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# 2008 Rwanda Child Verbal Autopsy Study: Causes of Death among Children Under Five Years of Age

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Rwanda Ministry of Health, Kigali, Rwanda  
National Institute of Statistics, Kigali, Rwanda  
Rwanda School of Public Health, Kigali, Rwanda  
MEASURE DHS, Calverton, MD, USA  
MEASURE Evaluation, Chapel Hill, NC, USA



President's Malaria Initiative



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Additional information about the survey can be obtained from the National Institute of Statistics of Rwanda (NISR), P.O. Box 6139, Kigali, Rwanda; Telephone: (250) 788-845758; e-mail: magoyusuf@hotmail.com; Internet: [www.statistics.gov.rw](http://www.statistics.gov.rw).

Additional information about the MEASURE projects can be obtained from the following:

MEASURE Evaluation  
CB 8120, University of North Carolina  
Chapel Hill, NC 27516, USA  
Telephone: 919-966-7482; fax: 919-966-2391  
E-mail: [measure@unc.edu](mailto:measure@unc.edu)  
Web site: <http://www.cpc.unc.edu/measure>

MEASURE DHS  
ICF Macro  
11785 Beltsville Drive, Suite 300  
Calverton, MD 20705, USA  
Telephone: 301-572-0200; fax: 301-572-0999  
E-mail: [reports@macrointernational.com](mailto:reports@macrointernational.com)  
Web site: <http://www.measuredhs.com/>

**Cover photograph** by Robert Mswia, MEASURE Evaluation, shows a village resident guiding a verbal autopsy interviewer to a remote home in order to conduct a survey.

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## ***Key Findings***

- ▲ The top five leading causes of death in children under five years of age in Rwanda are:
  - perinatal and early neonatal conditions (25 percent)
  - pneumonia (15 percent)
  - diarrhoeal diseases (13 percent)
  - malaria (11 percent), and
  - malnutrition (8 percent)
- ▲ The overwhelming majority (73 percent) of deaths in the first month of life (neonatal deaths) are due to perinatal and early neonatal conditions.
- ▲ Among children age 29 days to five years of age, pneumonia (19 percent) is the leading cause of death. Diarrhoeal diseases (18 percent) and malaria (16 percent) are the second and third main causes of death, respectively. The top three causes of death account for over half (53 percent) of all deaths in this age group.
- ▲ Significantly large proportion of children under five (66 percent) die at home, 20 percent die at health facilities, and the rest (14 percent) die in other places.
- ▲ Only about half (57 percent) of children under five who died received some form of treatment or care for the illness that led to death. Of these, 91 percent utilized formal health facilities including government or faith-based organization hospitals and health centers, and private clinics.
- ▲ The vast majority of deaths to children under five (93 percent) are caused by diseases that are addressable through cost-effective intervention programs, such as use of insecticide treated bednets, childhood vaccinations or nutritional programs.



# 1 Introduction

## 1.1 Objectives and Overview

The objective of the 2008 Rwanda child verbal autopsy (VA) study was to gather data about the causes of death in children under five years of age in Rwanda, including deaths that were related to malaria. Since the vast majority of children in Rwanda do not die in health facilities, information on causes of death established by health professionals on death certificates is almost non-existent and not representative of the whole country. Consequently, this study was based on a reliable sample of deaths to children under five that was collected through the 2007-08 Rwanda interim Demographic and Health Survey (DHS).<sup>1</sup> Women who reported such a death of a child in the approximately 59 months prior to the interim DHS interview were revisited in this study in 2008. These women or other members of the household were interviewed with a verbal autopsy questionnaire designed to elicit the crude causes of death. Issues on the length of recall period are discussed in another section in this report.

The study was implemented by the National Institute of Statistics in Rwanda (NISR) in collaboration with the Rwanda School of Public Health (RSPH) and the Rwanda Ministry of Health (MOH). Technical assistance was provided by MEASURE Evaluation and MEASURE DHS. Funding for the survey was provided by the U.S. Agency for International Development and the U.S. President's Malaria Initiative (PMI).

## 1.2 The 2007-08 Rwanda Interim DHS

The interim DHS, conducted between December 2007 and April 2008 by NISR in collabora-

tion with MOH, was designed to provide data to monitor the population and health situation in Rwanda. The survey covered a nationally representative sample of 7,469 households in 249 clusters. This sample provides representative estimates of health and demographic indicators at the national and provincial levels, and for rural and urban areas. Specifically, the interim DHS collected information on fertility levels, fertility preferences, awareness and use of family planning methods, breastfeeding practices, childhood mortality, maternal and child health, malaria, and other sociodemographic characteristics of individuals and households. In addition, all women ages 15-49 who were usual residents of the households, either selected or present in the household on the night before the survey, were eligible to be interviewed (7,528 women). Birth histories within the last five years prior to the interim DHS were collected from this eligible group, including information on children surviving and those who have died. Deaths of children who had died in the last five year provided the death frame from which the Rwanda verbal autopsy study was based.

## 1.3 Verbal Autopsy Questionnaires

The study adopted the recently revised core World Health Organization (WHO) questionnaire for neonatal and child deaths used to collect information on causes of death for children under five years of age. After obtaining informed consent, one of two questionnaires was used: one for children who died under four weeks (28 days) of age and the second for children who died at 28 days to 59 months of age (see Appendix A). MEASURE Evaluation worked with NISR, Ministry of Health, and the Rwanda School of Public Health staff and

made the appropriate revisions of the core VA questionnaires and Sample Vital Registration with Verbal Autopsy (SAVVY) manuals to fit the Rwanda situation.<sup>2</sup> Adaptation of the VA interviewer's manual was also made and sent to MEASURE Evaluation for the training manual to be finalized.

The NISR, Rwanda Ministry of Health, and the Rwanda School of Public Health made arrangements to have the Rwanda-specific VA questions translated into French and Kinyarwanda. In lieu of doing back-translations into English, the translated questionnaires were reviewed by the participants and facilitators during training.

#### **1.4 Training and Data Collection**

A total of 20 interviewers who took part in the interim DHS data collection were trained to be VA interviewers. Additionally, four medical doctors, who participated in the fieldwork supervision, and in death certification and coding, also participated in the VA interviewers' training. The VA interviewers were able to speak the local languages of the areas to which they were assigned.

Interviewer candidates were trained for five days (May 5-9, 2008) in Kigali on how to locate the households with child deaths in the reference period and how to administer the verbal autopsy questionnaires. The training was conducted in the form of lectures and discussions but was augmented by group work and extensive practical exercises. The training also included a slide show session on some of the common childhood illnesses documented by WHO for integrated management of childhood illnesses (IMCI) training for nurses. This was for purposes of getting a feel of some of the symptoms of childhood illnesses. Medical doctors participated in the VA interviewers training and helped clarify some of the medical terminologies, symptoms

and signs of diseases, and how they are locally known in different parts of Rwanda.

A field practice session was held with mothers who had lost a child under age five in the past five years. These respondents for the field practice were identified around Kigali. The teams (interviewers) were divided into five groups of four; each group visited a household where there was a death of child. Each member in the group practiced how to conduct the VA interview and how to complete at least one of the two types of VA questionnaires — depending whether the death in the household was of an infant aged 28 days or younger, or of a child between 29 days to five years of age. The teams were supervised by facilitators and medical doctors were present.

After the training and field practice, trainees reviewed and discussed the content of the VA questionnaires and VA interviewers' manual, question by question. The main outcome of the review was rephrasing of certain questions and correction of inconsistencies to some questions in both types of VA questionnaires and minor modification to the VA interviewers manual. It was also agreed that in the section on the place of death of a child, if the child died at a health facility, the name of the facility should be mentioned (this information would be helpful later, during a validation exercise). Finally, during the training, the teams reviewed the translated questionnaires to check the wording and make revisions where necessary.

In addition to an expert from MEASURE Evaluation, senior staff from NISR, the Rwanda School of Public Health, and Rwanda Ministry of Health (MOH) participated in the training. The role of personnel from the Rwanda School of Public Health was to facilitate the training and to provide the overall coordination of the VA fieldwork, whereas NISR provided the overall supervision and logistics of the training and of the entire VA study. The MOH

personnel's role was to assist the facilitators and share their experience on the types of symptoms and signs of different illnesses and how they are commonly referred to in local languages of Rwanda.

Verbal autopsy interviews and data collection for the study started on May 19, 2008 and was completed on June 27, 2008. Teams carried the list of households with child deaths, as well as the relevant 2007-08 interim DHS questionnaires, for further identification. As part of the data quality checks, interviewers exchanged questionnaires at the end of the day to check for inconsistencies. Supervisors (four medical doctors) accompanied the VA interviewers continuously for the duration of the fieldwork, with periodic supervision by senior staff from NISR and the School of Public Health.

### **1.5 Cause of Death Certification and ICD-10 Coding**

Criteria for selection of doctors to review the verbal autopsies and certify the cause of death included a non-specialized medical degree (i.e., general practitioner, not a specialist); the ability to attend the two weeks allocated for training on certification and coding of the verbal autopsy forms; and the availability to work on VA death certification and WHO's *International Statistical Classification of Diseases and Related Health Problems*, tenth revision (ICD-10)<sup>2</sup> coding for the duration of the exercise, which was estimated to be about one month. Experience with cause-of-death coding was not a prerequisite for being recruited. Although the four doctors selected had considerable experience in writing death certificates, none had prior training on ICD-10. The cause of death certification and ICD-10 coding training was thus a capacity-building exercise.

The training was conducted by a MEASURE Evaluation verbal autopsy and ICD-10 expert.

Training consisted of theoretical classes on the verbal autopsy, background on the survey, ICD-10 cause-of-death certification, and ICD-10 coding according to SAVVY manuals and WHO's ICD-10 volumes 1, 2, and 3 (second edition, tenth revision).<sup>2,3</sup> Theory was augmented with practical work using VA forms collected during the fieldwork and ICD-10 rules and guidelines.

The underlying cause of death was determined by trained physicians who reviewed the VA questionnaires and based on the ICD-10. Physicians worked in pairs, but independently. In each pair, one physician would independently produce an international cause-of-death certificate (shown in Appendix B) and ICD-10 code for each reported cause. The other physician reviewed a similar set of VA forms and produced a second death certificate and corresponding ICD-10 code. Most death certificates had one cause of death; a few had more than one cause of death (usually two).

### **1.6 Data Management and Analysis**

Data entry and management was done by NISR staff using CPro software. The data entry screens and programs were adaptation from the SAVVY data processing system developed by the U.S. Census Bureau. The adaptation of VA data entry and ICD-10 programs were done by MEASURE Evaluation, in collaboration with MEASURE DHS. The NISR data manager and data entry staff were trained on how to use these programs and were asked to document any problems they encountered for further assistance. The data processing for ICD-10 requires a data processor to key in both death certificates that are associated with a single verbal autopsy questionnaire, one directly after the other. Once both death certificates had been verified for keying inconsistencies, the cases that require reconciliation were sent back to the original two certifiers/coders. The

two certifiers/coders discussed the cases until final death certificates were agreed upon, so that each line on the reference death certificate had only one cause of death and only one ICD code entered into the database. Data entry and data management processes continually received support and supervision, to ensure the quality of data.

A sample of the VA data and their respective death certificates and ICD-10 codes were periodically reviewed by MEASURE Evaluation staff. With appropriate guidance and instructions, feedback was provided to the data manager regarding the quality of data and on any errors or inconsistencies that required correction or verification.

After all cause-of-death coding was completed and entered into the computer, NISR staff prepared data files and sent them to MEASURE Evaluation and MEASURE DHS for further processing. The death certificate files were matched to the verbal autopsy questionnaire files, and in turn to the DHS dataset. Weights were then added to the file and MEASURE Evaluation produced tabulations and figures. Causes of death were collapsed into broad categories for tabulation purposes (see Appendix C).

Analysis and writing of the report was lead by MEASURE Evaluation staff, with inputs from Rwanda School of Public Health, MEASURE DHS, and NISR.

## 1.7 Study Limitations

Retrospective birth histories, such as those included in the 2007-08 interim DHS, are susceptible to data collection errors. First, only surviving women age 15-49 are interviewed; therefore, no data are available for children whose mothers had died. Consequently, childhood mortality estimates will be biased if the

child mortality of surviving differs substantially with the child mortality of non-surviving women. This bias increases for periods farther back in time because more time will have passed between the birth and the date of the survey, thus allowing more time for the mothers to have died. However, analyses using the interim DHS data have shown that this bias is small and has negligible impact on the overall childhood mortality estimates in Rwanda, especially for childhood mortality estimates for the five-year period before the survey. Another possible error in data collection is associated with underreporting of events (births and deaths), which can lead to underestimation of childhood mortality. Underreporting is more likely to affect early infant deaths that occur farther back in time from the date of the survey, and is unlikely to affect recent death reporting.

Verbal autopsy data are affected by recall bias. The bias leads to uncertainty in the diagnosis of cause of death from such retrospective interviews. The length of the recall period may have an impact on the validity of VAs, and effects of recall may differ, depending on the age at death of the deceased. Presumably, difficulty in recalling the circumstances leading to the death of a child increases with the length of time since the child's death. This study is based on deaths that occurred during the 59-month period preceding the 2007-08 interim DHS interview. A long recall period in this study is likely to impair ability of the mother or other respondent to remember and report relevant information, such as the symptoms, signs of illness, and their duration that the child had in the period leading to death (more so if there had been more than one death of a child in the same household in the last five years). Based solely on VA experts' opinions, a recall period ranging from one to 12 months is thought to be acceptable. However, to our knowledge, there are no scientific studies that

have investigated the effects of long duration of recall. Further work is needed to investigate the effect of recall period and perhaps define an acceptable recall period for VA studies.

Another issue with verbal autopsy data is the ability to identify and code the correct cause of death based on signs and symptoms reported by family members. The verbal autopsy respondent may not have been with the child prior to death and thus may not be aware of the child's symptoms. Because of the above-mentioned limitations, readers of this report should view the study results with appropriate caution.

### 1.8 Response Rate

Using the criteria described above, a total of 462 deaths among children under five were identified from the 2007-08 interim DHS data set. Table 1 presents the results of verbal autopsy interviews completed during fieldwork; and for those not completed, reasons are given. Of the 462 deaths reported in the DHS, 431 (93.3 percent) were successfully followed up and verbal autopsy interview conducted. Of the 431 VA forms completed, 37 VA questionnaires did not have the corresponding death certificates and ICD-10 codes, and hence were removed from the analysis. In addition, five infant deaths were determined by medical coders to have been stillbirths and hence removed in the analysis. This means that a total of 389 deaths complete with VA interviews, death certificates and eligible ICD-10 codes were included in the analysis for this report.

**Table 1. Verbal Autopsy Interviews Completed and Not Completed (Unweighted), Rwanda 2008**

	Number	Percent
VA completed	431*	93.3
VA not completed	31	6.7
<i>Reason not completed:</i>		
<i>Household moved</i>	11	2.4
<i>Ineligible death</i>	10	2.2
<i>Respondent away</i>	5	1.1
<i>Unknown children</i>	2	0.4
<i>Refusal to participate</i>	1	0.2
<i>No reason given</i>	2	0.4
Total	462	100

\* Of the 431 completed, 37 did not have corresponding death certificates and ICD-10 codes, and five deaths were determined to be stillbirths. Consequently, these were eliminated in the analysis of 389 deaths.



