generally, children should not be interviewed. It is not uncommon for a VA respondent to require assistance from other household or family member in answering the VA questions. This is entirely acceptable.

### **WHAT TO DO IF THERE IS NO SUITABLE RESPONDENT?**

If an acceptable respondent (as defined previously) cannot be found, ask when you might be able to find a suitable respondent at home. Make an appointment to return at a later time or day. Make note of this return date in the cover page of the VA form.

You are required to make at least two callback attempts after the initial visit at every household where you failed to get an appropriate respondent. If after these three attempts you still have not been able to locate an acceptable respondent at the house, you should report this case to your supervisor.

## 5. HOW TO PROMOTE COMMUNITY PARTICIPATION

The Neonatal Verbal Autopsy System (NeVAS) is a community-based system and it is essential to have the support and participation of the local community. Without their co-operation the system cannot work. This section provides some guidance on how to encourage members of the local community to participate in the system.

Your relationship with the community will depend largely on how well you establish a relationship with the local key informants and with members of each household that you visit. In order to have the cooperation of the household and obtain complete and accurate data, you must first gain the trust and confidence of the people who live there. You can do this by making a good impression by conducting yourself in a professional, sensitive, and friendly manner. Your appearance is also important. You should dress appropriately for working with members of the community.

### GAINING THE TRUST AND COOPERATION OF THE HOUSEHOLD

If you are knowledgeable about your responsibilities and the VA in general, and can answer questions that household respondents may ask, you will be able to gain their trust and confidence. In order to be able to answer these questions, you must understand, for example, why verbal autopsy interviews are conducted in the community, and how the information collected will benefit the state or the country.

It will also help to reassure participants that their responses will be held in strictest confidence and that no information that would reveal anything about their specific household or the identity of the deceased will ever be released by the government. Before leaving, do not forget to offer your respects to the respondents.

### RESPONDING TO CONCERNS ABOUT THE NEONATAL VERBAL AUTOPSY SYSTEM

Prior to the implementation of the system, the Department of Health may conduct publicity activities in the selected cluster to explain the purpose and importance of the Neonatal Verbal Autopsy System.

Most people will be cooperative. However, some people may be suspicious about why the government is collecting information about the deaths of their relatives. Others may be skeptical about how the information they provide could be important to their country, communities, or families.

When necessary, stress the confidentiality of responses. If a respondent hesitates to cooperate because of confidentiality concerns, you should provide appropriate assurances and a comprehensive explanation. For example, explain that no individual names will be used for any purpose and that all information will be written in a report for regional and national use.

Always have a positive approach. Do not use such phrases as: “Are you too busy?” or “Would you spare 15 to 30 minutes?” Such questions invite refusal before you start. Instead, begin by restating sympathy or condolences for the death and say to the respondent: “I would like to ask you a few questions” or “I would like to talk with you for a few minutes.” However, if a respondent insists that

she or he does not wish to talk to you, do not argue. Instead, if there is no one else available in that household who can talk to you, ask the reluctant person for another day or time when she or he would be available to participate in the interview.

Answer any questions from the respondent frankly and to the best of your knowledge. Before agreeing to be interviewed, the respondent may ask questions about the survey and why the respondent should participate. Be direct and clear when you respond.

Here are a few sample objections that you might hear and potential responses.

**Question: Why is the government conducting this system of death reporting?**

Answer: The government is conducting this system in select areas of the country in order to monitor how many deaths are taking place, and what is causing these deaths in the community. This is necessary because such information is not well captured by any other source. This type of detailed information will help the government to plan better for the needs of the people in terms of healthcare services and other developmental programs, and help identify problems that policy-makers and program coordinators can work to resolve.

You and your family will benefit from the improved health care services that result from the information collected. For example, outbreaks of diseases and premature deaths due to preventable diseases can be detected and appropriate intervention measures will be implemented to prevent further loss of lives. Information from the survey should allow local and national authorities to take steps to improve the health and well-being of you and your family members.

**Question: Who will benefit from this program? Will I receive any monetary benefit?**

Answer: The data that are collected from households will be used by the government and other organizations for planning, policy-making, development, social services, and healthcare services in the community. The NeVAS should therefore help improve those services. The government is not able to pay you directly for your participation, but in time the community should receive better public and healthcare services as a result of improved planning.

**Question: Is this really a good use of government money? Wouldn't it be better to use the money to buy drugs for the local dispensary?**

Answer: Certainly more funds are needed for ALL aspects of the health system. The information we are asking you to provide, however, will help save lives and money. Health planners will have a much more accurate picture of the health problems facing your community, and so will know which drugs to buy and what new services might be necessary. The death-reporting system is being conducted with the most cost-effective measures possible. Without this information, it is difficult for the government to plan and adopt appropriate policies that will benefit the citizens of this country. This should lead to an improvement in the health care delivered by the health system.

**Question: Why do you need to ask so many questions and take up so much of my time?**

Answer: Every effort has been made to minimize the duration of the interview and to reduce inconvenience. In the verbal autopsy interview, we need to ask questions that can be used by a doctor to make a decision about the most likely cause of your family member's death. Sometimes the cause

of death may seem very obvious, but it is often necessary to ask many questions to give the doctor as much information as possible. We need to ask these questions to make sure we don't miss anything.

**Question: How do I know that the information that I give will be kept confidential?**

Answer: As a member of the NeVAS team, I have signed a pledge not to share any information that is collected, and all employees of the central office are required to store all information that is provided to them in strict confidence. Your information will be added to the information from all the other households and chosen areas.

## POTENTIALLY PROBLEMATIC SITUATIONS

During the course of your field work, it is very likely that you may encounter some situations (problems related to the respondent or the household) where you are not sure what to do. Below are some examples of such situations, and possible solutions to address the problem.

### A RESPONDENT SAYS THAT A VA HAS ALREADY BEEN DONE

If a respondent says another interviewer already visited his/ her household to conduct a verbal autopsy (VA) interview, make sure that you have not gone outside your assigned area. If you have not, do the following:

If there is more than one verbal autopsy interviewer in your area, check with the other interviewers to make sure that no one has already conducted an interview. Even if there is more than one verbal autopsy interviewer in an area, each will be assigned a specific sub-area to avoid such instances of double counting.

Explain to the respondent that the NEVAS does not have a form for a death that has occurred in the household, so you must conduct an interview.

### LANGUAGE PROBLEMS

If the person speaks another language and you do not speak that language, try to find someone else in the household to answer or interpret. If another interviewer on your team does speak the local language, it may be best for him/her to perform the interview. Notify your supervisor if you are unable to solve the problem within the household.

### VISITOR PRESENT IN A HOUSEHOLD DELIVERS A NEWBORN WHO HAPPENS TO DIE

This issue, when a visitor to a household delivers and the neonate dies, also relates to the definition of a resident and which deaths are eligible for a verbal autopsy. If you are unsure how a "resident" is defined, please review the Glossary of Terms. (The usual verbal autopsies are intended to count persons who are usual, permanent residents of households in the selected sample areas or recent immigrants who have the intention to stay. If you found out that a reported death was someone who was visiting his or her friends or relatives in the sample area but did not have the intent to live there permanently, then the deceased should not be included in the VA system.)

**BUT IN NeVAS WE ARE COLLECTING DATA OF ALL NEONATAL DEATHS, WHETHER THE DEATH OCCURRED IN AN USUAL RESIDENT OR A GUEST. ANY DEATH REPORTED BY THE SYSTEM HAS TO BE AUTOPSIED.**

## **RESPONDENT IS UNABLE TO GIVE COMPLETE INFORMATION ABOUT A HOUSEHOLD MEMBER**

If the respondent cannot give you complete information about the deceased:

- Complete as much accurate information as possible for that person on your current visit.
- Find out when someone more knowledgeable about that person will be home.
- Return to the residence for a callback visit at a time that will be most convenient for everyone involved.
- If you are unable to get complete information on the deceased child after the callback visit(s) to the household, tell your supervisor.

## **IF ALL POTENTIAL RESPONDENTS REFUSE TO BE INTERVIEWED**

If all potential respondents refuse to be interviewed regarding the death of a neonate that has been reported to you, talk to them about the importance of the information collected and the objectives of the NeVAS. Stress the confidentiality of VA information.

If the potential respondents still do not cooperate, try to get as many answers as possible about the death from other members or from neighbors. Stress the confidentiality of information to each person who answers questions.

If you cannot find an appropriate respondent after 3 visits to the household, you will note this on the VA form (this process is described later in this manual) and report this case to your supervisor as soon as possible. Your supervisor will return to the household to verify that no appropriate respondent is available.

## 6. HOW TO WORK WITH THE KEY INFORMANTS?

The key informants (KIs) are essential to the running Verbal Autopsy system. The Key Informants in our system are the **ASHAs, ANMs, AWWs, MPWs, school teachers, priests** etc. You will work closely with the KI. You will meet with each KI (preferably ASHAs, ANMs) at least once a month to receive new reports of deaths that have taken place since the last visit and to plan appointments to visit bereaved households.

Before you visit a bereaved household, the KI will have paid a visit to the household in order to confirm that a death has occurred in the household and to express condolences. The KI will have collected basic socio-demographic information about the person who died (including the identification information of the deceased's household), and will have left a medical information envelope for the family to save all medical documentation pertaining to the illness of the deceased. The KI also will have arranged an appointment with the family of the deceased for a VA interview, and will take you to the household of the deceased on the date of your appointment.

### REVIEWING A REPORTED DEATH AND PLANNING A VA INTERVIEW WITH THE KEY INFORMANT

You should meet with all KIs on a regular basis, following a fixed schedule (at least once a month). At each meeting, the KI will give you a report of deaths that have occurred in the area. At this meeting, you will fill out your VA reporting log book. With the key informant's help, you will prepare a schedule for visiting the bereaved families according to the appointment times arranged with families. **The KI will go with you to these appointments and wait outside while you conduct the VA interview.**

The key informant will also inform you about any households that have refused to be interviewed so that you are aware of the situation and can take appropriate action, such as visiting the household with the KI to encourage participation.

### ENSURING THAT THE KEY INFORMANT IS AWARE OF AND HAD REPORTED ALL DEATHS

It is possible that the KI for an area might miss some deaths that have occurred in his or her area. Reasons for missing deaths can include not recording the deaths in their respective registers, losing the support of the local community (so that community members are unwilling to report deaths to the KI), or the desire of a family to hide the fact that a death has occurred.

Stillbirths and early neonatal deaths in the community may not be regularly reported to the KI — especially if local customs would not necessitate a funeral. During visits to each KI's area of work, the VA interviewer should meet with other members of the community, especially local community leaders, to determine how the community perceives the local KI, and the manner in which the KI conducts his or her work. If there is rapport or reporting problems, these need to be discussed with the community and need to be resolved.

Care should be taken to ensure all stillbirths and neonatal deaths are reported and followed up.

## KEY POINTS

Key points to remember include the following:

- Visit each KI at least once a month.
- Work closely with the KIs.
- Arrange visits with bereaved families to conduct VA interviews and complete the VA forms. Help ensure that all deaths of residents are reported by the key informants.
- Be prepared before you go to the field (e.g. make sure you have sufficient forms and materials).

## 7. VERBAL AUTOPSY (VA) FORMS

The verbal autopsy (VA) forms have been designed to collect information about the deceased from caregivers and family members. The information included on the form will be used by medical professionals to assign the probable cause of death.

Ideally, an interview should be conducted after a culturally appropriate mourning period has elapsed and within eight weeks of a death. Key aspects related to successful completion of VA interviews include the following:

Be polite during the interview.

Use the appropriate VA form when filling in the information about the deceased (the correct type of form to use during interview is determined by the age at death of the deceased, as explained in the next chapter of this manual).

Ask all questions on the VA form (aside from the appropriate skips) regardless of your opinion as to their relevance.

### TYPES OF VA FORMS

VA forms are used to collect information on the history of the final episode of illness, as well as symptoms and signs preceding death. There are three different forms, each specific to an age group. The forms are found in the Forms section of this manual. They are:

International Verbal Autopsy Questionnaire 1 — This form is for perinatal and neonatal deaths (deaths of children aged 0-28 days).

International Verbal Autopsy Questionnaire 2 — Form 2 is for postneonatal and child deaths to under 15 years (deaths of children aged 29 days to 14 years).

International Verbal Autopsy Questionnaire 3 — This form is for adult deaths (deaths of adults aged 15 years and above).

**However we will be conducting only the VA of neonates aged 0-28 days**

### GENERAL STRUCTURE OF VA FORMS

The layout and question flow of all three forms is guided by two basic principles. First, all three forms follow the same general structure. Second, “skip patterns” (when an answer to a specific question results in bypassing or “skipping” other irrelevant questions) were employed to facilitate use by both medically and non-medically trained interviewers with differing levels of literacy.

The VA forms are divided into several sections. Some of the sections are common to all three types of VA forms and have the same general structure, while other sections are specific to certain forms. The general structure of all three forms includes:

information about the date and location of the verbal autopsy interview (such as age, sex, and place of death);

specific information about the field site, household, and information related to residency;

an informed consent statement, which the interviewer must sign to indicate that the respondent has agreed to be interviewed;

information about the primary respondent;

socio-demographic information about the deceased;

short narrative history of events leading to death, and the cause of death according to the respondent;

history of injuries/accidents; symptom duration checklist;

health services used by the deceased during illness in the period before death, including whether a health worker informed the respondent of the cause of death;  
information that can be abstracted from a death certificate (if available); and  
Summary of any medical evidence available at the household, In addition to general socio-demographic questions, each form contains sections and questions that are specific to the circumstances of the death.

Each VA form contains a series of questions involving symptoms and their duration. These questions are different for each form and are the essence of the VA tool. Because they differ from one form to the next, these are explained in detail later in this manual under the relevant chapters for each form. In this manual, the upper-case letter 'Q' indicates a question found in the symptom duration section of the forms.

For example, a section on the condition of a deceased child's mother during and after pregnancy and events during birth is included only on the neonatal form (Form 1). A checklist of symptoms and their duration specific to women aged 12 years and older are included in the adult VA form (Form 3). Sections on simple risk factors are also found in the child form (Form 2: occupation, education and marital status), and in the adult form (Form 3: education, marital status, occupation, and alcohol/tobacco use).

Questions contained in the symptom duration checklist have been selected by a World Health Organization (WHO) expert VA group. In most cases, these questions provide sufficient and balanced information to arrive at the most likely cause of death, and exclude other possible diagnoses. Therefore, it is strongly recommended that no adaptations be made to the symptom duration checklist on the VA forms. However, the information collected in the socio-demographic and health-service use sections of the form may need to be adapted, depending on the needs of the implementing organizations. A detailed discussion of the questions on each form is presented in Chapters 9-11.

## 8. HOW TO CONDUCT VERBAL AUTOPSY INTERVIEWS

Verbal autopsy interviews will be conducted by either a male or female interviewer. If the main respondent to the death is a man, a male interviewer will conduct the VA and if the main respondent to the VA is a woman, a female interviewer will carry out the interview. But exception to this rule is acceptable depending on the acceptance of the society to the interviewer and circumstances where a particular interviewer is not available. The art of interviewing develops with practice, but there are certain basic principles to follow in order to conduct a successful interview. It is important to follow the guidelines and procedures explained during your training and in this manual.

### GENERAL INSTRUCTIONS FOR COMPLETING VERBAL AUTOPSY FORMS

When you visit households of bereaved families to conduct interviews, it is important to adhere to the following:

Greet the members of the household or family. Introduce yourself respectfully and convey your condolences about the death that occurred in the household. Then ask to speak with the reference person (the person making daily decisions for the household), that person's spouse, or another appropriate adult relative who can give you permission to conduct the VA, and who can either answer questions relating to the deceased or introduce you to the primary care-giver of the deceased. When it is not possible to interview a reliable respondent, arrange to visit the household on another day when an appropriate respondent will be available.

Once you have begun interviewing a respondent, try to build rapport with her or him before you discuss the case of the deceased. For example, if culturally appropriate, you may ask the respondent what work she or he does, or inquire about the respondent's family. Then explain the purpose of your visit and try to answer any questions that the respondent may have about the VA system. For example, this is how you might introduce yourself to a household where you are conducting a VA interview: My name is [mention your name]. I am a nurse in our district's health center, and a verbal autopsy interviewer with the VA system. I have been informed by [mention the key informant's name] that a death has occurred in your household. I am very sorry to hear that a member of your household has passed away. Please accept my sympathies. For the purpose of improving health care provision in our district and country as a whole, we are collecting information on all recent deaths in this area. I would like to talk to you and ask you some questions about the history of events and any symptoms that [mention the deceased's name] had during illness before death.