## 2 Study Results

### 2.1 Distribution of Deaths by Characteristics

Table 2 shows the weighted distribution of the deaths analysed. Just over one-fifth (126) of the under-five deaths were among children who died in the first four weeks of life.

Reflecting the predominantly rural nature of Rwanda, only 8 percent of all under five deaths

occurred among children in urban areas. More than half of child deaths (66 percent) were among children of mothers who had only primary education. About half of all neonatal and malaria deaths occurred among children of women in age group 20-29, whereas large proportion of post-neonatal deaths occurred among children of women aged 30-39 years. Even though the proportions of deaths distributed by wealth quintiles do not follow

**Table 2. Distribution of Neonatal Deaths, Post-neonatal Deaths, Malaria-Specific Deaths and Deaths from All Causes for the Five-Year Period Preceding the Interim Rwanda DHS, by Background Characteristics, Rwanda 2008**

Background Characteristic	Neonatal Deaths (0-28 days, N=126) %	Post-neonatal (29 days-4 years, N=263) %	All deaths (<5 years, N=388) %	Malaria Deaths (< 5 years, N=43) %
Residence				
Urban	10.0	7.1	8.0	6.1
Rural	90.0	92.9	92.0	93.9
Mother's education				
No education	29.5	33.3	32.1	42.5
Primary	66.1	65.7	65.8	57.5
Secondary +	4.4	1.1	2.2	0.0
Wealth quintiles				
Poorest	17.1	14.6	15.4	17.6
Poorer	32.4	33.5	33.2	29.6
Middle	17.3	20.2	19.3	20.9
Richer	22.4	21.7	21.9	24.9
Richest	10.8	10.0	10.3	7.1
Mother's age at birth (years)				
<20	1.0	1.2	1.1	0.0
20-29	52.3	39.1	43.4	46.2
30-39	34.4	42.2	39.7	27.6
40-49	12.3	17.4	16.0	26.2
Sex of child				
Male	45.2	44.2	44.5	41.3
Female	54.8	55.4	55.2	58.7
Child's age at death (years)		(n=230)	(n=341)	(n=40)
0		50.0	66.3	29.9
1	(Not applicable)	20.3	13.7	23.9
2		19.8	13.4	35.4
3		6.4	4.3	9.1
4		3.5	2.4	1.8

any clear pattern, fewer are observed in the highest quintile eventually. The proportions of neonatal deaths, post-neonatal deaths, and overall under-five deaths are slightly higher among female children (55 percent), with the proportion being even higher for deaths due to malaria (59 percent). About two-thirds of all child deaths reported during the study period occurred under the age of one year (66 percent).

## 2.2 Causes of Death among Children under Five Years of Age

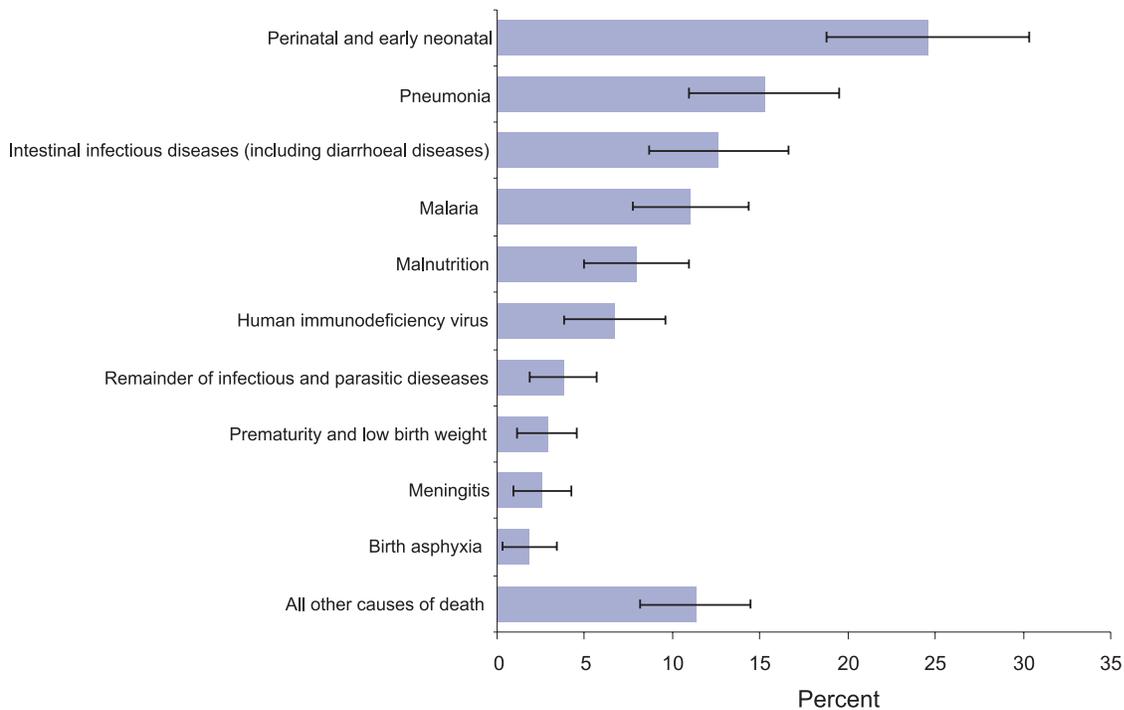
As shown in Table 3 and Figure 1, perinatal and early neonatal conditions are the most common causes of death among children under the age of five in Rwanda, accounting for about a quarter of the under-five deaths. The next most common cause of death is pneumonia (15 percent of under-five deaths), followed by diarrhoeal diseases, accounting for about

13 percent of under-five deaths. Malaria is fourth among the leading causes, accounting for about 11 percent of the under-five mortality burden in Rwanda. The proportion of under-five deaths from malnutrition (8 percent) is the fifth cause of death in the list of the top five causes of death in children under five in Rwanda

HIV/AIDS and other infectious and parasitic conditions are also among the most common causes of illness and death among under-five children in Rwanda, accounting for about 10 percent altogether. Prematurity and low birth weight, birth asphyxia, and meningitis are among the top ten causes of death among children under five years in Rwanda.

## 2.3 Causes of Death among Newborns

The riskiest period of life occurs immediately after birth. As documented in the 2007-08 interim



Note: Error bars indicate 95% confidence intervals around the proportions.

**Figure 1. Top 10 causes of death among children under five years of age, Rwanda 2008.**

DHS, for the period 0-4 years preceding the survey, the neonatal mortality rate in Rwanda was 28 deaths in the first month of life per 1,000 births, compared with a rate of 34 deaths per 1,000 from age 1-11 months (postneonatal mortality rate). The under-five mortality rate was 103 deaths per 1,000 live births, according to the 2007-08 interim DHS. Thus, in Rwanda, about one child in 16 dies before reaching the age of one and one in 10 children in Rwanda dies before reaching the age of five. In the 2008 verbal autopsy study, deaths in the neonatal period (i.e., the first 27 days of life) were followed up using the verbal autopsy questionnaire specifically designed for this age group (see Appendix A).

As shown in Table 4, perinatal and early neonatal conditions account for about 73 percent of all deaths during the first month of life (neonatal period). The next most common cause to neonatal deaths is prematurity and low birth weight (8 percent of neonatal deaths), followed by pneumonia (7 percent). Birth asphyxia is also one of the most common causes of infant deaths in the perinatal period, accounting for about 4 percent of all deaths in this infant age group. At this young age, malaria accounts for only about 2 percent of all deaths, slightly less than diarrhoeal diseases. All other diseases and conditions account for about 5 percent of all neonatal deaths and include HIV/AIDS,

**Table 3 . Percent Distribution of Under-Five Deaths by Cause (Weighted), Rwanda 2008**

Causes of Death	Number	Percentage	95% Confidence Interval Limits	
			Lower	Upper
Perinatal and early neonatal	95	24.5	18.7	30.3
Pneumonia	59	15.2	10.9	19.5
Intestinal infectious diseases (including diarrheal diseases)	49	12.6	8.6	16.5
Malaria	43	11.0	7.7	14.4
Malnutrition	31	7.9	4.9	11.0
Human immunodeficiency virus [HIV] disease	26	6.7	3.8	9.6
Remainder of Infectious and parasitic diseases	14	3.7	1.8	5.6
Prematurity and low birth weight	11	2.8	1.1	4.5
Unspecified causes of mortality	10	2.6	0.8	4.3
Meningitis	10	2.5	0.9	4.2
Birth Asphyxia	7	1.8	0.3	3.3
Tuberculosis	5	1.3	0.0	2.6
Abdominal pain	4	1.0	0.1	1.9
All other external causes	2	0.6	0.0	1.2
Congenital malformations of the central nervous system	2	0.5	0.0	1.1
Nutritional anaemias	2	0.4	0.0	1.2
Tetanus	1	0.4	0.0	1.1
Accidental poisoning by exposure to noxious substance	1	0.3	0.0	0.9
Assault	1	0.3	0.0	0.9
Convulsions	1	0.3	0.0	0.9
Remainder of malignant neoplasms	1	0.2	0.0	0.6
Viral hepatitis	1	0.2	0.0	0.6
Disorders of the kidney	1	0.2	0.0	0.5
Exposure to smoke	1	0.2	0.0	0.5
Fever of unknown origin	0.4	0.1	0.0	0.3
All other diseases*	11.4	3.0	1.2	4.6
All under-five causes of death	388	100.0		

\* All other diseases include acute bronchiolitis (1.2%), fever of unknown origin (0.1%), and eight other specified conditions (1.7% combined).

**Table 4. Percent Distribution of Perinatal and Neonatal Deaths by Cause (Weighted), in Infants Aged from 0 to 27 Days , Rwanda 2008**

Causes of Death	Number	Percentage	95% Confidence Interval Limits	
			lower	upper
Perinatal and early neonatal	91	72.9	34.70	81.04
Prematurity and low birth weight	10	7.6	3.05	12.22
Pneumonia	8	6.6	1.68	11.46
Birth asphyxia	5	4.4	0.11	8.61
Intestinal infectious diseases (including diarrhoeal diseases)	3	2.1	0.00	4.98
Malaria	2	1.7	0.00	4.33
Unspecified causes of mortality	2	1.7	0.00	4.02
Congenital malformations of the central nervous system	2	1.4	0.00	3.35
Human immunodeficiency virus	1	0.8	0.00	2.28
Remainder of infectious or parasitic diseases	1	0.6	0.00	1.68
Meningitis	0.5	0.4	0.00	1.08
All causes of death in infants aged under 1 month	126	100.0		

meningitis, congenital malformations, other infectious and parasitic diseases, and unspecified causes of mortality.

## 2.4 Causes of Death among Children Aged One Month to under Five Years

A second verbal autopsy questionnaire (Appendix A) was used to gather information on symptoms and conditions leading to the death of children age four weeks (28 days) to 59 months. The causes of deaths among these children are presented in Table 5.

For this age group of children in Rwanda, pneumonia is the leading cause of death, accounting for about 19 percent of deaths to children age one month to under five years. Diarrhoeal diseases (18 percent), malaria (16 percent), malnutrition (12 percent), and HIV/AIDS (10 percent) are the next leading top five causes of death in that order. Other infectious and parasitic conditions including meningitis account for about 9 percent of all child deaths in this age group. Injuries (accidental) account

for about 2 percent of all child deaths aged between 1 month and 5 years.

## 2.5 Child Mortality by Background Characteristics

Child mortality by background characteristics are presented in Figure 2 for age at death, Figure 3 for wealth quintiles, and Figure 4 for distribution of deaths among children under age five by mother's age.

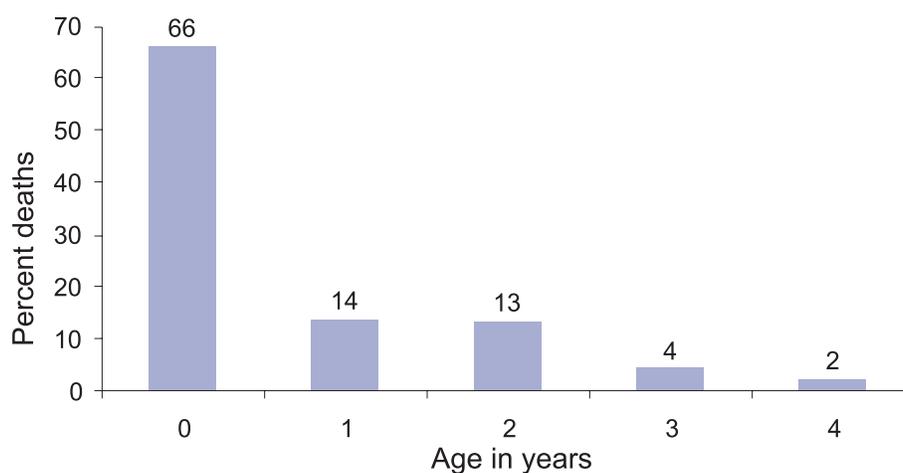
## 2.6 Place of Death

Figure 5 shows the percent distribution of deaths among children under five by the place of death. Table 6 shows the same data by background characteristics, including urban-rural residence, mother's education, household wealth, mother's age at birth, sex of the child, and age at death of a child.