Ask questions following the order in which they appear in the verbal autopsy form. If any question is not clear to the respondent, repeat it. Give time to the respondent to answer the questions. Remember that death is a sensitive issue and therefore you must pay attention to the respondent's emotions.

If the text on the form is written in capital letters, it should be considered an instruction to the interviewer, but should not be read aloud to the respondent. On the other hand, if the text on the VA form is written in lower case, it should be read aloud to the respondent.

You must fill in the VA form during the interview. VA forms should never be completed before or after an interview has taken place, and should not be completed by anyone other than a trained interviewer. With few exceptions, VA interviews should be completed in a single visit with the respondent.

Mistakes in filling in the VA forms do occur in the field. Whenever you make a mistake, do not erase the information you have entered. Instead, cross out the number or text that needs correction, but be certain that the original entry can still be read. Write the correct number or text above the crossed-out number or text. Never write over the number or text for correcting. Corrections can be made by the designated verbal autopsy interviewer only.

Note that respondents may tend to give answers that they think will please the interviewer. It is therefore very important that you remain absolutely neutral towards the subject matter of interview. Do not show any surprise, approval or disapproval of the respondent's answer by the tone of your voice or facial expression.

## COVER PAGE (SECTION 1) OF ALL INTERNATIONAL VERBAL AUTOPSY FORMS

### A. IDENTIFICATION OF HOUSEHOLD ON THE COVER PAGE

Before you begin the VA interview, fill in the identification information in the box at the top of the cover page.

The following are key points in completing the identification section:

Write the name of the village or panchayat in which you are working.

For further information write the name of the tola if present and the name of the Anganwadi center.

It has been observed that the pregnant lady often visits her mother's home (Maayka) before or after delivery, and it is important to register the address of her mother's home. So both the address of the husband's household and that of the maternal household has to be filled in cases where the lady who has delivered the baby (still born or dead in our case) is found in the maternal home.

The name of the key informant is to be written. The key informant can be anyone who has given information about the neonatal death or the still born death. This person may be a Doctor, Nurse, ANMs, Sahiyyas, AWWs, School teacher, village priest, or any other person and this position has to be written in the adjacent portion labeled position.

Then comes the name of the household head that is the head of the family (Mukhiya).

The respondent is the person who answers to the questions being asked from the schedule. The respondent is usually the person who was present with the pregnant lady during the delivery and who has knowledge of the activities that occurred during the delivery.

The name of the mother is then written. The respondent and the mother may be same in many cases.

**N. B: Please take the help of the persons who were present during the delivery and saw the newborn in case the respondent is the mother, as they might add to the information that the mother might have missed.**

As you begin to interview the primary respondent to the VAQ (who may not necessarily be the head of the household), you should fill in the area labeled "Interviewer Visits." Here, you will record your own name, keep a record of your visits, and record the final date and result code.

Before you begin the interview, you will read the Consent Statement word for word to explain the purpose of the interview

### SECTION 1 INTERVIEWER VISITS

After each visit to the household, you must record the date and result of the visit in Column 1. Columns 2 and 3 are to be used to record the results of any callbacks that you make if you cannot identify an appropriate respondent on your first visit. An interviewer must make at least three

different visits to try to obtain an interview with a household. Record your full name and the date in the space provided for each visit you make to the household of the deceased.

### **Result\***

The result of each visit to the household of the deceased should be recorded in the appropriate box. You will make every attempt to contact and interview the household, but sometimes it may happen that you make three visits to the household (at different times) and are unable to conduct the interview.

The following are descriptions of the various result codes:

- Code 1 (Completed). Enter this code when you have completed the verbal autopsy interview.
- Code 2 (Not at home). This code is to be used in cases in which the dwelling is occupied, but no one is at home. Try to find out from a neighbor when a competent adult will be present and include this information in the visit record. If possible, write the date/time you plan to return.
- Code 3 (Postponed). If you contact a household, but for some reason, it is not convenient for them to be interviewed, then schedule a callback interview and enter code '3' as a result code for that visit. If possible, write the date/time you plan to return.
- Code 4 (Refused). The impression you make during your initial contacts with members of a household is very important. Be careful to introduce yourself and explain the purpose of the survey. Stress that the interview takes only a short amount of time and that the information will be confidential. If the individual with whom you first talk is unwilling to cooperate, ask to speak with another member of the household, such as the household head. Suggest that you can return at another time if it would be more convenient. If the individual still refuses to cooperate, enter code '4' and report the problem to your supervisor.
- Code 5 (Partly completed). If a respondent begins an interview, but needs to stop the interview before it can be completed, enter code '5'. You should try to schedule a call back time to complete the interview — write this date/time in the space provided.
- Code 6 (No appropriate respondent found). This code should be used if the household is occupied but an appropriate respondent is not available at that time. You should try to schedule a callback time to complete the interview when an appropriate respondent will be available. Write this date/time in the space provided.
- Code 7 (Other). There may be times that you cannot interview a household and the above categories do not describe the reason. An example might be if the household has been destroyed, evacuated, or cannot be located. Specify the reason that '7' has been coded. You should try to identify someone else who can be interviewed — write the expected date/time in the space provided.

### **Final Visit**

After you have paid your last visit to the household, you will fill in the boxes under FINAL VISIT. The date on which you completed the VA interview is recorded in the DAY, MONTH, YEAR boxes. Record the result for the final visit in the RESULT box. Add up the number of visits you made for the household interview and enter the total in the box labeled TOTAL NUMBER OF VISITS.

The next boxes on the forms should be completed by your Supervisor, a Field Editor, an Office Editor, and data entry staff when they complete their review of the VA forms. Do not fill in these boxes.

## **Sample Informed Consent Statement**

Before continuing with the interview, the interviewer must read (verbatim) the informed consent statement

If the respondent agrees to be interviewed, circle '1' and the verbal autopsy interview can continue. If the respondent does not agree to be interviewed, circle '2' and end the interview.

Regardless of the respondent's answer, the interviewer needs to sign and date that the informed consent statement has been read to the respondent.

The following three chapters describe how to complete each VA form, question by question.

## 9. CHECKLIST QUESTIONS FOR VA FORM 1: DEATH OF A CHILD AGED 0-28 DAYS

The international verbal autopsy Form 1 should be used for all deaths (including stillbirths) occurring 0-28 days (where the day of birth counts as day “zero”). It is used to collect information on the history of illness, events, signs, and symptoms preceding death of a child in this age group. This chapter provides instructions for filling in Form 1.

### OVERVIEW

There are different types of sections on VA Form 1:

Sections 2-3 contain questions about the respondent and socio-demographic information about the deceased;

Section 4 is an open-ended section in which the respondent is asked to describe the sequence of events leading to death;

Section 5 contains questions that relate to the mother’s pregnancy history or before the child’s birth (for example: Q504. “Did the pregnancy end earlier than expected?”);

Section 6 contains questions that relate to events during delivery (for example: Q601. “Where was the child born?”);

Section 7 contains questions that relate to symptoms and their onset after birth (for example: Q709: “Was there any sign of paralysis?”);

Section 8 contains questions that relate to a potentially catastrophic event that happened before death (for example: Q801. “Did the baby suffer from any injury or accident that led to her/his death?”).

Section 9 contains questions that relate to symptoms and signs of illness, and their duration (for example: Q913. “Did the baby have a fever?”);

Section 10 contains questions about the mother’s health and contextual factors (for example: Q1005. “How is the mother’s health now?”);

Section 11 contains questions about health service utilization; and

Sections 12-13 ask the interviewer to abstract information from a death certificate or other health records (if available).

### HOW TO COMPLETE VA FORM 1

Some questions might seem to be a little embarrassing or might not seem to you to be directly related to the death. However, it is important to follow the instructions given to you during training and in this manual in order to make the verbal autopsy certification and coding process work properly.

#### **Important:**

You must ask every question as it appears in the verbal autopsy form without skipping a single question, unless specifically directed to do so in the form.

You must do this even if the cause of death seems obvious to you.

Some questions ask the number of days that a symptom or condition was present. If the respondent knows that the deceased had the symptom but does not know how soon after birth it appeared, circle the duration code for “DON’T KNOW.” (If left blank, it will be assumed that you did not ask that particular question and your form will be returned to you for correction.)

For deaths of a child 0-28 days: the number of days after birth since the appearance or onset of that particular sign/symptom should be recorded regardless of the presence of that sign/symptom at the

time of death, and irrespective of whether the sign/symptom appeared intermittently. For example, if an infant began to have fever 10 days after birth, but ceased having fever two days before death, the number of days after birth since onset of fever would be ten days. (Note that for children 29 days – 11 years and for adults, age 15 and above, “duration” is the approximate interval between onset of that particular symptom/sign and the cessation of that symptom/sign.)