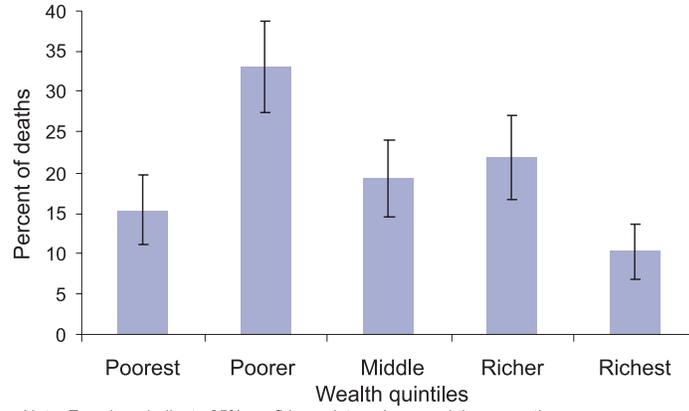
About two-thirds (66 percent) of deaths among children under five occur at home, whereas only 20 percent occur at a hospital or other

**Table 5. Proportion of Post-Neonatal and Child Deaths by Cause (Weighted), in Children Aged from 28 Days to under Five Years, Rwanda 2008**

Causes of Death	Number	Percentage	95% Confidence Interval Limits	
			lower	upper
Pneumonia	51	19.4	14.03	24.68
Intestinal infectious diseases (including diarrhoeal diseases)	46	17.6	12.43	22.71
Malaria	41	15.5	10.76	20.16
Malnutrition	31	11.7	7.35	16.02
Human immunodeficiency virus	25	9.5	5.29	13.65
Remainder of Infectious and parasitic diseases	14	5.2	2.50	7.92
All other diseases	11	4.3	1.75	6.86
Meningitis	9	3.6	1.19	5.96
Unspecified causes of mortality	8	3.0	0.86	5.10
Tuberculosis	5	1.9	0.00	3.77
Abdominal pain	4	1.5	0.12	2.85
Conditions originating in the early neonatal period	4	1.4	0.00	3.16
All other external causes	2	0.9	0.00	1.83
Nutritional anaemias	2	0.6	0.00	1.77
Birth asphyxia	2	0.6	0.00	1.53
Tetanus	1	0.6	0.00	1.61
Prematurity and low birth weight	1	0.5	0.00	1.37
Accidental poisoning by exposure to noxious substance	1	0.5	0.00	1.35
Assault	1	0.5	0.00	1.34
Convulsions	1	0.4	0.00	1.13
Remainder of malignant neoplasms	1	0.3	0.00	0.91
Viral hepatitis	1	0.3	0.00	0.90
Disorders of the kidney	1	0.3	0.00	0.77
Exposure to smoke	1	0.2	0.00	0.70
Fever of unknown origin	0	0.1	0.00	0.42
All causes of death in infants aged 1 month to under five years	263	100.0		

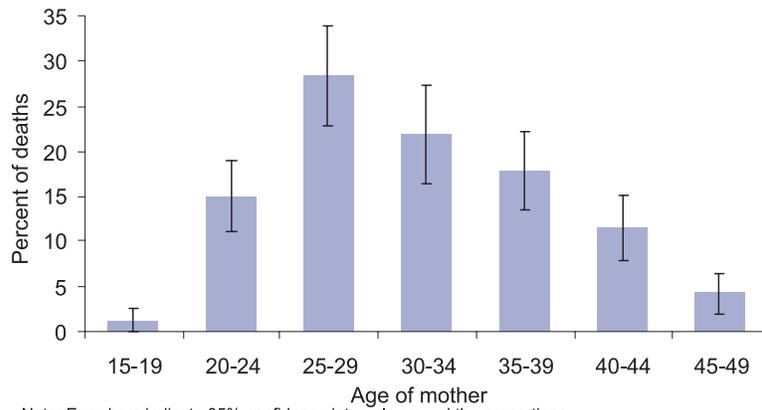


**Figure 2. Distribution of under-five deaths, by age at death of a child, Rwanda 2008.**



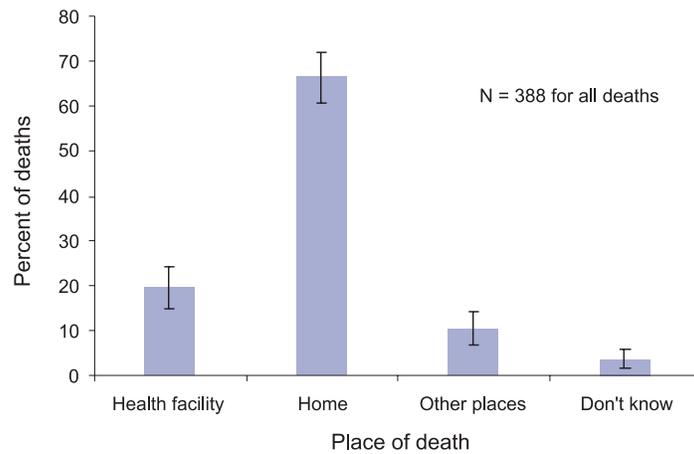
Note: Error bars indicate 95% confidence intervals around the proportions.

**Figure 3. Distribution of under-five deaths, by wealth quintiles, Rwanda 2008.**



Note: Error bars indicate 95% confidence intervals around the proportions.

**Figure 4. Distribution of deaths to children under five, by mother's age, Rwanda 2008.**



Note: Error bars indicate 95% confidence intervals around the proportions.

**Figure 5. Place of death for all deaths to children under five years, Rwanda 2008.**

**Table 6 Place of Death for All Causes of Under-Five Deaths for the Five-Year Period Preceding the Rwanda Interim DHS, by Background Characteristics, Rwanda 2008**

Characteristic	Place of Death (N=388)				Number
	Health Facility %	Home %	Other Place %	Unknown %	
<b>Residence</b>					
Urban	20.2	71.0	3.3	5.5	31
Rural	19.5	66.0	11.1	3.5	357
<b>Mother's education</b>					
No education	13.8	70.8	10.4	4.9	124
Primary	21.7	65.0	10.7	2.7	255
Secondary +	41.8	44.1	0.0	14.1	9
<b>Wealth quintile</b>					
Poorest	21.5	70.5	5.0	3.0	60
Poorer	17.2	66.5	10.8	5.6	128
Middle	21.0	63.3	12.1	3.6	75
Richer	13.7	76.4	9.9	0.0	85
Richest	34.2	44.4	15.1	6.4	40
<b>Mother's age at birth</b>					
<20	0.0	100	0	0	5
20-29	19.3	67.7	9.3	3.5	168
30-39	22.4	61.2	13.0	3.3	154
40-49	14.8	73.0	7.6	5.3	61
<b>Sex of a child</b>					
Male	18.5	68.0	9.4	4.1	174
Female	20.6	65.0	11.2	3.3	214
<b>Child's age at death (n = 342)*</b>					
0 years	19.9	67.7	8.9	3.6	226
1 year	14.0	70.1	13.6	2.3	47
2 years	22.0	59.0	16.7	2.4	46
3 years	37.4	32.0	20.7	9.9	15
4 years	24.2	35.2	40.6	0.0	8
Number for place of death	76	258	40	14	388

**Notes:**

Total N is the total number of weighted counts with no missing information.

\* The number for child's age at death (n) is not equal to total N because missing data on age.

health facility and 14 percent take place elsewhere. As shown in Table 6, there are large differences in place of death by background characteristics. For example, the proportion of deaths occurring at home declines as education of the mother increases; and the proportion of deaths that occur at health facilities increases as education of the mother increases.

Differences in place of death by mother's age at the time of the birth and by sex of the child are not large. Interpreting variations in the place of birth by the age of the child at the time of death are hampered by the small number of cases.

## 2.7 Cause-Specific Mortality Rates

One way to analyze cause of death data is to calculate cause-specific mortality rates. The simplest way to do this is to multiply the percentages of children under five who die of each of the major causes (see Table 3) by the under-five mortality rate from the 2007-08 interim DHS. Since the VA in this study was based on deaths to children under five that occurred in the five years during and prior to the 2007-08 interim DHS (years 0-4), mortality rates were calculated for this period (Table 7). Table 7 also shows the childhood mortality rates for the period 5-9 years before the interim DHS.

Rates for the five years during and before the interim DHS are all lower than those for the next five-year period prior to the survey (years 5-9). This could be due to a decline in mortality over time, possible selective omission, trans-

ference of the births of children who died, or a combination of these factors.

The cause-specific under-five mortality rates obtained from multiplying the under-five mortality rate for the 0-4 years period by the percent distribution of cause of death given in Table 3 are shown in Table 8. They reflect the prominence of perinatal and early neonatal conditions and pneumonia in childhood mortality that was previously mentioned.

## 2.8 Health Service Use in the Period Leading to Death

This section summarizes findings on the use of health services and facilities by children in the period leading to death in Rwanda. During the verbal autopsy interviews with the mother or other family member of the child who died, in addition to questions on symptoms and signs of terminal illness, questions were also asked about treatment and medical care sought prior to death of the child. It is important to note that

**Table 7. Neonatal, Post-Neonatal, Infant, Child, and Under-Five Mortality Rates per 1,000 Children Surviving to 12 Months of Age for Five-Year Periods Preceding the Rwanda Interim DHS, Rwanda 2008**

Years Preceding the Survey	Neonatal Mortality	Post-Neonatal Mortality*	Infant Mortality	Child Mortality	Under-Five Mortality
0-4	28	34	62	43	103
5-9	36	59	95	86	173

**Notes:**

\* Computed as the difference between the infant and neonatal mortality rates.

**Neonatal mortality** = the probability of dying within the first month of life.

**Postneonatal mortality** = the difference between infant and neonatal mortality.

**Infant mortality** = the probability of dying before the first birthday.

**Child mortality** = the probability of dying between the first and fifth birthday.

**Under-five mortality** = the probability of dying between birth and fifth birthday.

Source: Rwanda: Interim Demographic and Health Survey 2007-08 [unpublished data set]. Calverton, MD, USA: Rwanda Ministry of Health, National Institute of Statistics, MEASURE DHS.

**Table 8. Cause-Specific Under Five Mortality Rates (Weighted), Rwanda 2008**

Cause of Death	Rate per 1,000 Live Births
Perinatal and early neonatal	25.2
Pneumonia	15.7
Intestinal infectious diseases (including diarrhoeal diseases)	13.0
Malaria	11.3
Malnutrition	8.1
Human immunodeficiency virus [HIV] disease	6.8
Remainder of Infectious and parasitic diseases	3.8
Prematurity and low birth weight	2.9
Unspecified causes of mortality	2.6
Meningitis	2.6
Birth Asphyxia	1.9
Tuberculosis	1.3
Abdominal pain	1.0
All other external causes	0.6
Congenital malformations of the central nervous system	0.5
Nutritional anaemias	0.4
Tetanus	0.4
Accid. poisoning by exposure to noxious substance	0.3
Assault	0.3
Convulsions	0.3
Remainder of malignant neoplasms	0.2
Viral hepatitis	0.2
Disorders of the kidney	0.2
Exposure to smoke	0.2
All other diseases*	3.1
Under-five mortality rate (all causes) <sup>†</sup>	462

**Notes:**

\* All other diseases (5.6% of all deaths) include nine other specified (2.9%) and unspecified causes (2.6%), and fever of unknown origin (0.1%).

† Under-five mortality rate is per 1000 live births reported in the 2007-08 Rwanda interim DHS.

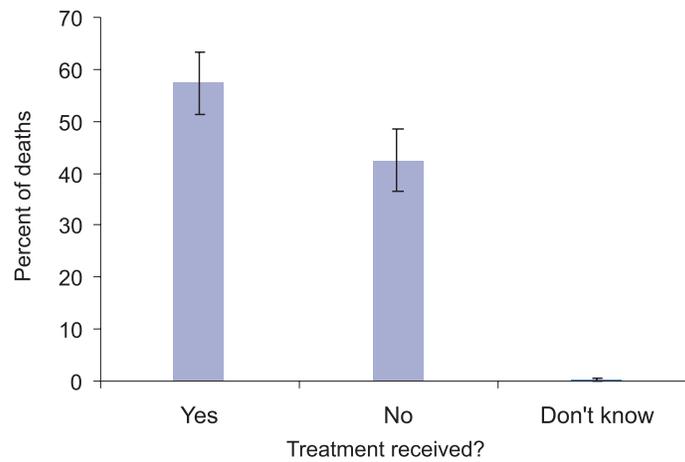
this section deals only with treatment behavior for children who died and does not reflect the treatment of children who were ill but who survived. A thorough investigation of the effect of treatment would require analysis of health service utilization for both living and dead children, controlling for possible confounding variables and taking into account the timing of treatment relative to the onset of symptoms.

Figure 6 shows that about 57 percent of children who died under age five received some type of treatment for the illness that led to death — ranging from formal health facilities, traditional healers, to home-base care using locally prepared remedies or modern drugs purchased from pharmacies. According to the study, a surprisingly large proportion (42 percent) of deceased children aged under five years did not receive any type of health care during the illness that led to their death.

Figure 7 shows the breakdown of types of places or facilities where treatment was sought for children whose parents/caregivers said they received some form of treatment during the illness leading to death. The results show that for those children who received some form of treatment, almost all children who died (91 percent) were taken to a formal health service (government and faith-based hospitals and health centers, or private clinics) at some point during the illness that led to death. About one-fifth (22 percent) of children were taken to traditional healers or herbalists at some point during their illness, 13 percent were given home remedies, and 7 percent were given medications purchased from local pharmacies or drug stores.

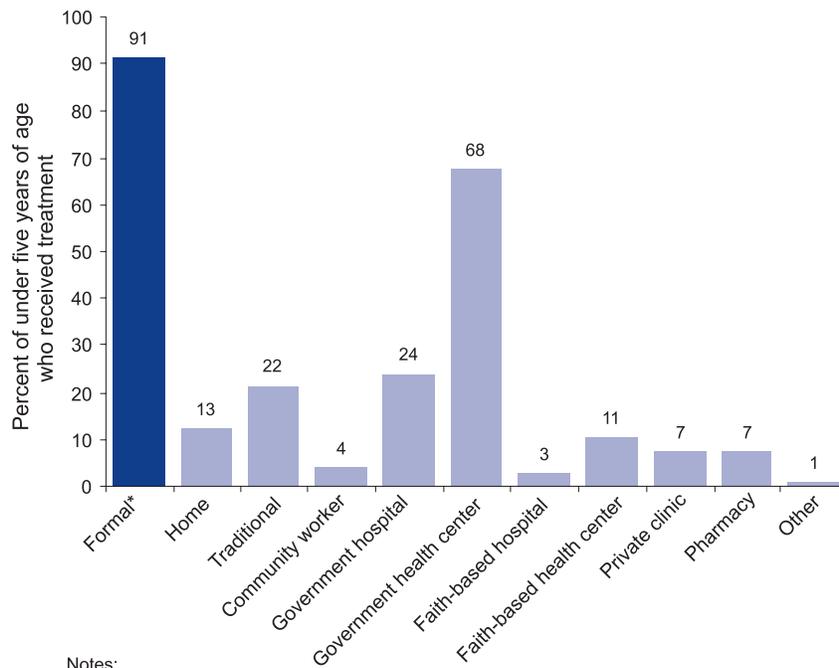
**2.9 Intervention-Addressable Mortality Burden in Children Under Age Five**

This section summarizes the mortality burden shares that are addressable by various existing and cost-effective health intervention programs. The proportion of under-five deaths that could have been addressable and perhaps prevented are shown for the following programs: the WHO’s Essential Drugs Programme (EDP) kits, WHO’s Integrated Management of Childhood Illnesses (IMCI) strategy, the Safe Motherhood Initiative (SMI)



Note: Error bars indicate 95% confidence intervals around the proportions.

**Figure 6. Percent of children receiving treatment in the period before death, Rwanda 2008.**



Notes:

Proportions do not add up to 100 percent because a child may have been taken to more than one place or health facility during illness.

\* Formal health services include government or faith-based organization hospitals or health centers, and private clinics.

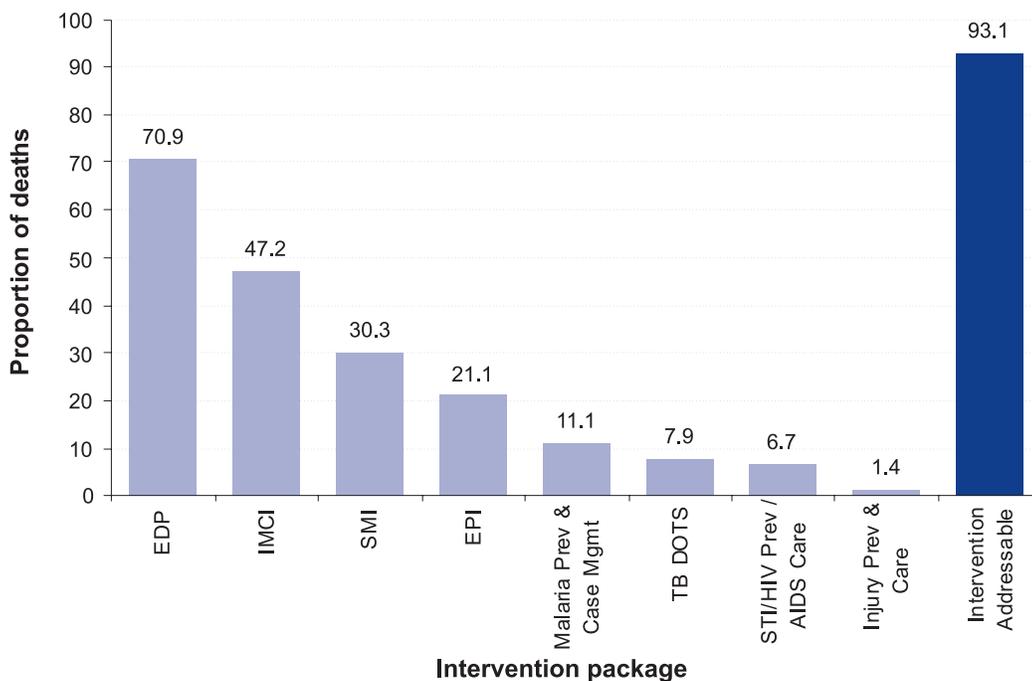
**Figure 7. Places where children received treatment at some point during their illness before death, Rwanda 2008.**

initiated by several United Nations organizations, WHO's Tuberculosis Directly Observed Treatment Short Course (TB DOTS), programs for the prevention and treatment of HIV/AIDS and other sexually transmitted infections, WHO's Expanded Programme on Immunization (EPI), and programs for the prevention of transmission of malaria that are promoted by the National Malaria Control Programme (NMCP) in a number of African countries. Figures 8 through 14 show intervention-addressable mortality burden for all addressable conditions, and for specific type of intervention package in Rwanda.

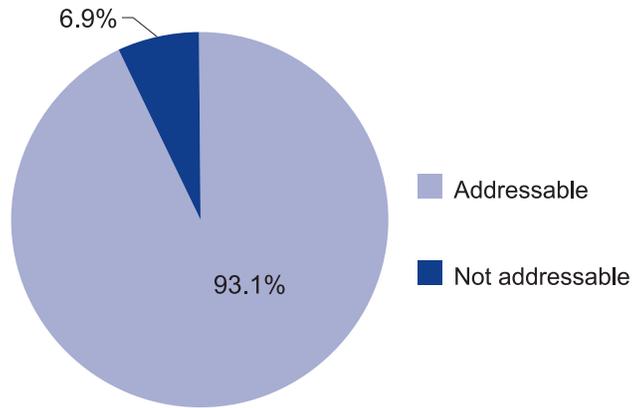
Figures 8 and 9 show the proportion of the under-five mortality burden that could potentially be addressed by various health intervention packages. Here, the mortality burden is measured in terms of proportional mortality. The grouping of causes of deaths to various intervention-addressable programs is based on the assumption that these intervention programs are available in Rwanda, or could be

made available at national or provincial levels. Almost all deaths (93 percent) among children under five in Rwanda could potentially be addressed by various health intervention packages.

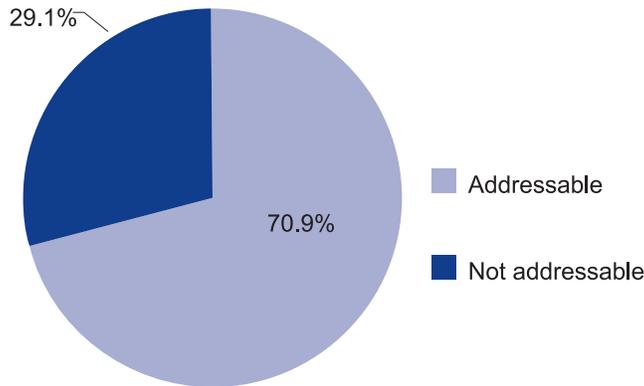
Successful implementation of EDP could potentially address about 71 percent of deaths in children under five in Rwanda (Figure 10). Figure 11 shows the proportion of premature deaths that could be avoided by the IMCI's programs in Rwanda. EPI could potentially address about 21 percent of deaths in children aged below five years in Rwanda (Figure 12). Deaths due to malaria, other acute febrile illnesses, and other perinatal and early neonatal deaths could potentially be avoided by successfully implementation of the malaria prevention and case management programs (Figure 13) and SMI (Figure 14).



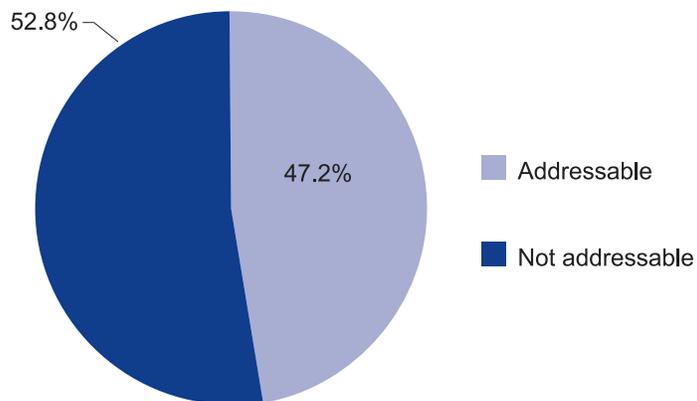
**Figure 8. Interventional-addressable shares of the mortality burden, Rwanda 2008.**



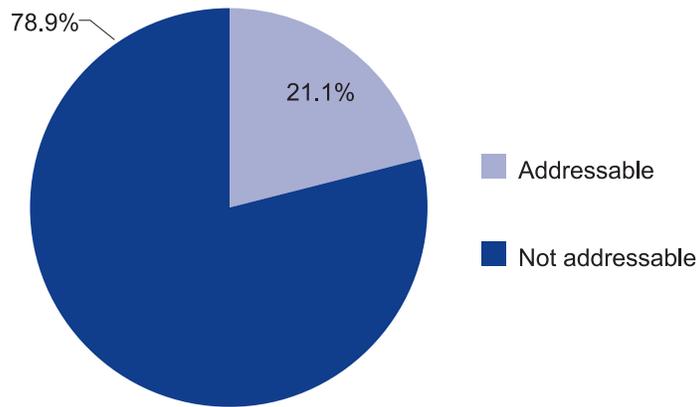
**Figure 9. Mortality burden addressable by district interventions, Rwanda 2008.**



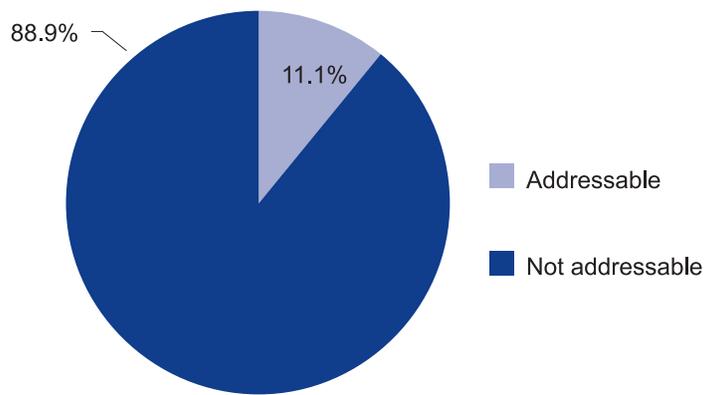
**Figure 10. Mortality burden addressable by Essential Drugs Programme, Rwanda 2008.**



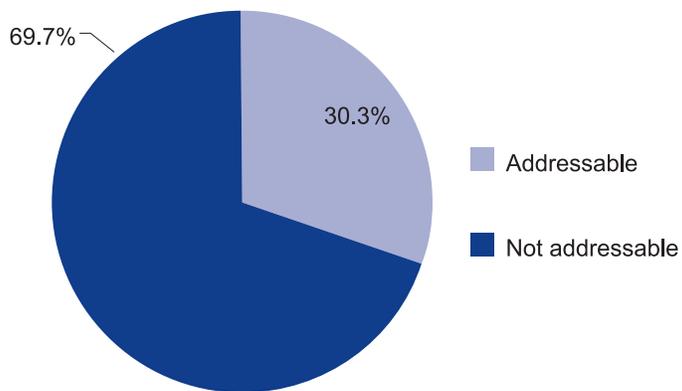
**Figure 11. Mortality burden addressable by IMCI intervention, Rwanda 2008.**



**Figure 12. Mortality burden addressable by Expanded Programme of Immunization, Rwanda 2008.**



**Figure 13. Mortality burden addressable by malaria prevention and case management, Rwanda 2008.**



**Figure 14. Mortality burden addressable by Safe Motherhood Initiative, Rwanda 2008.**



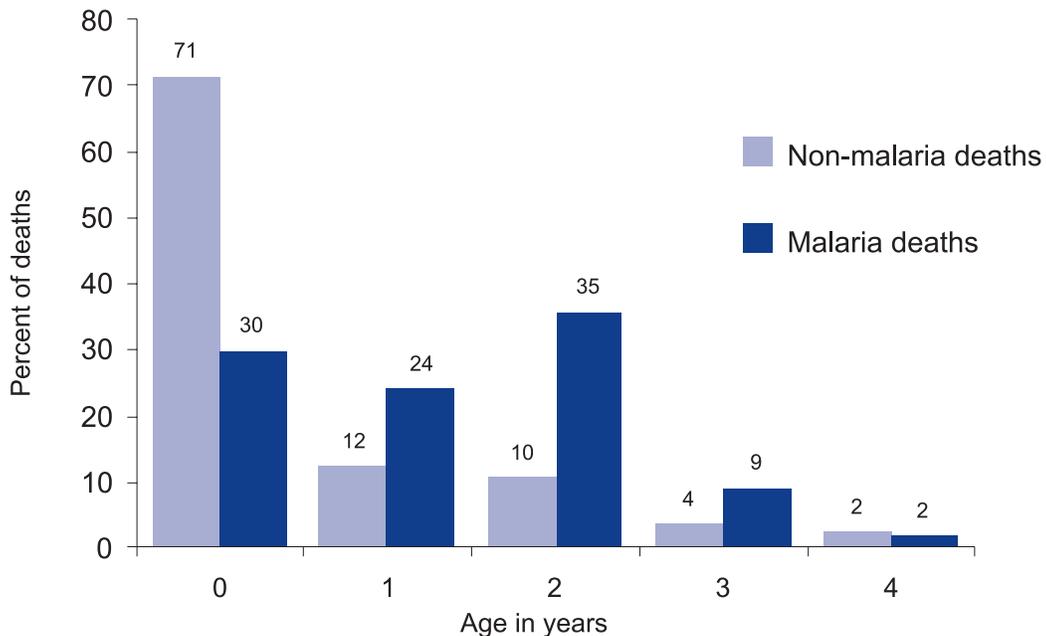
### 3 The Burden of Malaria Mortality among Children in Rwanda

#### 3.1 Malaria Mortality

Malaria is the leading cause of illness and deaths in many countries in sub-Saharan Africa, especially among children under five years. However, unlike many other countries in Africa, Rwanda has registered tremendous success in the fight against malaria. According to a recent WHO report,<sup>4</sup> Rwanda tops the list of African countries that have shown reduced malaria deaths recorded in the past two years. Nationwide distribution of treated mosquito nets and drugs to children and pregnant mothers, together with the indoor residual spray are among the major efforts that have yielded success in the ant-malaria campaign in Rwanda.

Despite success in combating the disease in Rwanda, malaria is still contributing significantly to the overall burden of mortality

— it is the fourth leading cause of all deaths in children under five in Rwanda during the period of this study. In the Rwanda VA study, an underlying cause of death was reached and assigned by two trained medical doctors who agreed on the cause based on the review of signs, symptoms and their duration, and other information collected in the VA questionnaires. Thus, malaria as a cause of death is based on signs and symptoms, and not based on laboratory confirmation. Figure 15 shows the distribution of under-five deaths by age at death in years, and the relative contribution of malaria and all other causes to mortality at each age. As mentioned earlier in this report, malaria accounts for 11 percent of all deaths in children under five in Rwanda. Figure 15 also shows that almost 90 percent of all malaria deaths in children under five occur in the first two years of life. Malaria accounts for a



**Figure 15.** Distribution of deaths by age, and the contribution of malaria deaths to the age distribution, Rwanda 2008.

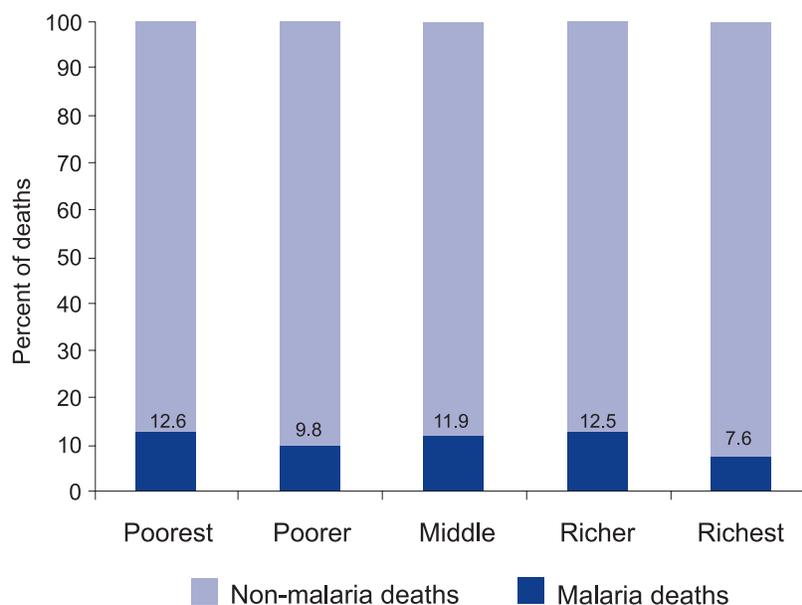
relatively smaller proportion of deaths at age three and age four.

Table 9 shows separate distributions of malaria and non-malaria deaths by wealth quintiles. From the table, it is observed that malaria deaths are largely concentrated between poorer and richer wealth quintiles. A large proportion of non-malaria deaths occurs in the poorer wealth quintile. Figure 16 shows the contribution of malaria deaths by wealth quintiles, which indicates that on average malaria is responsible for about 11% of all deaths in each wealth quintile, except in the richest quintile (8%).

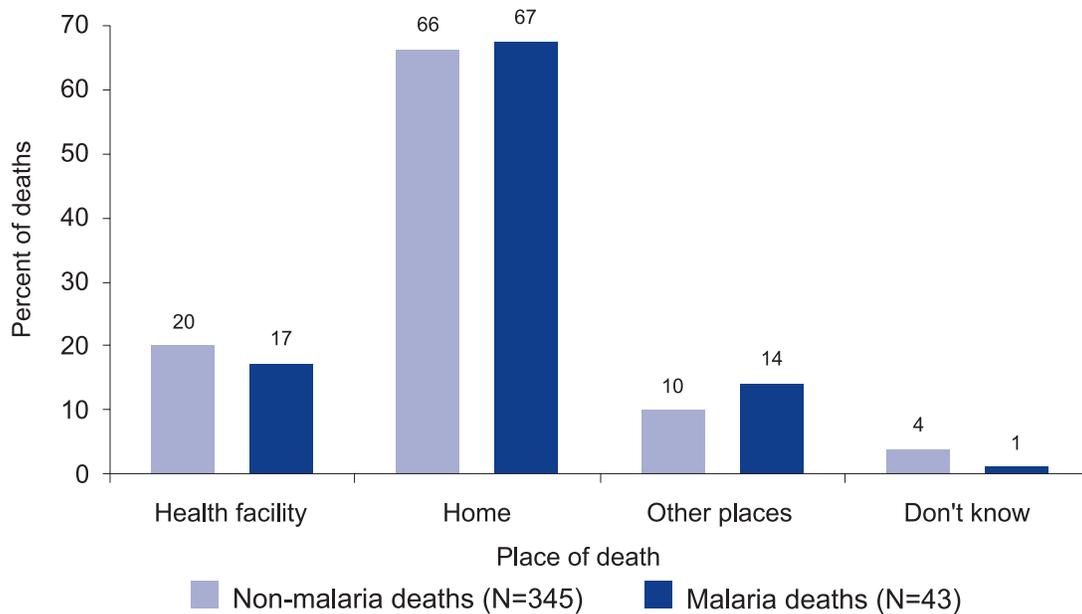
Figure 17 shows a comparison of deaths due to malaria versus deaths from all other causes (non-malaria deaths) by place of death. It shows that both malaria and non-malaria deaths are more likely to occur at home. However, there is very little difference between malaria and non-malaria deaths by place of death.