If the deceased had a sign or symptom, but it appeared on the day of birth, write ‘1’ in the box for days.

For questions where it is necessary to circle a response, only one response should be circled (unless the form instructs you otherwise).

Certain questions ask for more detail about a sign/symptom than a simple yes/no or duration question. For these questions, the VAI should read the response categories located below the question (in lower case) to the respondent to be certain that the response is coded correctly.

Each of the VA forms has places where you can, under certain circumstances, skip questions. These are called “filter” questions. For example, Q504: “Did the pregnancy end earlier than expected?” is followed by one filter question, Q505: “How many weeks before the expected date of delivery?”

Note that, when a skip pattern is being applied, there is an arrow ‘→’ located to the right of the response code. If one of the codes to the left of the arrow or bracket is used, the next question that should be asked is identified in the ‘Skip’ column on the far right of the form. To continue with the previous example, if in Q504 the respondent states that the pregnancy did not end earlier than expected, the VAI should circle ‘2’, skip question 505, and ask question 506.

If there is no arrow located to the right of the appropriate response code, simply continue to the next question on the form.

Sometimes a respondent may not be able to remember all the details on the symptom duration checklist, especially if the mother of the child who died is not your respondent. Therefore, whenever necessary you should ask other family members who may have more detailed information regarding the symptoms and their durations or the treatments received. Collateral sources of information should be used to obtain as detailed and accurate information as possible on the illness prior to death, in order to assist in the assignment of cause of death. For example, if a child dies in the hours after birth, and the mother was too exhausted by labor to recall many details, ask other members of the household to assist her in providing more accurate responses.

## SECTION 2- BASIC INFORMATION ABOUT THE RESPONDENT

### **201: Record the time at start of interview**

Record the time using 24-hour format.

### **202: What is your relationship to the deceased?**

There are five options for this question. These options describe the relationship between the respondent and the deceased. In International Verbal Autopsy Form 1, the options for spouse and for child are not included because these are not logical choices for a deceased baby. You should ask the respondent, “What was your relationship to the deceased?” Circle the correct response among categories provided. For example, if the respondent is the mother of the deceased, then circle: ‘2’ for mother.

### **203: Did you live with the deceased in the period leading to his/her death?**

This yes-or-no question asks if the respondent lived at the same residence with the deceased during the events that led to death. You should ask the respondent: “Did you live with the deceased in the period leading to her/his death?” If the respondent lived with the deceased during his or her illness or before the death, the answer is ‘yes’, thus circle ‘1’. If the respondent did not live with the deceased, circle ‘2’ for no.

## SECTION 3- INFORMATION ON THE DECEASED AND DATE/PLACE OF DEATH

### **301: What was the name of the deceased?**

Fill in the complete name of the deceased in the space provided. Ask for the name of the deceased (if appropriate) and write it in the space provided in the VA form. It is important to make sure that you are given the names that the deceased used during medical treatment in case permission is sought to access the deceased’s medical records. If the deceased used any alias names, it is advisable to write them in parenthesis. If a stillbirth or infant had not been given a name, write ‘NO NAME’.

### **302: Was the deceased male or female?**

Sex should be recorded carefully, especially for deaths occurring in the first few days of life. Since newborns in some cultures are not named, there is no possibility of cross checking sex with a name for unnamed children. Record the sex of the deceased by circling the appropriate number (‘1’ for a male child, ‘2’ for a female child).

### **303: When was the deceased born?**

Ask the respondent for the complete date of birth. Fill in the day, month and year in the boxes provided. A child’s date of birth is usually written in a birth certificate, maternal-child health (MCH) card, and antenatal-care card (ANC), which you may ask to see for confirmation. If it was a stillbirth (when a fetus dies before birth), the date of birth is the same as the date of the miscarriage when filling in Form 1. However, in order to distinguish from abortions (where VA is not conducted), the NeVAS only includes stillbirths that occur after 28 weeks of pregnancy. If the respondent is unsure about the gestational age of the stillbirth, ask to see medical records or antenatal care cards (if available) to ascertain the gestational age. In some cases the exact date of birth may not be known and records might not be available to help. In these cases, only fill in what is actually known about the date of birth. It is unlikely that the month or year of birth will not be known for a child known to have died before reaching one month of age.

### **304: How old was the deceased when s/he died?**

In addition to the date of birth and date of death, from which age at death of the deceased can be calculated, this question is asked as a form of verification to the age of the deceased. Ask the age of the deceased at the time of death, and record the age (in days) in the boxes provided. If the age is unknown, and cannot be estimated, record ‘98.’ Interviewers should double check with the respondent if age at death mentioned is different from the difference between year of death and year of birth.

### **305: When did s/he die?**

Ask the respondent for the complete date of death. Fill in the day, month and year in the boxes provided. If the exact date of death is unknown, follow the instructions provided on the VA form. It is unlikely that the month or year of death will not be known for a child known to have died before reaching one month of age.

### **306: Where did s/he die?**

Ask the respondent where the deceased died, and circle the appropriate choice using one of the following categories: If the death occurred in a district hospital, circle '21'. If the death occurred in a private hospital or clinic, circle '31'. If the baby died at mother's home, circle '11'. If the death occurred at any other location, such as on a roadway during an accident, away from home, or during transit between home and a health facility, circle '96' for other, and write the name of the location. If the location of death was unknown, circle '98'. In some applications, it may be useful to record the name of the health facility at which death occurred.

## SECTION4- RESPONDENT'S ACCOUNT OF ILLNESS/EVENTS LEADING TO DEATH

The next section of the VA forms is an open-ended narrative of the events leading to, and causing, the death of the individual.

### **401: Could you tell me about the illness/events that led to her/his death?**

In the space provided, write a history of illness or events leading to the death as narrated by the respondent. This is a "story" about what led to the death and is not a medical history. This might be a sequence of symptoms of disease and the deceased person's health in general prior to death or might be the events that caused the death. Local terms of common illnesses should be written as stated.

### **402: Cause of death according to respondent**

Ask the respondent what he or she thinks caused the death. Write exactly what the respondent says, even if it is an entirely non-medical explanation or a term in vernacular (local) language; do not try to interpret comments. If the respondent states that nothing was noticed, and that the death was sudden, record that observation as stated. Do not probe further at this stage. The respondent may also state that death was caused by a supernatural or evil spirit. For example, if the respondent says that the deceased was bewitched, even if you think it would be better to add or modify this reason, write: 'Bewitched' or 'Witchcraft'. If the respondent mentions more than one cause of death, write any and all additional causes in the space provided, exactly as the respondent tells you.

## SECTION 5- PREGNANCY HISTORY

In order to diagnose cause of death of a neonate, it is often important to know details about the mother's pregnancy history. Questions 501-509 ask about the mother's pregnancy history.

**501: When you reach this section of the form, you must inform the respondent that you are going to ask her or he questions concerning the mother and the symptoms that were present before death. For consistency, a statement paragraph has been added for you to read to the respondent:**

I would like to ask you some questions concerning the mother and symptoms that the deceased had/showed at birth and shortly after. Some of these questions may not appear to be directly related to the baby's death. Please bear with me and answer all the questions. They will help us to get a clear picture of all possible symptoms that the deceased had.

### **502: How many births, including stillbirths, did the mother have before this baby?**

Ask "How many births (including stillbirths) did the mother have before this baby?" Write the total number of births (both live births and still births) in the response box.

**503: How many months was the pregnancy when the baby was born?**

Ask “How many months was the pregnancy when the baby was born?” Write the number of months in the response box.

**504: Did the pregnancy end earlier than expected?**

Ask if the pregnancy ended earlier than expected. Circle the appropriate response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**505: How many weeks before the expected date of delivery?**

This is a filter question, to be asked only if the answer to the previous question was ‘yes’. Ask the respondent the number of weeks the child was born before the expected date of delivery, and write the number of weeks in the response box. Note that Questions 503 and 505 are similar, but are asked in a different way depending on mother’s understanding of the gestational age of the baby born.

**506: During the pregnancy did the mother suffer from any of the following known illnesses ...**

Ask the respondent if the mother of the child had any of the following illnesses during the pregnancy (read all illnesses to the respondent): high blood pressure, heart disease, diabetes, epilepsy or convulsion, or another specific medically-diagnosed illness like tuberculosis, hepatitis etc. You must circle a response for each illness on the list, and write in any other specific illness that is mentioned in the space provided under “other [specify].”