**Table 9. Distribution of Malaria and Non-malaria Deaths among Children under Five, According to Wealth Quintiles, Rwanda 2008**

Wealth Quintile	Non-malaria		Malaria		All	
	N	%	N	%	N	%
Poorest	52	15.1	8	17.6	60	15.4
Poorer	116	33.6	13	29.6	129	33.2
Middle	66	19.1	9	20.9	75	19.3
Richer	74	21.6	11	24.9	85	21.9
Richest	37	10.6	3	7.1	40	10.3
All deaths	345	100.0	43	100.0	388	100.0



**Figure 16. Proportion of deaths due to malaria and other causes within each wealth quintile, Rwanda 2008.**

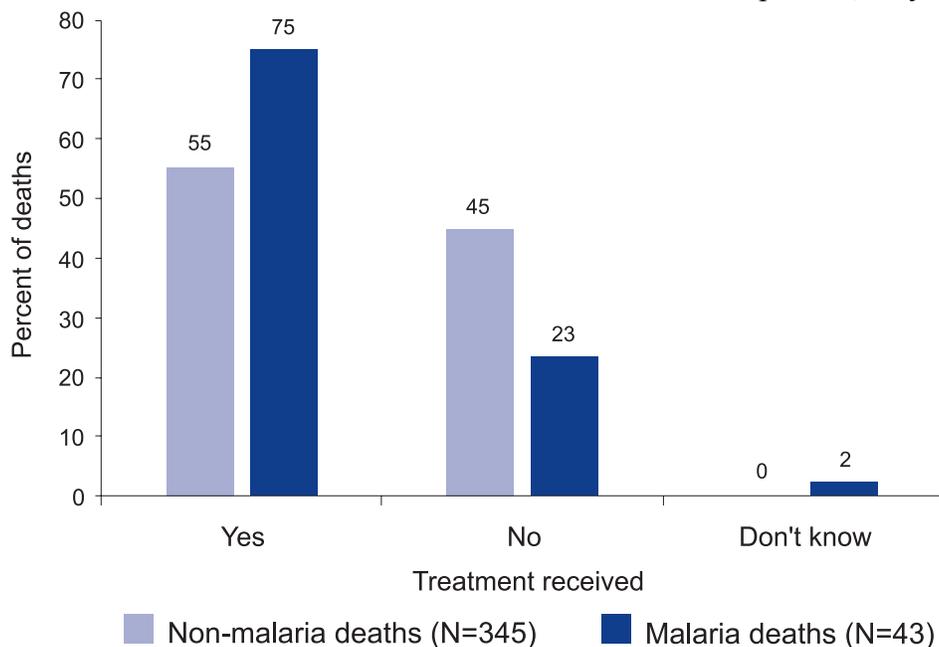


**Figure 17. Place of death, comparing malaria with non-malaria deaths, Rwanda 2008.**

### 3.2 Health Service Use in the Period Leading to Death Due to Malaria

Deaths due to malaria can be prevented by prompt treatment with the appropriate medicines. Figure 18 shows the proportion of

children who received treatment at some point during the illness that preceded their death. Data are shown separately for deaths due to malaria and deaths due to other causes. About 75 percent of children who died from malaria received some form of treatment, be it formal or informal, during the illness that preceded their death. In comparison, only about half of



**Figure 18. Proportion of children who received treatment at some point in time during their illness before death, Rwanda 2008.**

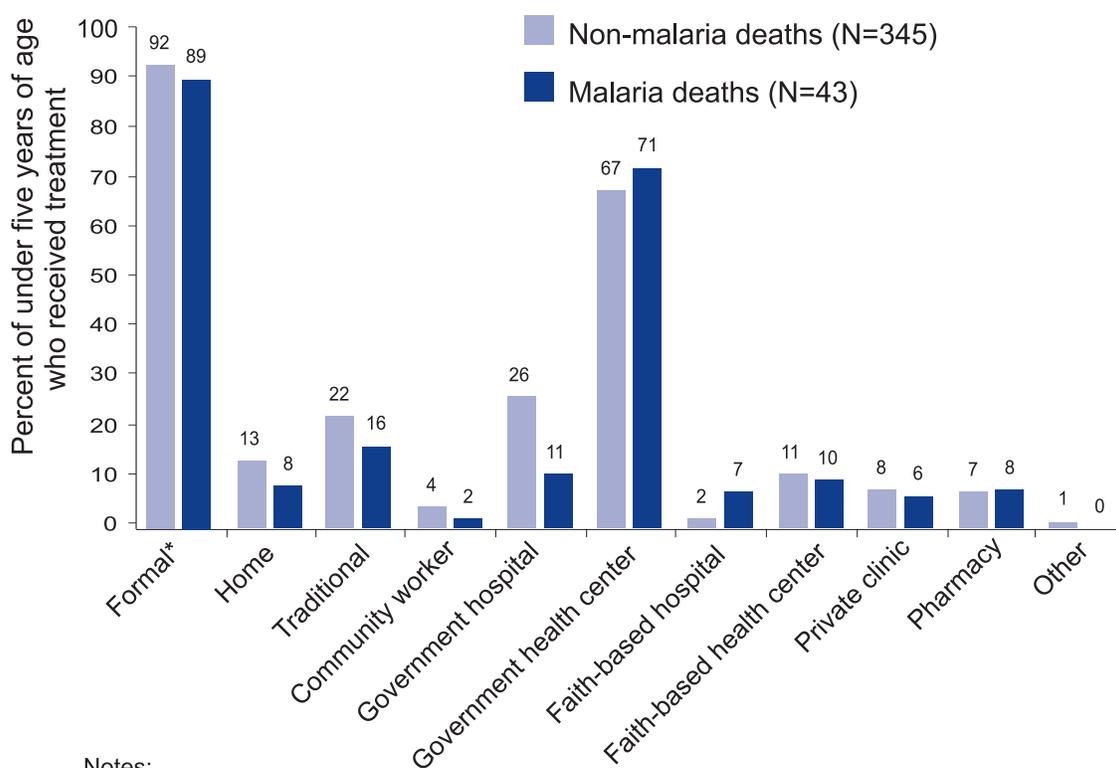
children who died from causes other than malaria received treatment during their illness.

Figure 19 shows the types of places or facilities in Rwanda where children received treatment at some point during the illness preceding their death, comparing children who died from malaria with those who died from causes other than malaria.

Among children who died from malaria and who received treatment prior to death, about 89 percent were taken to formal health facilities — government or private hospitals, health centers, or clinics. The most common place sought for treatment among children who died from malaria and those who died from all other

causes was government health centers (71 percent and 67 percent, respectively). Visits to the traditional healers in search for treatment is also common in Rwanda. About 22 percent of all deaths among children who died from causes other than malaria and about 16 percent of children who died due to malaria were taken to the traditional healers or herbalists at some point during their illnesses before death.

Only 11 percent of children who died from malaria were taken to government hospitals for treatment, compared with 26 percent of those who died from non-malaria causes and were taken to government hospital for treatment.



Notes:

Proportions do not add up to 100 percent because a child may have been taken to more than one place or health facility during illness.

\* Formal health services include government or faith-based organization hospitals or health centers, and private clinics.

**Figure 19. Source of treatment before death for deaths among children under five, by non-malaria and malaria cause of death, Rwanda 2008.**

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# Appendix A Questionnaires

## INTERNATIONAL VERBAL AUTOPSY QUESTIONNAIRE 1 DEATH OF A CHILD AGED UNDER 4 WEEKS (28 Days)

### SECTION 1.1 DEMOGRAPHIC INFORMATION (TO BE PROVIDED AND COMPLETED IN THE OFFICE)

IZINA RY'UMUDUGUDU _____	ADDRESS/AHO INZU IHEREYE _____
IZINA RYA NYIR'URUGO _____	_____
INTARA _____	_____
AKARERE _____	_____
UMURENGE _____	_____
AKAGARI _____	_____
UMUDUGUDU _____	_____
NUMERO DE GRAPPE/AGACE K'IBARURA _____	_____
NUMERO DE STRUCTURE/N0 Y'IGIPANGU _____	_____
NUMERO DU MENAGE/N0 Y'URUGO _____	_____
UMUGI/ICYARO (UMUGI=1, ICYARO=2) _____	_____
UMUGI/LARGE TOWN/SMALL TOWN/VILLAGE (UMUJYI WA KIGALI=1, UNDI MUJYI=2, ICYARO=3) _____	_____
IZINA RYA MAMAN W'UMWANA WAPFUYE _____	_____
NUMERO YUMURONGO WANYINA WUMWANA WAPFUYE _____	_____
NUMERO YUMURONGO UMWANA WAPFUYE _____	_____
Uwapfuye yitwaga nde? UMWANA YAPFUYE AFITE IMYAKA INGAHE? _____	(IZINA) _____
STATUT DE RESIDENCE DE L'ENFANT DECEDE _____	RESIDENT DANS LA ZONE DE DENOMBREMENT 1 CORPS RAPATRIE A LA MAISON POUR ENTERREMENT 2 >> STOP RENTRE A LA MAISON MALADE ..... 3

### SECTION 1.2 INSHURO UBZWA YASUWE

	1	2	3	INSHURO YA NYUMA
ITARIKI _____	_____	_____	_____	UMUNSI _____ UKWEZI _____ UMWAKA 2 0 _____ NUMERO UBZWA _____
IZINA RY'U UBAZA _____	_____	_____	_____	IGISUBIZO _____
IGISUBIZO* _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ITARIKI N'ISAHA ITARIKI _____ UBAZA AZASUBIRIRAYO: ISAHA _____	_____	_____		UMUBARE RUSANGE W' INGENDO <input type="checkbox"/>

\* CODE IGISUBIZO

- |                            |                               |
|----------------------------|-------------------------------|
| 01 BYUJWE BYOSE            | 07 URUPFU RWABAYE MUGIHE      |
| 02 MURUGO NTIBAHARI        | KITAREBWA N'UBU BUSHAKASHATSI |
| 03 IBAZA RIRASUBITSWE      | 08 URUGO RWARASENYUTSE        |
| 04 UBZWA YANZE GUSUBIZA    |                               |
| 05 BYUJWE IGICE            | 96 IKINDI _____               |
| 06 NTAWA USHOBORA GUSUBIZA | (SOBANURA)                    |
| UBONETSE                   |                               |

IZINA _____	UMUGENZUZI _____	CODE _____	IZINA _____	USHINZWE IKOSORA MU KAZI _____	CODE _____	UKOSORERA MU BIRO _____	BYABONWE _____
ITARIKI _____	<input type="checkbox"/>	<input type="checkbox"/>	ITARIKI _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

INYANDIKO YEMEZA KWEMERA UBUSHAKASHATSI

Mwaramutse, Nitwa.....Nkaba ndi Intumwa ya Minisiteri y'Ubuzima ifatanije n'ikigo cy'Igihugu gishinzwe Ibarurisha-mibare. Turatara amakuru ku bijyanye no kumenya impamvu zica abantu mu baturage. Amakuru yose mumpa arabikwa nk'ibanga. Nta buryo bwatuma umenyekana cyangwa uwapfuye yamenyekana, bizaguma mu rwego rw'aka kazi gusa. Kubazwa biba kubushake, ntawe tubihatira, ushobora guhitamo kubireka igihe cyose wumva ushatse guhagarika ibiganiro, ntangaruka n'imwe byagutera. Ariko rero twizeye ko nta mpamvu yakubuza kwitabira ubu bushakashatsi mu gihe tubona ko ibizava muri ubu bushakashatsi bizafasha Leta guhamya serivisi zagenewe abatwaga. Muri aka kanya haba hari ikibazo mwifuzaga kumbaza ku by'ingenzi bikubiye muri ubu bushakashatsi n'icyo bugamije? Nshobora se gutangira nkababaza?

Umukono w'ubaza: \_\_\_\_\_

Itariki: \_\_\_\_\_

USUBIZA YEMEYE KUBAZWA

... 1 ↓ USABWA GUSUBIZA YABYANZE

2 → GUHAGARIKA

NO.	IBIBAZO N'UTUYUNGURUZO	INTERA ZA KODI	SIMBUKA
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IGICE CYA 2. AMAKURU Y'IBANZE K'USUBIZA

201	ANDIKA ISAHA UTANGIRIYEHU KUBAZA	ISAHA ..... IMINOTA .....	<table border="1"><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>				
202	IZINA RY'USUBIZA	_____ (IZINA)					
203	Upfana iki n'umuntu wapfuye?	ISE ..... 1 NYINA ..... 2 UMUVANDIMWE ..... 4 IKINDI BAPFANA ..... 6 (BIVUGE) NTACYO BAPFANA ..... 8					
204	Wabanaga n'uwapfuye mu gihe yitabaga Imana?	YEGO ..... 1 OYA ..... 2					

IGICE 3. AMAKURU KU MUNTU WAPFUYE, ITARIKI NAHO YAPFIRIYE

302	Uwapfuye yari igitsina gore cg se Gabo?	GORE ..... 1 GABO ..... 2									
303	Uwapfuye yari yaravutse ryari? ANDIKA '98' NIBA UTAZI UMUNSI cg SE UKWEZI ANDIAK '9998' NIBA UTAZI UMWAKA	UMUNSI ..... UKWEZI ..... UMWAKA .....	<table border="1"><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>								
304	Uruhinja yapfuye amaze igihe kingana iki?	IGIHE MU MINSI .....	<table border="1"><tr><td></td><td></td></tr></table>								
305	Yapfuye ryari? ANDIKA '98' NIBA UTAZI UMUNSI cg SE UKWEZI ANDIAK '9998' NIBA UTAZI UMWAKA	UMUNSI ..... UKWEZI ..... UMWAKA .....	<table border="1"><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>								
306	Yaguye he?	IBITARO (IVUGE) ..... 1 IKINDI KIGO CY'UBUVUZI (IVUGE) ..... 2 MU RUGO ..... 3 AHANDI ..... 6 (AHANDI) IKIGO NDERA BUZIMA (IVUGE) ..... 7 NTABYO AZI ..... 8									

**IGICE 4. UKO USUBIZA ABONA CYABA CYARATEYE URUPFU UWARI URWAYE**

401	Ushobora kumpa amakuru ajyanye n'uburwayi bwatumye apfa? <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
402	IMPAMVU YA MBERE YATEYE URUPFU DUKURIKIJE UKO ABIBONA <hr/>
403	IMPAMVU YA KABIRI YATEYE URUPFU DUKURIKIJE UKO ABIBONA <hr/>