**507: During the last 3 months of pregnancy did the mother suffer from any of the following illnesses...**

Ask the respondent, “During the last 3 months of pregnancy, did the mother suffer from any of the following illnesses?” Read the list of illnesses to the respondent: “vaginal bleeding; smelly vaginal discharge; puffy face; headache; blurred vision; convulsion; febrile illness; severe abdominal pain that was not labor pain; pallor and shortness of breath (both present); and, other [specify].” You must circle a response for each illness on the list, and write in any other specific illness that is mentioned in the space provided under “other [specify].”

**508: Was the child a single or multiple birth?**

A “singleton” is when one child is born, and “twins” are two children born at the same time, even if one of the babies is born dead. “Triplets” are three children born at the same time, etc. Ask whether the child was a single or multiple birth, and circle the appropriate response. If ‘singleton’ or ‘don’t know’, follow the skip pattern.

**509: What was the birth order of the child that died?**

This is a filter question, to be asked only if the answer to the previous question was that the child who died was a multiple birth. Ask the birth order of the child that died, and circle the appropriate response.

## SECTION 6- DELIVERY HISTORY

Questions 601-616 ask about the mother’s delivery history.

**601: Where was the child born?**

Ask where the child was born. Record the information by circling the appropriate response. If the child was not born at a hospital, other health facility, or the home, record the location where the child was born. For example, if the child was born on the road to a health facility, write “on the road to a health facility” under “96-other (specify).”

**602: Who assisted with the delivery?**

It is important to know whether a mother received assistance during delivery. Ask the respondent: “Who assisted with the delivery?” Record the correct response. For example, if the delivery was attended by aASHA/Sahiyya record the information by circling ‘C’ for her. There can be multiple responses to this question as more than one person can assist with the delivery. For example an ANM/Nurse can be assisted by an ASHA. In that case both ‘B’ and ‘C’ are to be encircled.

**603: When did the water break?**

During the onset of labor pain a water-like fluid comes out of the vagina. Ask the mother/respondent when the “water broke,” whether it happened before labor started or it occurred during labor. Circle the appropriate response. If the mother delivered without going into labor (e.g. cesarean section), circle ‘2’ for “during labor.”

**604: How many hours after the water broke was the baby born?**

Ask “How many hours after the water broke was the baby born?” and circle the correct response.

**605: Was the water foul-smelling?**

Ask if the water was foul-smelling; that is, if the water had a bad smell when it broke. Circle the correct response.

**606: Did the baby stop moving in the womb?**

Mothers feel the movement of the baby inside their womb. In different cultures these movements are known and reported as “kicking,” “playing,” “walking,” etc. If the baby had some problem then these movements may have stopped. Ask the mother or other respondent if the baby stopped moving inside the womb, and circle the correct response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**607: When did the baby stop moving in the womb?**

This is a filter question, to be asked only if the answer to the previous question was “1-yes.” Ask “When did the baby stop moving in the womb?” Circle the appropriate response — either ‘before labor started’, ‘during labor’, or ‘don’t know’.

**608: Did a birth attendant listen for fetal heart sounds during labor?**

Ask, “Did a birth attendant listen for fetal heart sounds during labor?” and record the respondent’s answer. If ‘no’ or ‘don’t know’, follow the skip pattern.

**609: Were fetal heart sounds present?**

This is a filter question, to be asked only if the answer to the previous question was “1-yes.” Ask if the birth attendant heard any fetal heart sounds during labor, and record the appropriate response.

**610: Was there excess bleeding on the day labor started?**

Ask the mother or other respondent if there was excess bleeding on the day labor started. Circle the correct response.

**611: Did the mother have a fever on the day labor started?**

Ask if the mother had fever on the day labor started. Circle the appropriate response.

**612: How long did the labor pains last?**

A prolonged labor is when the interval between onset of labor pain and delivery of baby is 12 hours or more. Labor pains are pains felt as the uterus contracts. The pain becomes progressively more

severe, the duration longer, and the interval between them shorter. This question seeks to determine whether it was a prolonged labor or not. Ask the respondent “How long did the labor pains last?” Circle the appropriate response.

**613: Was it a normal vaginal delivery?**

Ask if the birth was a normal vaginal delivery, and record the appropriate response. If ‘yes’ or ‘don’t know’, follow the skip pattern.

**614: What type of delivery was it?**

This is a filter question, to be asked only if the answer to the previous question was ‘no’. Ask the respondent about the type of delivery, and read the response categories. Circle the appropriate response. If the respondent does not know the technical name of the procedure, ask him/her to describe the procedure, and use the following information to guide you to choose the appropriate response option. In case of prolonged or difficult labor, a “forceps” or “vacuum delivery” may be performed. These types of delivery involve application of a metal cap on the head of the fetus as it emerges from the birth canal. The cap is then pulled down by the birth attendant to assist the mother’s effort to “push down.” There is a chance of injury to the fetus. Injuries with fatal outcomes are mostly on the head, and manifest as swelling, blood clots, or sometimes even external, open injuries. A surgical incision through the walls of the abdomen and uterus is sometimes performed to deliver a child. This mode of delivery is called “caesarean section” and in most cases it is performed because of complications that took place during labor. Circle the appropriate response. If the type of delivery cannot be determined by the interviewer, circle ‘6’ for ‘other’ and specify the terms the respondent used to describe the procedure.

**615: Which part of the baby came first?**

Ask which part of the baby came out of the womb first, and circle the appropriate response. If the respondent’s answer does not match the coding options, circle ‘6’ for ‘other’ and specify the response in the space provided.

**616: Did the umbilical cord come out before the baby was born?**

Ask if the umbilical cord came out of the womb before the baby was born. Circle the appropriate response.

## SECTION 7- CONDITION OF THE BABY SOON AFTER BIRTH

**701: At birth what was the size of the baby?**

The normal weight of a baby at birth is between 2.5 kg and 3.9 kg. A baby less than 2.5 kg is small and a baby of 4 kg or more is large. This question is asked to determine if the baby had low birth weight at birth. Ask the respondent, “At birth, what was the size of the baby?” Circle the appropriate response.

**702: Was the baby premature?**

This question is related to the duration of the pregnancy, which has a very important bearing on the maturity of the child and mortality. The duration is counted from the last menstrual period to the birth of the child. A premature child is a child who was delivered between 28 and 37 weeks of pregnancy. Full-term babies are born between 37 and 40 weeks after the last menstrual period. Therefore, a premature baby is a baby born before 37 weeks (or less than nine months) of pregnancy. The difference between question 701 and questions 503-505 is that 503-505 relate to pregnancy history and question 702 relates to maturity of the baby. They appear similar but are different. The

baby can be small or weigh less than 2.5 kg but was born at 38 or more weeks. Circle the appropriate response. If 'no' or 'don't know', follow the skip pattern.

**703: How many months or weeks along was the pregnancy?**

This is a filter question, to be asked only if the answer to the previous question was "yes." Record the number of months/weeks of pregnancy when the baby was born.

**704: What was the birth weight of the baby?**

The average weight of a baby at birth is between 2.5 kg and 3.9 kg. A baby less than 2.5 kg is small and a baby of 4.0 kg or more is large. This question is asked to determine if the baby had low birth weight at birth. Ask the respondent the child's weight at birth, and write this number in kilograms in the space provided.

**705: Was anything applied to the umbilical cord stump after birth?**

Usually, immediately after a baby is born, the umbilical cord is tied with a ligature or thread and divided by scissors. Sometimes, especially in babies born at home without medical supervision, the umbilical cord is cut by potentially septic means and various types of substances are applied on the umbilical stump. Ask, "Was anything applied to the umbilical cord stump after birth?" Circle the appropriate response. If 'no' or 'don't know', follow the skip pattern.

**706: What was it?**

This is a filter question. If the answer to the previous question was "yes," ask the respondent what was applied to the cord after birth, and record his/her response in the space provided.

**707: Were there any signs of injury or broken bones?**

It is important to know if there were any bruises or signs of injury on the baby's body after birth. Signs of injury or bruises or broken bones indicate birth trauma from difficult delivery. There could be a collection of blood in the head (scalp) and under the skin surface anywhere in the body of a child or a broken limb. Ask if there were any signs of injury or broken bones, and record the appropriate response. If 'no' or 'don't know', follow the skip pattern.

**708: Where were the marks or signs of injury?**

This is a filter question. If the answer to the previous question was "yes," ask and record the location of the injury marks on the baby's body.

**709: Was there any sign of paralysis?**

Paralysis is the loss of muscle tone and power in an area or part of the body, usually as a result of diseases or injuries involving the head and backbone/spine. Some mothers confuse paralysis and weakness as a result of illness. Make sure that there is no confusion. Ask, "Was there any sign of paralysis?" Record the appropriate response.

**710: Did the baby have any malformation?**

This question asks whether the baby showed abnormalities of any part of the body after birth. Specific examples may include a swelling or defect on the back, a small or large head, defect on upper and lower limbs, neck, face, mouth, and lips. Ask if there was any malformation, and record the appropriate response. If 'no' or 'don't know', follow the skip pattern.

**711: What kind of malformation did the baby have?**

This is a filter question. If the answer to the previous question was "yes," ask and record the kind of malformation the baby had, by circling the appropriate response from the list indicated on the form.

If '6-other malformation' is selected, the type of malformation must be specified in the space provided.

**Questions 712 through 718 are very important and should be asked carefully, and the appropriate responses recorded. They are asked to determine whether the child was born alive or dead.**

**712: What was the color of the baby at birth?**

A normal baby is usually born with pink color, but if there were problems in the baby or during birth that interfered with breathing and blood circulation the baby could be born blue or pale. In darkskinned babies, the color change can only be noticed in lips, palms, or soles of the feet. Ask the color of the baby at birth, and read the response categories. Circle the appropriate response.

**713: Did the baby breathe after birth, even a little?**

Ask, "Did the baby breathe after birth, even a little?" and record the appropriate response.

**714: Was the baby given assistance to breathe?**

Ask, "Was the baby given assistance to breathe?" and record the appropriate response. This may indicate the baby was born alive but had breathing difficulties that required assistance. There may be instances where the birth attendant may not be sure whether the baby was born alive or dead and therefore will attempt to assist the baby to breathe.

**715: What kind of assistance?**

If the answer to the previous question is 'YES', then ask what kind of breathing assistance was given to the baby. This is a multiple response question, as more than one type of breathing assistance may be given in continuity to help the baby breathe. Encircle the appropriate answers.

**716: Did the baby ever cry after birth, even a little?**

Most babies cry after birth. It indicates that the baby is breathing. The cry may be weak in some cases. Ask the respondent if the child ever cried immediately after birth, even a little. Record the appropriate response.

**717: Did the baby ever move, even a little?**

Ask the respondent, "Did the baby ever move, even a little?" Record the appropriate response.

**718: Check 713, 716, and 717 for codes 'no':**

If the responses to questions 713, 716, and 717 are all 'no', then put an 'x' in the appropriate box and ask 719. If the response to either 713, 716 or 717 was 'yes', then put an 'x' in the box on the right and skip to question 801.

**719: If the baby did not cry, breathe or move, was it born dead?**

If the respondent indicated that the baby did not cry, breathe, or move (that is, they answered "no" to 713, 716, and 717), ask if the baby was born dead. Circle the appropriate response. If the child was born dead, it will be considered a stillbirth, and the VAI should continue asking 720. If the baby was born alive, then skip to 801.

**720: Was the baby macerated, that is, showed signs of decay?**

This is a filter question, and is asked only if the baby was born dead. Ask, "Was the baby macerated, that is, showed signs of decay?" Signs of decay include softening of the muscle mass and decaying changes in the skin. Circle the appropriate response, and then proceed directly to 1001.

## SECTION 8- HISTORY OF INJURIES/ACCIDENTS

The questions in this section should be asked of all children who were born alive, even if the respondent does not believe that an injury caused the child's death.

### **801: Did the baby suffer from any injury or accident that led to her/his death?**

Ask the respondent if the baby suffered from any injury or accident that led to her/his death. Circle the appropriate response. If 'no' or 'don't know', follow the skip pattern.

### **802: What kind of injury or accident did the baby suffer?**

This is a filter question, and it is only asked if the answer to 801 was "yes." Ask the respondent what kind of injury/accident led to death, and circle only one response. If the respondent names a type of injury/accident that is not listed, write this information in the space provided under "96-other."

### **803: Was the injury or accident intentionally inflicted by someone else?**

This is a filter question, and it is only asked if the answer to 801 was "yes." Ask the respondent if the injury/accident that led to death was intentionally inflicted by someone else. Questions 802 and 803 are asked to differentiate between intentional and unintentional injuries.

### **804: Did the baby suffer from any animal/insect bite that led to her/his death?**

Ask, "Did she or he suffer from any animal/insect bite that led to her/his death?" and circle the appropriate response. Do not include mosquito bites. If 'no' or 'don't know', follow the skip pattern.

### **805: What type of animal/insect?**

This is a filter question, and it is only asked if the answer to 804 was "yes." Ask the respondent what kind of animal/insect bite led to death, and circle only one response. If the respondent names a type of animal/insect that is not listed, write this information in the space provided under "6-other".

## SECTION 9- NEONATAL ILLNESS HISTORY

Questions 901-939 are only asked if the child was born alive, but died within the first 27 days (4 weeks) of life. Therefore, if the answer to 718 above was "yes," that is if the child was born dead, do not ask these questions. Instead, go to 1001.

### **901: Was the baby ever able to suckle or bottle-feed?**

The baby may stop breastfeeding when it falls sick. In addition, breastfeeding is an important component of the child's nutrition. Ask, "Was the baby ever able to suckle or bottle-feed?" Circle the response given. If the answer is 'no' or 'don't know', follow the skip pattern.

### **902: How soon after birth did the baby suckle or bottle-feed?**

This is a filter question, and is asked if the answer to 901 above was "yes." A baby generally starts sucking the breast soon after birth, but some babies start breast-feeding or bottle-feeding on the second or the third day. Ask how soon after birth the baby started breastfeeding or bottle-feeding, and record the duration in hours or days.

### **903: Did the baby stop suckling or bottle-feeding?**

This is a filter question, and it is only asked if the answer to 901 was “yes.” If the child was able to breast- or bottle-feed soon after birth, ask whether the baby stopped breast- or bottle-feeding later on. Circle the response given. If ‘no’ or ‘don’t know’, follow the skip pattern.

**904: How many days after birth did the baby stop suckling or bottle-feeding?**

This is a filter question, and it is only asked if the answer to the previous question (903) was “yes.” If the child stopped breast- or bottle-feeding, ask how many days after birth the baby stopped suckling or bottle-feeding. Write the number of days in the response box.

**905: Was the breastfeeding exclusive?**

Exclusive breast-feeding means feeding the baby with the breast only, without supplementary feeding. Ask, “Was the breastfeeding exclusive?” and circle the appropriate response.

**906: Did the baby have convulsions?**

Convulsions cause a baby’s body to shake rapidly and uncontrollably. During convulsions, the child’s muscles contract and relax repeatedly. He or she may have his or her look fixated at a particular direction or drool excessively or foam at the mouth. The VAI should demonstrate what convulsions look like. Ask the respondent if the baby had convulsions. Circle the correct response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**907: How soon after birth did the convulsions start?**

This is a filter question, and it is only asked if the answer to the previous question was “yes.” If the child had convulsions, ask how many days after birth the convulsions started. Write the number of days after birth in the response box.

**908: Did the baby become stiff and arched backwards?**

Ask, “Did the baby become stiff and arched backwards?” Circle the response given.

**909: Did the child have bulging of the fontanelle?**

A bulging fontanelle manifests when the skin on the top, soft part of the head protrudes. This may be a sign of infection of the brain and its adjacent parts. In some cultures, there are local terms to describe this condition, and mothers often know these terms. Ask if the baby had bulging of the fontanelle, and record the appropriate response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**910: How many days after birth did the baby have the bulging?**

This is a filter question, and it is only asked if the answer to the previous question was “yes.” If the child had a bulging fontanelle, ask how many days after birth the bulging fontanelle started. Write the number of days after birth in the response box.

**911: Did the baby become unresponsive or unconscious?**

A state of unconsciousness is when someone experiences loss of senses (i.e. inability to see, hear, or be aware of surroundings). This question inquires whether the baby became unconscious and unresponsive to verbal commands or external stimuli (such as pinching, injections, etc.) during illness. Ask “Did the baby become unresponsive or unconscious?” Record the appropriate response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**912: How many days after birth did the baby become unresponsive or unconscious?**

This is a filter question, and it is only asked if the answer to the previous question was “yes.” Ask how many days after birth the baby became unresponsive or unconscious. Write the number of days after birth in the response box.