**IGICE 5. AMATEKA YO GUTWARA INDA**

501	<p><i>NDAHAKA KU KUKUBAZA IBIBAZO BIJYANYE N'UMUBYEYI N'IBIMENYETSO UWAPFUYE YARI AFITE AKIMARA KUVUKA NA NYUMA YAHO GATO BIMWE MU BIBAZO BISHOBORA KUBA BITAJYANYE N'URUPFU RW'URUHINJA NDAGUSABYE KUMFASHA KUMVA NEZA IKIGAMUJWE, BITYO BIKADUFASHA KUMENYA IBIMENYETSO UWAPFUYE YARI AFITE BISHOBOKA</i></p>																																																		
502	Habonetse imbyaro zingana iki, harimo, nizavutse zipfuye mbere y'uru ruhinja?	<p>UMUBARE WABYAWWE ABAVUTSE BAPFUYE ..... <input type="text"/> <input type="text"/></p> <p>NTABYO AZI ..... 98</p>																																																	
503	Ilgihe umwana yavukaga inda yari ifite amezi angahe?	<p>AMEZI ..... <input type="text"/> <input type="text"/></p> <p>NTABYO AZI ..... 98</p>																																																	
504	Inda yavutse mbere y'igihe cyari giteganijwe?	<p>YEGO ..... 1</p> <p>OYA ..... 2</p> <p>NTABYO AZI ..... 8</p>	<p>→ 506</p> <p>→ 506</p>																																																
505	Igihe agahinja kavukaga inda yari ifite ibyumweru bingahe?	<p>IBYUMWERU ..... <input type="text"/> <input type="text"/></p> <p>NTABYO AZI ..... 98</p>																																																	
506	Mu gihe yari atwite, yigeze agira indwara zikurikira:	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">YEGO</th> <th style="width: 10%; text-align: center;">OYA</th> <th style="width: 10%; text-align: center;">NTAZI</th> </tr> </thead> <tbody> <tr> <td>1 Umuvuduko ukabije w'amaraso?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>2 Indwara y'umutima?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>3 Diyabeti?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>4 Igicuri/gushikagurika?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>5 yaba yaragize indi ndwara izwi kwa muganga</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td colspan="4" style="text-align: center;">(YIVUGE)</td> </tr> </tbody> </table>		YEGO	OYA	NTAZI	1 Umuvuduko ukabije w'amaraso?	.....	1	2 8	2 Indwara y'umutima?	.....	1	2 8	3 Diyabeti?	.....	1	2 8	4 Igicuri/gushikagurika?	.....	1	2 8	5 yaba yaragize indi ndwara izwi kwa muganga	.....	1	2 8	(YIVUGE)																								
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507	Mu mezi atatu yanyuma atwite, yigeze agira imwe muri izi ndwara:	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">YEGO</th> <th style="width: 10%; text-align: center;">OYA</th> <th style="width: 10%; text-align: center;">NTAZI</th> </tr> </thead> <tbody> <tr> <td>01 Kuvira kunda?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>02 Ibintu binuka biva munda ibyara?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>03 kubyimba mu maso?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>04 Kurwara umutwe?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>05 Kutabona neza?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>06 kwishikagura cyane?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>07 indwara itera umuriro?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>08 Kubabara munda cyane bitagamije kubyara?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>09 Guhindura ibara no guhumeka nabi?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td>10 yaba se yaragize indi ndwara izwi?</td> <td style="text-align: center;">.....</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2 8</td> </tr> <tr> <td colspan="4" style="text-align: center;">(YIVUGE)</td> </tr> </tbody> </table>		YEGO	OYA	NTAZI	01 Kuvira kunda?	.....	1	2 8	02 Ibintu binuka biva munda ibyara?	.....	1	2 8	03 kubyimba mu maso?	.....	1	2 8	04 Kurwara umutwe?	.....	1	2 8	05 Kutabona neza?	.....	1	2 8	06 kwishikagura cyane?	.....	1	2 8	07 indwara itera umuriro?	.....	1	2 8	08 Kubabara munda cyane bitagamije kubyara?	.....	1	2 8	09 Guhindura ibara no guhumeka nabi?	.....	1	2 8	10 yaba se yaragize indi ndwara izwi?	.....	1	2 8	(YIVUGE)				
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(YIVUGE)																																																			
508	Umwana yavutse wenyine cyangwa ni impanga?	<p>WENYINE ..... 1</p> <p>IMPANGA ..... 2</p> <p>BATATU/BARENGA ..... 3</p> <p>NTABYO AZI ..... 8</p>	<p>→ 601</p> <p>→ 601</p>																																																
509	Umwana wafuye yari uwa kangahe?	<p>UWA MBERE ..... 1</p> <p>UWAKABIRI ..... 2</p> <p>UWA 3 GUSUBIZA HEJURU ..... 3</p> <p>NTABYO AZI ..... 8</p>																																																	

**IGICE 6. AMATEKA YO KUBYARA**

601	Umwana yavukiye he?	IBITARO ..... 1 IRINDI VURIRO ..... 2 MU RUGO ..... 3 AHANDI ..... 6 (HAVUGE) NTABYO AZI ..... 8	
602	Ninde wamubyaje?	MUGANGA MUKURU ..... 1 UMUFOROMO ..... 2 UMUBYAZA GIHANGA ..... 3 BAFITANYE ISANO ..... 4 WE UBWE ..... 5 UNDI ..... 6 (MUVUGE) NTABYO AZI ..... 8	
603	Isuha yamenetse ryari?	MBERE KO IBISE BITANGIRA ..... 1 ARI KUNDA ..... 2 NTABYO AZI ..... 8	
604	Hashize amasaha angaha isuha imenetse n'igihe umwana yavutse?	MUNSI AMASAHA 24 ..... 1 HEJURU YA 24 ..... 2 NTABYO AZI ..... 8	
605	Ayo mazi y'isaho yaranukaga?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
606	inda yigeze ibaho itonka?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 608 → 608
607	Ni ryari inda yaretse konka?	MBERE YO KUJYA KUNDA ..... 1 ARI KU NDA ..... 2 NTABYO AZI ..... 8	
608	Bigeze bumva uko umutima w'umwana utera uri kunda?/ Umugore ari kunda bigeze bumva ko umutima w'umwana utera?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 610 → 610
609	Umutima w'umwana warateraga?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
610	Umugore atangiye ibise, yaba yaravaga cyane?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
611	Umugore ajya kunda yaba yari afite umuriro?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
612	Inda yayimazeho igihe kingana iki ababara?	MUNSI AMASAHA 12 ..... 1 HAGATI 12-23 ..... 2 HEJURA YA 24 ..... 3 NTABYO AZI ..... 8	
613	Yaba yarabyaye neza?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 615 → 615
614	Yaba yarabyaye ate?	GUKURURA NIBYUMA ..... 1 SEZARIYENE ..... 2 IBINDI ..... 6 (BIVUGE) NTABYO AZI ..... 8	
615	Ni ikihe gice cy'umubiri cyaje mbere?	UMUTWE ..... 1 IKIBUNO ..... 2 AMAGURU ..... 3 AMABOKO ..... 4 IKINDI ..... 6 (BIVUGE) NTABYO AZI ..... 8	
616	Urureri rwaba nwarasohotse mbere y'uko umwana aza?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	

**IGICE 7. UBURYO UMWANA YARIMO AKIVUKA**

701	Umwana avuka yanganaga ate?	MUTO UGERERANJE NUSANZWE ..... 1 USANZWE ..... 2 MUNINI KURUSHA USANZWE ..... 3 NTABYO AZI ..... 8					
702	Uruhinja rwavutse rutageje igihe?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 704 → 704				
703	Inda yaba yaramaze amezi angaha ayitwite? VUGA IGIHE CYOSE INDA YAMAZE	AMEZI ..... 1 IBYUMWERU ..... 2 NTABYO AZI ..... 9 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>				
704	Umwana yaba yaravukanye ibiro bingaha?	IBIRO ..... NTABYO AZI ..... 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>				
705	Hari ikintu cyaba cyarashyizwe ku rureri umwana akivuka?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 707 → 707				
706	Ni igiki?	_____ _____ (KIVUGE)					
707	Haba se hari ikimenyetso cyo gukomereka cyangwa se cyo kuvuna amagufa yari afite?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 709 → 709				
708	Ibimenyetso byibikomere byari he?	_____ _____ (HAVUGE)					
709	Haba hari aho afite ikimenyetso cyo kumugara (Paralyisie)?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8					
710	Umwana yaba yari afite ubusembwa?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 712 → 712				
711	Ni ubuhe bwoko bw'ubusembwa umwana yari afite?	UBUSEMBWA BWO KUMUGONGO W O HASI ..... 1 UMUTWE W'IGIHAZA ..... 2 AGATWE GATO CYANE ..... 3 GUHOMBANA URWASAYA /URUSENGE AKANWA ..... 4 UBUNDI BUSEMBWA ..... 6 NTABYO AZI ..... 8	(BUVUGE)				
712	Umwana avuka yasaga ate?	BISANZWE ..... 1 UFITE AMARASO MAKE ..... 2 UBURURU ..... 3 NTABYO AZI ..... 8					
713	Yaba yarigeze ahumekaho nibura gake akimara kuvuka?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8					
714	Yigeze yongererwa umwuka akimara kuvuka?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8					
715	Yigeze arira akivuka, naho kaba gake	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8					
716	Yigeze anyeganyega naho kaba gake?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8					
717	REBA 713, 715, NA 716 KURI KODI 'OYA': KODI ZOSE ESHATU 'OYA': URUHINJA NTIRWAHUMETSE, <input type="checkbox"/> URUHINJA NTIRWARIZE, <input type="checkbox"/> URUHINJA NTIRWANYEGANYEZE	IBINDI <input type="checkbox"/>	→ 801				
718	Niba uruhinja rutararize, nta guhumeka nta kunyeganyega, rwavutse rwarapfuye?	YEGO ..... 1 OYA ..... 2	→ 801				

**IGICE 8. AMATEKA YA GISIDA**

801	Uruhinja rw'igeze se rugira ibikomere cg se impanuka byatumye apfa?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 804 → 804
802	Ni ubuhe bwoko bw'ibikomere/impanuka uwafuye yaba yaragize?	IMPANUKA ZO MU MUHANDA ..... 01 KUGWA ..... 02 KUOHAMA ..... 03 UBURUZI ..... 04 GUSHYA ..... 05 GUHOTHERWA ..... 06 IBINDI ..... 96 (BIVUGE)	
803	Haba se hari undi muntu wamuteye ibyo bikomere cg se iza impanuka kubushake?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
804	Ukeka ko se haba hari igisimba cyamuriye cg se agakoko kamurumye kagatuma apfa?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 901 → 901
805	Ni ubuhe bwoko bw'igisimba/agakoko?	IMBWA ..... 1 INZOKA ..... 2 AGAKOKO ..... 3 IKINDI ..... 6 (KIVUGE) NTABYO AZI ..... 8	

**IGICE 9. AMATEKA Y'UBURWAYI AKIMARA KUVUKA**

901	Umwana yigeze yonka cg se akoresha bibero?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 905 → 905				
902	Umwana yitabiriye konka cg se gufata bibero hashize igihe kingana iki avutse?	AMASAHA ..... 1 IMINSI ..... 2 NTABYO AZI ..... 9 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>				
903	Umwana yahagaritse konka cg se gukoresha bibero?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 905 → 905				
904	Umwana yaba yarahagaritse konka cg se gufata bubero hashize igihe kingana iki avutse	IMINSI ..... NTABYO AZI ..... 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>				
905	Umwana yahawe amashereka gusa ntakindi kinyobwa/ kiribwa avangiwe?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8					
906	Umwana yaba yarigeze agira ibintu byo kugagara/ kuzana urufuzi/kubirindura ijisho?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 908 → 908				
907	Ibyo kugagara/ kuzana urufuzi/kubirindura ijisho byaje amaze igihe kingana iki avutse?	IMINSI ..... NTABYO AZI ..... 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>				
908	Umwana yigeze agagaza ibimenyetso byo guhwera cg se yitwara buheto?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8					
909	Umwana yigeze abyimba igihorihori?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 911 → 911				
910	Umwana yagagaye amaze igihe kingana iki avutse?	IMINSI ..... NTABYO AZI ..... 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>				
911	Umwana yaba yarigeze ata ubwenge n'iyumve n'yo haba hari umukozeho?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 913 → 913				
912	Umwana yaba yaramaze igihe kingana iki atumva umukoze cg se ataragarura ubwenge	IMINSI ..... NTABYO AZI ..... 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>				
913	Umwana yaba yaragize umuriro?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 915 → 915				
914	Umwana yaba yaragize umuriro amaze iminsi ingaha avutse?	IMINSI ..... NTABYO AZI ..... 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>				

915	umwana yigeze agira ubukonji umuntu akabwumva amukozeho?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 917 → 917
916	Umwana yaba yaramaze igihe kingana iki afite ubukonje umuntu yumva ari uko amukozeho nyuma y'aho avukiye?	IMINSI ..... <input type="text"/> NTABYO AZI ..... 9 8		
917	Uruhinja rwigeze rukorora?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 919 → 919
918	Umwana yatangiye gukorora amaze iminsi ingaha avutse?	IMINSI ..... <input type="text"/> NTABYO AZI ..... 9 8		
919	Uruhinja rwigeze ruhumeka insigane?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 921 → 921
920	Umwana yahumetse insigane hashize iminsi ingaha avutse?	IMINSI ..... <input type="text"/> NTABYO AZI ..... 9 8		
921	Uruhinja rwigeze rugira ingorane zo guhumeka?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 926 → 926
922	Uruhinja rwagize ingorane zo guhumeka rumaze iminsi ingaha ruvutse?	IMINSI ..... <input type="text"/> NTABYO AZI ..... 9 8		
923	Uruhinja rwigeze rugira imbavu n'agatuzza bitebera mu gihe ruhumeka?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		
924	Uruhinja rwigeze rutishimira uko rufashwe rurira rutera amaguru? EREKANA UKO BIKORWA	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		
925	Uruhinja rwigeze rugira amazuru anyeganyega agana hasi no hejuru?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		
926	Uruhinja rwigeze rugira impiswi?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 930 → 930
927	uruhinja rwagize impiswi rumaze iminsi ingaha ruvutse?	IMINSI ..... <input type="text"/> NTABYO AZI ..... 9 8		
928	Mu gihe impiswi yari ikataje, yaba yaritumye inshuro zingaha mu munsu?	UMUBARE ..... <input type="text"/> NTABYO AZI ..... 9 8		
929	Umusarane we waba warimo amaraso?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		
930	Uruhinja rwigeze ruruka?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 933 → 933
931	Kuruka byatangiye hashize iminsi ingana iki amaze kuvuka?	IMINSI ..... <input type="text"/> NTABYO AZI ..... 9 8		

932	Mu gihe kuruka byari bifite intera ikomeye, yabikoraga kangaha ku munsi?	UMUBARE INSHURO KU MUNSI ..... <input type="text"/> NTABYO AZI ..... 9 8	
933	Umwana yaba yarabyimbye inda?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 935 → 935
934	Umwana yaba yarabyimbye inda amaze iminsi ingaha avutse?	IMINSI ..... <input type="text"/> NTABYO AZI ..... 9 8	
935	Umwana yaba yaragize umukondo utukura cg se hakavamo amashyira cyangwa ibindi bintu?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
936	Umwana yaba yarageze asesa ibitobore ku mubiri?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
937	Umwana se yaba yaragize ibiganza n'ibirenge by'umuhondo	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 1001 → 1001
938	Ibyo biganza n'ibirenge by'umuhondo byaba byaratangiye afite iminsi ingaha avutse?	IMINSI ..... <input type="text"/> NTABYO AZI ..... 9 8	
939	Ibyo biganza by'umuhonda yaba yarabimaranye igihe kingana iki?	IMINSI ..... <input type="text"/> NTABYO AZI ..... 9 8	

**IGICE 10. UBUZIMA BW'ABAGORE N'IMPAMVU ZABWO NYAMUKURU**

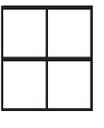
1001	Nyina w'umwana yari afite imyaka ingaha igihe umwana yapfaga?	IMYAKA ..... <input type="text"/> NTABYO AZI ..... 9 8	
1002	Nyina w'umwana yaba yaragiye kwipimisha inda atwite?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
1003	Nyina yaba yarabonye inkingo zabugenewe za tetanosi (agakwega)?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 1005 → 1005
1004	Yakingiyeye inkingo za tetanosi inshuro zingaha?	UMUBARE WA DOZI ..... <input type="text"/> NTABYO AZI ..... 9 8	
1005	Ubuzima bwa nyina ubu bitaye bute?	MUZIMA ..... 1 ARARWAYE ..... 2 NTA KIRIHO ..... 3 NTABYO AZI ..... 8	

NO.	IBIBAZO N'UBUYUNGURUZO	KATEGORI YA KODI	SIMBUKA
<b>IGICE 11 KUVURA NO GUKORESHA SERIVISI Z'UBUZIMA KUNDWARA YA NYUMA</b>			
1101	Uruhinja rwaba rwaravuye kuri iriya ndwara yatumye rupfa?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 1201 → 1201
1102	Ushobora kumbwira imiti yose yabonye kuri iriya ndwara yagejeje uruhinja ku rupfu?  ANDUKURA IBIJYANE NIBYO BAMWANDIKIYE NIBA BIHARI	_____ _____ _____	
1103	Mbwira ahantu hose mu hakurikira umwana yivujwe kuri iriya ndwara yamugejeje ku rupfu?  01 Mu rugo 02 Gakondo 03 Umujyanama w'Ubuzima 04 Ikigo nderabuzima/disipanseri/post de santé bya Leta 05 Ikigo nderabuzima/disipanseri/post de santé by'Abihayimana 06 Ibitaro bya Leta? 07 Ibitaro by'Abihayimana? 08 Ivuriro ryigenga 09 Farumasi? 96 Ahandi hantu hashoboka cg se ahadi havuriwa?	<p style="text-align: right;">YEGOOYA NTAZI</p> MU RUGO ..... 1 2 8 KWA GAKONDO ..... 1 2 8 ABAKANGURAMBAGA B'UBUVUZI .. 1 2 8 CS/DISP/PS LETA ..... 1 2 8 CS/DISP/PS BYABIHAYIMANA ..... 1 2 8 IBITARO BYA LETA ..... 1 2 8 IBITARO BYABIHAYIMANA ..... 1 2 8 KIRINIKR BYIGENGA ..... 1 2 8 FARUMASI ..... 1 2 8 AHANDI ..... 1 2 8  (HAVUGE)	
1104	Mu gihe kibanziriza urupfu rwe, yaba yari yavuye inshuro zingaha mu mavuriro yemewe na Leta	INSHURO YIVUJE ..... <input type="text"/> <input type="text"/> NTABYO AZI ..... 9 8	
1105	Umukozi wo kwa muganga yigeze akubwira impamvu y'urupfu?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 1201 → 1201
1106	Umukozi wo kwa muganga yakubwiye iki?	_____ _____ _____	

**IGICE 12 ITARAMAKURU RITURUTSE MURI SERITIFIKA YO GUPFA KWE**

1201	Mufite se seritifika ijyanye n'urupfu rw'umwana?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 1301 → 1301						
1202	Nshobora se kuyibona?  ANDUKURA UMUNSI UKWEZI N UMWAKA BIJYANYE NIGIHE YAPFIRIYE	<table style="width: 100%; text-align: center;"> <tr> <td><b>UMUNSI</b></td> <td><b>UKWEZI</b></td> <td><b>UMWAKA</b></td> </tr> <tr> <td><input type="text"/><input type="text"/></td> <td><input type="text"/><input type="text"/></td> <td><input type="text"/><input type="text"/><input type="text"/><input type="text"/></td> </tr> </table>		<b>UMUNSI</b>	<b>UKWEZI</b>	<b>UMWAKA</b>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
<b>UMUNSI</b>	<b>UKWEZI</b>	<b>UMWAKA</b>							
<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
1203	ANDUKURA UMUNSI, UKWEZI, N'UMWAKA ICYEMEZO CYO KWITABA IMANA CYATANGIWE	<table style="width: 100%; text-align: center;"> <tr> <td><b>UMUNSI</b></td> <td><b>UKWEZI</b></td> <td><b>UMWAKA</b></td> </tr> <tr> <td><input type="text"/><input type="text"/></td> <td><input type="text"/><input type="text"/></td> <td><input type="text"/><input type="text"/><input type="text"/><input type="text"/></td> </tr> </table>		<b>UMUNSI</b>	<b>UKWEZI</b>	<b>UMWAKA</b>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
<b>UMUNSI</b>	<b>UKWEZI</b>	<b>UMWAKA</b>							
<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
1204	ANDIKA IMPAMVU YO GUPFA BIVUYE KU MURONGO WO HEJURU WA SERITIKA YO GUPFA: _____								
1205	ANDIKA IMPAMVU YO GUPFA BIVUYE KU MURONGO WA KABIRI WA SERITIKA YO GUPFA (NIBA UHARI): _____								
1206	ANDIKA IMPAMVU YO GUPFA BIVUYE KU MURONGO WA GATATU WA SERITIKA YO GUPFA (NIBA UHARI): _____								
1207	ANDIKA IMPAMVU YO GUPFA BIVUYE KU MURONGO WA KANE WA SERITIKA YO GUPFA (NIBA UHARI): _____								

**IGICE 13. ITARAMAKURU RIKOMOKA MU BINDI BITABO BYO KWA MUGANGA**

1301	HARI SE IZINDI NYANDIKO ZO KWA MUGANGA ZIFITE AMAKURU Y'UBUZIMA BWA NYINA CG URUHINJA RWITABY'IMANA?	YEGO ..... 1 OYA ..... 2	→ 1311
1302	KURI BURI BWOKO BWAMAKURU ABONEKA KORA INSHAMAKE ZINGENDO EBYIRI ZA NYUMA (NIBA ZIRENGA) HANYUMA WANDIKE NIGIHE BYABEREYE. (ANDIKA AMAKURU YA NYINA N'AY'UMWANA WAVUTSE YARAPFUYE)		
1303	URUHUSHYA RWO GUSHYINGURA (IMPAMVU YO GUPFA)		
1304	IBISUBIZO BYA NYUMA YO GUPFA BYEREKANYE ICYAMWISHE		
1305	IFISHI YOGUKINGIRA/AMAKURU AFATIKA AVUYE KU KARITA YUKWIPIMISHA INDA		
1306	IMITI YANDITSWE MU BITARO (YA NGOMBWA)		
1307	IKARITA YAVURIWEHO (AMAKURU YA NGOMBWA)		
1308	URUPAPURO RWO GUSOHOKA MU BITARO (AMAKURU YA NGOMBWA)		
1309	IBISUBIZO BYA LABORATWARI (AMAKURU YA NGOMBWA)		
1310	IZINDI PMAPURO ZO KWA MUGANGA ( ZIVUGE) ZIRHO AMAKURU YA NGOMBWA		
1311	ANDIKA ISAHA URANGIRIJEHO KUBAZA	ISAHA ..... IMINOTA .....	

IBYUBAZA YABONYE  
IBI BISUBIZWA NYUMA YO KUGANIRA NUWASUBIJE

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IBIGARAGARA KU BIBAZO BIMWE NA BIMWE

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IKINDI CY INGENZI CYAVUGWAHO:

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ICYO USHINZWE UBUGENZUZI ABIVUGAHO

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IZINA RY UMUGENZUZI \_\_\_\_\_ ITARIKI: \_\_\_\_\_



INYANDIKO YEMEZA KWEMERA UBUSHAKASHATSI

Mwaramutse. Nitwa.....Ndi intumwa ya Minisiteri y'Ubuzima ifatanije n'likigo cy'Igihugu gishinzwe Ibarurisha mibare. Turatara amakuru ku bijyanye no kumenya impamvu zica abana mu baturage. Amakuru yose mumpa arabikwa nk'ibanga. Nta buryo bwatuma umenyekana cyangwa uwapfuye yamenyekana, bizaguma mu rwego rw'aka kazi gusa. Kubazwa biba kubushake, ntawe tubihatira, ushobora guhitamo kubireka igihe cyose wumva ushatse guhagarika ibiganiro, ntangaruka n'imwe byagutera. Ariko rero twizeye ko nta mpamvu yakubuza kwitabira ubu bushakashatsi mu gihe tubona ko ibizava muri ubu bushakashatsi bizafasha Leta guhamya serivisi zagenewe abaturage. Muri aka kanya, haba hari ikibazo mwifuzaga kumbaza kuby'ingenzi bikubiye muri ubu bushakashatsi n'icyo bugamije? Nshobora se gutangira nkababaza?

Umukono w'ubaza: \_\_\_\_\_ Itariki: \_\_\_\_\_  
 USUBIZA YEMEYE KUBAZWA ... 1 USABWA GUSUBIZA YABYANZE 2 → GUHAGARIKA

NO.	IBIBAZO N'UTUYUNGURUZO	GATEGORI ZA KODI	SIMBUKA
<b>IGICE 2. AMAKURU Y'IBANZE AJYANYE N'USUBIZA</b>			
201	ANDIKA IGIHE UTANGIRIYE KUBAZA	ISAHA ..... <input type="text"/> IMINOTA ..... <input type="text"/>	
202	IZINA RY'USUBIZA	_____ (IZINA)	
203	Mupfana iki n'uyu wapfuye?	ISE ..... 1 NYINA ..... 2 UMUVANDIMWE ..... 4 IKINDI BAPFANA ..... 6 _____ (KIVUGE) NTACYO BAPFANA ..... 8	
204	Waba warabanaga n'uyu wapfuye igihe yapfaga?	YEGO ..... 1 OYA ..... 2	
<b>IGICE 3. AMAKURUR K'UWAPFUYE, ITARIKI YAPFIRIYEHO N'AHU YAPFIRIYE</b>			
302	Uwapfuye yari igitsina gore cg se igitsina gabo?	GORE ..... 1 BABO ..... 2	
303	Uwapfuye yari yaravutse ryari? ANDIKA '98' NIBA UTAZI UMUNSI CG SE UKWEZI ANDIKA '9998' NIBA UTAZI UMWAKA	UMUNSI ..... <input type="text"/> UKWEZI ..... <input type="text"/> UMWAKA ..... <input type="text"/>	
304	Uwapfuye yari afite imyaka ingaha apfa?	IMYAKA ..... <input type="text"/>	
308	Yapfuye ryari? ANDIKA '98' NIBA UTAZI UMUNSI CG SE UKWEZI ANDIKA '9998' NIBA UTAZI UMWAKA	UMUNSI ..... <input type="text"/> UKWEZI ..... <input type="text"/> UMWAKA ..... <input type="text"/>	
309	Yapfiriye he?	IBITARO (IVUGE) ..... 1 IKINDI KIGO CY'UBUVUZI (IVUGE) ..... 2 MU RUGO ..... 3 AHANDI ..... 6 _____ (AHANDI) IKIGO NDERA BUZIMA (IVUGE) ..... 7 NTABYO AZI ..... 8	

**IGICE 4. IBINTU BYATUMYE APFA NK'UKO BYEMEZWA N'UBAZWA**

401	Ushobora se kumbwira ibibizazane by'ubuzima yahuye nabyo byamubereye intandaro yo gupfa? <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
402	IMPAMVU YO GUPFA YA MBERE UKO USUBIZA ABIZI <hr/>
403	IMPAMVU YO GUPFA YA KABIRI UKO USUBIZA ABIZI <hr/>

**SECTION 5. AMATEKA Y'INDWARA YASUZUMWE**

501	NDIFUZA KUKUBAZA IBIBAZO BIJYANYE N'UKO UWAPFUYE YARI AMEZE, IBIMENYETSO YARI AFITE AJYA GUPFA <i>cg</i> SE YEREKANAGA. SI NGOMBWA KO IBIMENYETSO BYOSE BYABA BYAREKEJE KU RUPFU. NGIRIRA IKIXERE UNSUBIZE UNYEREKE ISHUSHO NYAYO UWAPFUYE YARI AFITE. MBWIRA RERO NIBA UWAPFUYE YARI AFITE BIMWE MU BIMENYETSO <i>cg</i> SE INDIRWA ZIKURIKIRA:	
502	Indwara y'umutima?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8
503	Diyabete?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8
504	Asima?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8
505	Igicuri?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8
506	Ibimenyetso by'imire mibi?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8
507	Kanseri?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8
508	Ushobora se kumbwira ubwo bwoko bwa kanseri? cyangwa se igice cy'umubiri iyo kanseri yari iherereyemo?	UBWOKO/AHO IRI _____ _____
509	Igituntu?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8
510	SIDA? BAZA NIBA UMWANA YARI ARWAYE SIDA, CYANGWA SE NIBA YARI MURI GAHUNDA YO GUFATA IMITI YA SIDA, CYANGWA SE NIBA YARI KU RUTONDE RW'ABAZAPIMWA SIDA AGAPFA MBERE Y'UKO APIMWA.	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8
511	Yigeze agira indi ndwara yemejwe no kwa muganga?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8
512	Ushobora se kumbwira iyo ndwara?	INDWARA _____ _____