**913: Did the baby have a fever?**

It is important to know whether the baby had history of continuous or intermittent fever (coming on alternate days, and sometimes daily), with or without shivering. Ask if the baby had fever (hot body), and record the appropriate response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**914: How many days after birth did the baby have a fever?**

This is a filter question, and it is only asked if the answer to the previous question was “yes.” Ask how many days after birth the baby had a fever. Write the number of days after birth in the response box.

**915: Did the baby become cold to the touch?**

Ask if the baby became cold to the touch, and record the appropriate response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**916: How many days after birth did the baby become cold to the touch?**

This is a filter question, and it is only asked if the answer to the previous question was “yes.” Ask how many days after birth the baby become cold to the touch. Write the number of days after birth in the response box.

**917: Did the baby have a cough?**

Ask if the baby had a cough, and record the appropriate response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**918: How many days after birth did the baby start to cough?**

This is a filter question, and it is only asked if the answer to the previous question was “yes.” Ask how many days after birth the baby started to cough. Write the number of days after birth in the response box.

**919: Did the baby have fast breathing?**

A baby generally takes about 50 breaths in a minute or about one per second. A mother often knows when her child is breathing fast. Ask if the baby had fast breathing, and record the appropriate response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**920: How many days after birth did the baby start breathing fast?**

This is a filter question, and it is only asked if the answer to the previous question was “yes.” Ask how many days after birth the baby started breathing fast. Write the number of days after birth in the response box.

**921: Did the baby have difficulty breathing?**

There are many ways in which a child with difficulty breathing presents: sometimes a respondent/mother may have noticed a continuous, high-pitched, hissing sound (wheezing) or the baby may visibly show that she or he is having difficulties in breathing in and out. Early signs of respiratory failure include altered depth and pattern of respirations, shortness of breath, nasal flaring, chest wall retractions, expiratory grunt, and wheezing, and/or prolonged expiration. Ask if the baby had difficulty breathing, and record the appropriate response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**922: How many days after birth did the baby start having difficulty in breathing?**

This is a filter question, and it is only asked if the answer to the previous question was “yes.” Ask how many days after birth the baby started having difficulty in breathing. Write the number of days after birth in the response box.

**923: Did the baby have chest indrawing?**

This is a filter question, and it is only asked if the answer to 921 was “yes.” Chest indrawing refers to when the area beneath the chest, around the upper part of the abdomen/stomach, is drawn in to assist breathing as the child breathes. This may also be a sign of chest infection. Ask if the baby had chest indrawing.

**924: Did the baby have grunting? DEMONSTRATE.**

This is a filter question, and it is only asked if the answer to 921 was “yes.” Grunting is a sound produced by a child in a manner that shows or indicates “suffering or being ill.” The grunting of sick children is like a sigh but is more regular, often with every breath. The child usually appears to be in some distress or to be ill. Grunting respirations in a baby with a fever or who appears to be sick is a very bad sign of immediate emergency and could represent a very serious respiratory infection. Grunting helps the child to get additional air into the lungs. Ask if the baby had grunting. Demonstrate grunting noises.

**925: Did the baby have flaring of the nostrils?**

This is a filter question, and it is only asked if the answer to 921 was “yes.” Nasal flaring refers to enlargement of the opening of the nostrils during breathing. Nasal flaring is seen mostly in infants and younger children. Nasal flaring is often an indication that increased effort is required for breathing. Any condition that causes the infant to work harder to obtain enough air can cause nasal flaring. While many causes of nasal flaring are not serious, some can be life-threatening. In young infants, nasal flaring can be a very important sign of respiratory distress. Ask the mother or the respondent if the baby had flaring of the nostrils.

**926: Did the baby have diarrhea?**

It is normal in the first 2-3 days of life for the child to pass loose stools. Mothers usually know when a baby is having diarrhea. They may use a local term to describe it. Diarrhea is the frequent passage of loose or watery stools, with or without blood. Ask if the baby had diarrhea, and record the appropriate response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**927: How many days after birth did the baby have diarrhea?**

This is a filter question, and it is only asked if the answer to the previous question was “yes.” Ask how many days after birth the baby started having diarrhea. Write the number of days after birth in the response box.

**928: When the diarrhea was most severe, how many times did the baby pass stools in a day?**

This is a filter question, and it is only asked if the answer to 926 was “yes.” Ask how many times in a day the baby passed stools when the diarrhea was severe. Write the number of times in the response box.

**929: Was there blood in the stools?**

This is a filter question, and it is only asked if the answer to 926 was “yes.” Ask if there was blood in the baby’s stools. Circle the appropriate response.

**930: Did the baby have vomiting?**

It is important to record whether the infant had vomiting. The VAI should distinguish vomiting from effortless regurgitation of milk (which is normal). Ask if the baby had vomiting, and record the appropriate response. If 'no' or 'don't know', follow the skip pattern.

**931: How many hours or days after birth did vomiting start?**

This is a filter question, and it is only asked if the answer to the previous question was "yes." Ask how many days after birth the baby started having vomiting. Write the number of days after birth in the response box.

**932: When the vomiting was most severe, how many times did the baby vomit in a day?**

This is a filter question, and it is only asked if the answer to 930 was "yes." Ask how many times in a day the baby vomited when the vomiting was severe. Write the number of times in the response box.

**933: Did the baby have abdominal distension?**

Ask if the baby had abdominal distension, and record the appropriate response. If 'no' or 'don't know', follow the skip pattern.

**934: How many days after birth did the baby have abdominal distension?**

This is a filter question, and it is only asked if the answer to the previous question was "yes." Ask how many days after birth the baby started having abdominal distension. Write the number of days after birth in the response box.

**935: Did the baby have redness or discharge from the umbilical cord stump?**

Ask, "Did the baby have redness or discharge from the umbilical cord stump?" Circle the appropriate response.

**936: Did the baby have a pustular skin rash?**

A pustular skin rash is a skin manifestation in which tiny sac-like bumps appears, which contain pus and indicates that skin infection with bacteria. Ask, "Did the baby have a pustular skin rash?" Circle the appropriate response.

**937: Did the baby have yellow palms or soles?**

Ask, "Did the baby have yellow palms or soles?" Circle the appropriate response. If 'no' or 'don't know', follow the skip pattern.

**938: How many days after birth did the yellow palms or soles begin?**

This is a filter question, and it is only asked if the answer to the previous question was "yes." Ask how many days after birth the baby started having yellow palms or soles. Write the number of days after birth in the response box.

**939: For how many days did the baby have yellow palms and soles?**

This is a filter question, and it is only asked if the answer to 937 was "yes." Ask how long the baby had yellow palms or soles. Write the number of days in the response box.

## SECTION 10- MOTHER'S HEALTH AND CONTEXTUAL FACTORS

**1001: What was the age of the mother at the time the baby died?**

This question seeks to find out the age of the mother at the time the baby died. Ask, "What was the age of the mother at the time the baby died?" Write the number of completed years in the response box provided.

**1002: Did the mother receive antenatal care?**

Antenatal care is routine care for the health of a pregnant woman and her child. During antenatal care, a pregnant woman is seen by her physician, midwife, or other trained health provider at regular intervals during pregnancy to check that all is well with her and her baby. Ask the respondent if the mother had antenatal care during her pregnancy. Record the information by circling the appropriate response.

**1003: How many times did she receive ANC checkup?**

This question is asked to know how many times the pregnant woman had received ANC. At least 3 ANC checkups are mandatory. And ideally 4 ANC visits are required to be made.

**1004: Did the mother receive tetanus toxoid (TT) vaccine?**

Usually tetanus toxoid (TT) injections are given to mothers during pregnancy to prevent tetanus. Ask if the mother received TT vaccine. Circle the appropriate response. If 'no' or 'don't know', follow the skip pattern.

**1005: How many doses?**

This is a filter question, and it is only asked if the answer to 1003 was "yes." Usually two injections are given to prevent tetanus. Ask how many TT injections/doses the mother received, and write the number of doses in the space provided.

**1006: Did the mother receive iron and folic acid tablets?**

Ask whether she received any iron and folic acid from the ANM and encircle the appropriate code. If she answers 'No' then go to question 1009.

**1007: How many did she receive?**

Ask how many iron and folic acid tablets she had received from the ANM and encircle the appropriate code.

**1008: How many iron and folic acid tablets did the mother ingest?**

This is asked to know how many of the tablets did she ingest if she had received any.

**1009: Did the mother receive any of the following during all the ANC visits?**

This is a multiple response question asked to know what care she received during the ANC checkups.

**1010: How is the mother's health now?**

Ask about the condition of the mother at the time you visit the household. If the mother of the child is your respondent, ask her whether she is healthy and fine or if she is feeling sick. If your respondent is not the mother of the deceased baby, ask: "How is the child's mother now?" Circle the response given by the respondent from among the response options: 'healthy-1'; 'ill-2'; 'not alive-3'; or 'don't know-8'.

**SECTION 11- TREATMENT AND HEALTH SERVICE USE FOR THE FINAL ILLNESS**

This is another section that is common to all the VA forms, found near the end of each form after the symptom duration checklist. However, the questions in this section are slightly different in each form. In this section, information is collected on the type of health services sought on behalf of the

deceased during illness, and whether he or she received any treatment during those services. This section begins with the heading: “Treatment and health service use for the final illness.”

**1101: Did the baby receive any treatment for the illness that led to death?**

The first question asked under this section seeks to know whether the deceased received any treatment for the illness that led to death. The response categories are ‘yes - 1,’ ‘no - 2,’ and ‘don’t know - 8.’ This question is asked in all three types of VA forms. If the respondent says “yes,” that the person received treatment for the illness that led to death (that is, ‘1’ is circled), then additional (filter) questions need to be asked. If ‘no’ or ‘don’t know’, follow the skip pattern to the next section.

**1102: Can you please list the treatments the baby was given for the illness that led to death?**

This is a filter question, only to be asked if the answer to 1101 was ‘yes’. Ask the respondent to list, in chronological order, the treatments the individual was given for the disease that led to death. Ask if prescription or discharge forms are available; if so, the VAI should copy the information from such hospital documents into the space provided.

**1103: Please tell me at which of the following places or facilities the baby received treatment during the illness that led to death.**

This is a filter question, only to be asked if the answer to 1101 was ‘yes’. This seeks to identify different places or facilities at which the deceased received treatment during the illness that led to his or her death. Different types of health facilities/services are listed on the form. Read each of the options and ask the respondent to identify all the specific types of services used by the deceased in the period before death. Circle all places/facilities at which she or he received treatment during the illness that led to death. If the respondent’s answer does not match the coding options, circle ‘1-yes’ for item 8 and specify the response in the space provided.

**1104: In the month before death, how many contacts with formal health services did the baby have?**

This is a filter question, only to be asked if the answer to item 3, 4, 5, or 6 in question 1103 was ‘yes’. This question asks the number of contacts with formal health services [in the previous question: government clinic (3), government hospital (4), private clinic (5), or private hospital (6)] the deceased had in a month prior to her or his death when she or he received treatment. Ask, “In the month before death, how many contacts with formal health services did she or he have?” Record the total number of visits made to these facilities in the space provided. For example, during the last week of life, if the deceased went to a government clinic twice, and then government hospital once, the VAI should enter “03” in the box.

**1105: Did a health care worker tell you the cause of death?**

This is a filter question, only to be asked if the answer to item 3, 4, 5, or 6 in question 1103 was ‘yes’. This question is asked if the baby that died received treatment. Ask the respondent, “Did a health care worker tell you the cause of death?” Circle the appropriate response. If ‘no’ or ‘don’t know’, follow the skip pattern.

**1106: What did the health care worker say?**

This is a filter question, only to be asked if the answer to 1105 was ‘yes’. Ask the respondent, “What did the health care worker say?” Write the cause of death mentioned by the respondent in the space provided.

The final two sections, common to all the three types of forms, require the VAI to record information from death certificates and/or any documents that may be available at the household relating to medical treatment or the cause of death.

## **SECTION 12- DATA ABSTRACTED FROM DEATH CERTIFICATE**

### **1201: Do you have a death certificate for the baby?**

Ask the respondent if there is a death certificate for the baby that died. If 'no' or 'don't know', follow the skip pattern.

### **1202: Can I see the death certificate?**

This is a filter question, only to be asked if the answer to 1201 was 'yes'. If the household has a death certificate, ask if you can see it, in order to record information about the date and cause of death. Copy the day, month, and year of death from the death certificate. If the respondent will not allow you to see the death certificate, continue to the next section.

### **1203 Copy day, month and year of issue**

This is a filter question, only to be asked if the death certificate is available. Copy the day, month, and year of issue from the death certificate.

### **1204: Record the cause of death from the first (top) line of the death certificate:**

This is a filter question, only to be asked if the death certificate is available. Copy the cause of death from the FIRST line of the death certificate. There should always be a cause listed on the first line of the death certificate.

### **1205: Record the cause of death from the second line of the death certificate (if any):**

This is a filter question, only to be asked if the death certificate is available. Copy the cause of death from the SECOND line of the death certificate, if a cause is listed.

### **1206: Record the cause of death from the third line of the death certificate (if any):**

This is a filter question, only to be asked if the death certificate is available. Copy the cause of death from the THIRD line of the death certificate, if a cause is listed.

### **1207: Record the cause of death from the fourth line of the death certificate (if any):**

This is a filter question, only to be asked if the death certificate is available. Copy the cause of death from the FOURTH line of the death certificate, if a cause is listed.

## **SECTION 13- DATA ABSTRACTED FROM OTHER HEALTH RECORDS**

The purpose of this section is to summarize any written evidence of health records that can be obtained from the respondent. This information will help in the process of assigning a probable cause of death. There are various types of supporting evidence including burial permits, MCH/ANC cards, in-patient or out-patient records, prescriptions, or hospital discharge forms. These are listed on the VA form, and you will need to ask about each one of these individually.

It is crucial that the verbal autopsy interviewer is familiar with these cards/forms and that they are available during the verbal autopsy interviewers' training. During the training each form will be presented and the details explained fully. When you come across these forms during field work you might find medical/health records which are not very legible. It is essential that you should try to understand the words written on the records so that you are able to copy the information onto your verbal autopsy forms. Record as much information as possible on the verbal autopsy forms, but refrain from interpreting or recording information that is not reported.

For VA Form 1, it is important that the VAI request these health records for the baby, but also the health records of the mother during her pregnancy with the child that died. Often, information from the mother's health records is useful for determining the cause of the infant's death. Relevant information would include illnesses that occurred during pregnancy up until the death of the infant, and in the case of stillbirth, from beginning of pregnancy until the child is born.

**1301: Other health records available**

Ask the respondent if any other types of health records might be available. If 'no', follow the skip pattern to 1311.

**1302: For each type of health record summarize details for last 2 visits**

For each type of health record listed below, ask if the respondent has the type of record. If so, summarize the details of the last two visits (if there were more than two, otherwise just the last visit) from each of the supporting documents on the form. Record the date of issue for each form. Do not forget to record information about the mother, and any stillborn deceased child.

**1303: MCH Card/Register**

Record any details you can get from MCH card or register about the mother and the newborn who died.

**1304: Post mortem results.**

Record the results from the post mortem certificate if the post mortem has been done.

**1311: Record the time at the end of interview**

Record the time using 24-hour format.

## **10. INTERVIEWER'S OBSERVATIONS**

At the end of the interview, before leaving the household, please include any additional comments about the interview. You may make comments about the respondent you interviewed, about specific questions on the questionnaire, or about any other aspects of the interview. If anything about the interview was unusual or should be brought to the attention of the editor or supervisor, note it here.

If you were unable to complete the interview for any reason, or if certain answers required further explanation, this space should be used to document the reason the interview could not be completed.

## **11. AT THE END OF THE INTERVIEW**

At the end of the interview, consider the following:

Before leaving the household, check the VA form that you have completed to make sure you have done so accurately and completely.

- In particular, you should make sure that every question in the form has been asked (except where skip patterns were employed) and check your writing to ensure that others can read what you have written.
- Check your work systematically. First, make sure that information identifying the household has been entered. Then look at all sections for consistency and completion to ensure that all your entries agree item by item and that you have not written anything that is not required.
- If you find discrepancies, mistakes, or omissions, ask further questions and correct your form. It must be complete and accurate in all respects before you leave the household.
- When you are satisfied that everything is in order, thank the respondents and the family for their cooperation and willingness to be interviewed. You may again offer words of sympathy (if culturally appropriate) before you leave.
- When you have completed the day's work or all VA interviews in one particular segment, report to your supervisor with all your completed forms and logbooks. She or he will then check with you to verify that everything is in order and accurate before collecting the forms for further scrutiny and processing.