→ 509  
→ 509

→ 601  
→ 601

NO.	IBIBAZO N'UTUYUNGURUZO	GATEGORI ZA KODI	SIMBUKA
<b>IGICE 6 AMAKURU AJYANYE N'IBIKOMERE/ IMPANUKA</b>			
601	Yigeze se agira ibikomere cg se impanuka byatumye apfa?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→606 →606
602	Ni ubuhe bwoko bw'ibikomere/impanuka uwapfuye yaba yaragize?	IMPANUKA ZO MU MUHANDA ..... 01 KUGWA ..... 02 KUROHAMA ..... 03 UBUROZI ..... 04 GUSHYA ..... 05 GUHOHOTERWA ..... 06 IBINDI ..... 96 (BIVUGE)	
603	Haba se hari undi muntu wamuteye ibyo bikomere cg se izo mpanuka kubushake?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
606	Ukeka ko se haba hari igisimba cyamuriye cg se agakoko kamurumye kagatuma apfa?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→608 →608
607	Ni ubuhe bwoko bw'igisimba/agakoko?	IMBWA ..... 1 INZOKA ..... 2 AGAKOKO ..... 3 IKINDI ..... 6 ( KIVUGE) NTABYO AZI ..... 8	
608	REBA IKIBAZO 304 IMYAKA YARI AFITE APFA: MUNSI UMWAKA <input type="checkbox"/> UMWAKA 1 CG SE URENGA <input type="checkbox"/>		801
<b>IGICE 7. IBIMENYETSO BYAGARAGAYE NYUMA YOKUVUKA NA IGIYE CYANYUMA MBERE YO GUPFA</b>			
701	Umwana se yaba yaravutse ari gato cyane?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
702	Umwana yavutse igihe kitaragera (mbere y'igihe)?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→704 →704
703	Igihe umwana yavukaga, indayari ifite amezi cyangwa amezi angahe? VUGA IGIHE CYOSE YATWAYE INDA	IBYUMWERU ..... 1 <input type="checkbox"/> AMEZI ..... 2 <input type="checkbox"/> NTABYO AZI ..... 9 9 8	
704	Umwana yakuze neza uko bisanzwe?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
705	Umwana yigeze se abyimba igihorihori?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→801 →801
706	Yaba yaramaze igihe kingana iki (iminsi) abyimbye igihorihori mbere y'uko apfa?	IMINSI ..... <input type="checkbox"/> NTABYO AZI ..... 9 8	

NO.	IBIBAZO N'UTUYUNGURUZO	GATEGORI ZA KODI	SIMBUKA
<b>IGICE CYA 8. IMITERERE Y'UMUBYEYI N'IBIMENYETSO BYAGARAGARAGA KUNDUNDURO Y'UBURYAYI KU BANA BOSE</b>			
801	Ubuzima bwa nyina bwifashe bute ubu?	UBUZIMA BWIZA ..... 1 ARARWAYE ..... 2 NTA KIRIHO ..... 3 NTABYO AZI ..... 8	
802	Umwana yaba yararwaye igihe kingana iki mbere y'uko apfa?	IMINSI ..... 1 <input type="checkbox"/> <input type="checkbox"/> AMEZI ..... 2 <input type="checkbox"/> <input type="checkbox"/> NTABYO AZI ..... 9 9 8	
803	Yaba yaragize se umuriro?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 808 → 808
804	Yaba yaragize umuriro igihe kingana iki?	IMINSI ..... 1 <input type="checkbox"/> <input type="checkbox"/> AMEZI ..... 2 <input type="checkbox"/> <input type="checkbox"/> NTABYO AZI ..... 9 9 8	
805	Uwo muriro se wari igikatu?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
806	Uwo muriro se wahoragaho cg se warazaga ukongera ugasubirayo?	UHORAHO ..... 1 URAGENDA UKAGARUKA ..... 2 NTABYO AZI ..... 8	
807	Yigeze se agira imbeho ikabaje byo gutitira?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
808	Yigeze se akorora?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 812 → 812
809	Yaba se yarakoroye igihe kingana iki?	IMINSI ..... 1 <input type="checkbox"/> <input type="checkbox"/> AMEZI ..... 2 <input type="checkbox"/> <input type="checkbox"/> NTABYO AZI ..... 9 9 8	
810	Inkorora ye se yari igikatu?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
811	Umwana se yigeze aruka amaze gukorora?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
812	Yigeze se ahumeka insigane?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 818 → 818
813	Yahumetse insigane igihe kingana iki?	IMINSI ..... <input type="checkbox"/> <input type="checkbox"/> NTABYO AZI ..... 9 8	
814	Yigeze se agira ingorane mu guhumeka?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 820 → 820

815	Yaba yaragize ingorane mu guhumeka igihe kingana iki?	IMINSI ..... <input type="text"/> <input type="text"/> NTABYO AZI ..... 9 8	
816	Yigeze se agira mu gatuza hatebeyemo kandi hisimbiza?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 818 → 818
817	Ni igihe kingana iki yigeze agira mu gatuza hatebeyemo ubona hisimbiza?	IMINSI ..... <input type="text"/> <input type="text"/> NTABYO AZI ..... 9 8	
818	Yigeze se ahumeka bigasakuza nk'uvuza ifirimbi? BIMWIGANIRE UKO BIBA BIMEZE	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
819	Wigeze se ubona ahumeka amazuru akiterura?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
820	Yigeze se agira impiswi?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 824 → 824
821	Yaba se yaragize impiswi igihe kingana iki?	IMINSI ..... <input type="text"/> <input type="text"/> NTABYO AZI ..... 9 8	
822	Igihe impiswi yari ikabije cyane, yitumaga inshuro zingaha ku munsu?	UBARE ..... <input type="text"/> <input type="text"/> NTABYO NZI ..... 9 8	
823	Yaba se yarigeze agira amaraso mu musarane mu minsi ya nyuma ajya gupfa?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
824	Yaba se yararutse?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 827 → 827
825	Yaba se yararutse igihe kingana iki?	IMINSI ..... <input type="text"/> <input type="text"/> NTABYO AZI ..... 9 8	
826	Mu gihe igihe cyo kuruka cyari gikaze, yarutse kangaha ku munsu?	INSHURO ..... <input type="text"/> <input type="text"/> NTABYO AZI ..... 9 8	
827	Yaba se yarababaye mu nda?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 830 → 830

828	yaba se yarababaye mu nda igihe kingana iki?	IMINSI ..... 1 AMEZI ..... 2 NTABYO AZI ..... 9 9 8		
829	Ububabare bwo munda bwari bukabije?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		
830	Yaba se yarigeze abyimba inda?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 834 → 834
831	Yaba yarabimbye inda igihe kingana iki?	IMINSI ..... 1 AMEZI ..... 2 NTABYO AZI ..... 9 9 8		
832	Kubyimba inda byaba se byarahutiyeho mu minsi mike cg se byaje biza buhoro buhoro mu gihe cy'amezi menshi.	BYIHUTA MU MINSI MIKE ..... 1 BUHORO BOHORO MU GIHE CY'AMEZI ..... 2 NTABYO AZI ..... 8		
833	Haba se yaramaze igihe cy'umunsi cg se kirenga atigeze yituma ibikomeye?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		
834	Haba hari ikibyimba yari afite mu nda?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 836 → 836
835	Yaba yaragize ikibyimba munda igihe kingana gite?	IMINSI ..... 1 AMEZI ..... 2 NTABYO AZI ..... 9 9 8		
836	Yigeze arwara umutwe?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 839 → 839
837	Yarwaye umutwe igihe kingana iki?	IMINSI ..... 1 AMEZI ..... 2 NTABYO AZI ..... 9 9 8		
838	Uwo mutwe waba wari ukaze cyane?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		
839	Yigeze se akebana ijosi cg se rikamera nk'igiti?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 841 → 841
840	Yaba yaragize iryo josi rikebanye cg se rimeze nk'igiti igihe kingana iki?	IMINSI ..... NTABYO AZI ..... 9 8		
841	Yaba se yarabayeho atumva kubera uburwayi?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8		→ 844 → 844

842	Yabayeho igihe kingana iki atumva kubera uburwayi?	IMINSI ..... <input type="checkbox"/> <input type="checkbox"/>	
		NTABYO AZI ..... 9 8	
843	Uko kutumva kubera uburwayi byarizanye bitunguranye, byihuse mu munsu umwe, cg se buhoro buhoro igihe kirekire.	BYARATUNGURANYE ..... 1 BYARIHUSE UMUNSI UMWE ..... 2 BUHORO BUHORA MU MINSI MYINSHI ..... 3 NTABYO AZI ..... 8	
844	Yigeze agagara? (convulsions)	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 846 → 846
845	Yaba yarahinze umushyitsi arerembura amaso igihe kingana iki?	IMINSI ..... 1 <input type="checkbox"/> <input type="checkbox"/> AMEZI ..... 2 <input type="checkbox"/> <input type="checkbox"/> NTABYO AZI ..... 9 9 8	
846	Yigeze se amugara (Paralysie) amaguru ye yombi cg se igice cy'epfo?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 849 → 849
847	Yaba se yaramugaye (Paralysie) amaguru/igice cy'epfo igihe kingana gite?	IMINSI ..... 1 <input type="checkbox"/> <input type="checkbox"/> AMEZI ..... 2 <input type="checkbox"/> <input type="checkbox"/> NTABYO AZI ..... 9 9 8	
848	Kumugara amaguru cg se igice cy'epfo byarizanye gutyo, bitih se byaje umunsu umwe, cg se byarizanye iminsi myinshi buhoro buhoro?	BYARATUNGURANYE ..... 1 BYARIHUSE UMUNSI UMWE ..... 2 BUHORO BUHORA MU MINSI MYINSHI ..... 3 NTABYO AZI ..... 8	
849	Kubijyanye n'inkari yitumaga ku munsu, haba hari icyahindutse?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 852 → 852
850	Niba se hari icyahindutse ku bwinshi bw'inkari yitumaga ku munsu, byamaze igihe kingana iki?	IMINSI ..... 1 <input type="checkbox"/> <input type="checkbox"/> AMEZI ..... 2 <input type="checkbox"/> <input type="checkbox"/> NTABYO AZI ..... 9 9 8	
851	Yihagarikaga inkari zingana iki?	NYINSHI CYANE ..... 1 NKE CYANE ..... 2 NTIYITUMA NA GAKE ..... 3 NTABYO AZI ..... 8	
852	Mu gihe cyose yaranwaye byatumye apfa, yigeze asesa uduheri ku mubiri?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 856 → 856
853	Yasheshe uduheri ku mubiri igihe kingana iki?	IMINSI ..... 1 <input type="checkbox"/> <input type="checkbox"/> AMEZI ..... 2 <input type="checkbox"/> <input type="checkbox"/> NTABYO AZI ..... 9 8	
854	Ibyo yasheshe byari: 1 Mu maso? 2 Mu gatuza? 3 Ku maboko no ku maguru?	YEGO OYA NTAZI MU MASO ..... 1 2 8 MUGATUZA ..... 1 2 8 AMABOKO N'AMAGURU ..... 1 2 8	
855	Ibyo yasheshe byasaga bite?	GUSESA NK'ISERU ..... 1 GUSESA HARIMO UTUZI TUBENGERANA ..... 2 GUSESA HARIMO AMASHYIRA ..... 3 NTABYO AZI ..... 8	

856	Yigeze se agira amaso atukura?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8					
857	Yigeze ava amaraso binyuze mu mazuru, mu kanwa cg se mu kibuno?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8					
858	yigeze se ata ibiro?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 861 → 861				
859	Mbere yo gupfa, yataye ibiro igihe kingana gite?	IMINSI ..... 1 AMEZI ..... 2 NTABYO AZI ..... 9 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>				
860	Yigese aba muto cyane ku buryo wabonaga yashizemo?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8					
861	Yigeze se agira ibisebe mu kanwa cg se ubugenda kanwa n'ururimi rupfutse umweru?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 863 → 863				
862	Niba se yaragize ibyo bisebe mu kanwa n'ubugenda kanwa byamaze igihe kingana iki?	IMINSI ..... NTABYO AZI ..... 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>				
863	Yigeze agira aho abyimba?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 866 → 866				
864	Yaba se yarabyimbye igihe kingana iki?	IMINSI ..... 1 AMEZI ..... 2 NTABYO AZI ..... 9 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>				
865	Ububyimbe se bwari he? 1 Mu maso? 2 Mu ngingo? 3 Mu tubumbambari? 4 Umubiri wose? 5 Ahandi hashoboka?	<b>YEGOOYA NTAZI</b> MU MASO ..... 1 2 8 MUNGINGO ..... 1 2 8 MUTUBUMBAMBARI ..... 1 2 8 UMUBIRI WOSE ..... 1 2 8 AHANDI ..... 1 2 8 HAVUGE _____ ↓					
866	Yigeze agira amapfundo ku mubiri (lumps= protubérances= tumeurs)?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 869 → 869				
867	Ibyo bibyimba byihariye byamaze igihe kingana iki?	IMINSI ..... 1 AMEZI ..... 2 NTABYO AZI ..... 9 9 8	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>				
868	Ibyo bibyimba byagaragaraga/ 1 Ijosi? 2 Mu nkokora? 3 Mu manyankinya (aine)? 4 undi mwanya?	<b>YEGOOYA NTAZI</b> IJOSI ..... 1 2 8 MUNKOKORA ..... 1 2 8 MU NKANU ..... 1 2 8 AHANDI ..... 1 2 8 HAVUGE _____ ↓					

869	Yigeze se agira amaso y'umuhondo?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 871 → 871
870	Yamaze igihe kingana iki afite amaso y'umuhondo?	IMINSI ..... 1 AMEZI ..... 2 NTABYO AZI ..... 9 9 8	
871	Umusatsi se wigeze uhinduka ugana ku butukure cg se ku muhondo?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 873 → 873
872	Yamaze igihe kingana iki imisatsi ari umuhondo cg se utukura?	IMINSI ..... 1 AMEZI ..... 2 NTABYO AZI ..... 9 9 8	
873	Yigeze se ahindura ibara agana ku bweruruke cg se akagira ibiganza byeruruka, amaso atagira amaraso?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 875 → 875
874	Ibyo kugira umubiri usa nutagira amaraso yabimaranye igihe kingana gite?	IMINSI ..... NTABYO AZI ..... 9 8	
875	Yigeze se agira amaso yahenenyeye?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 901 → 901
876	Yaba se yaragize amaso ahenebereye igihe kingana iki?	IMINSI ..... NTABYO AZI ..... 9 8	

NO.	IBIBAZO N'UTUYUNGURUZO	GATEGORI ZA KODI	SIMBUKA
<b>IGICE 9. KUVURA NO GUKOresha Serivisi z'ubuzima umurwayi ari ku ndunduro</b>			
901	Yigeze se akingirwa iseru?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	
902	Yigeze se avurwa ku burwayi bwe bwatumye apfa?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 909 → 909
903	Mushobora se kumbwira imiti yafashe imivura kuri iyi ndwara yatumye apfa?  FATA KOPI Y'IMITI YANDIKIWE CYANGWA SE Y'URUPAPU RO YAVIRIYEMO MU BITARO NIBA BIHARI	_____ _____ _____	
904	Nubuho bwoko bw'imiti yafashe:  1 Umuti wo mu kanwa wo kuvura umwuma cg se yatewe serumu? 2 Yongerewe amaraso? 3 Yagaburiwe binyuze mu gapira gacye mu mazuru? 4 Indi miti yabonye?	YEGO OYA NTAZI ORS/IMPAGA MABONDO ..... 1 2 8 KWONGERWA AMARASO ..... 1 2 8 GUCISHA MU MAZURU ..... 1 2 8 IBINDI ..... 1 2 8 (BIVUGE)	
905	Hitamo mu hantu hakurikira aho yavuriwe mugihe yari arwaye iyi ndwara yamwishe?  01 Mu rugo 02 Gakondo 03 Umujyanama w'ubuzima 04 Ikigo nderabuzima/disipanseri/post de santé ya leta 05 kigo nderabuzima/disipanseri/post de santé by' Abihayimana 06 Ibitaro bya leta? 07 Ibitaro byabihayimana? 08 Ivuriro ryigenga 09 Farumasi? 96 Ahandi hantu hashoboka cg se ahadi havuriwa?	YEGO OYA NTAZI MU RUGO ..... 1 2 8 KWA GAKONDO ..... 1 2 8 ABAKANGURAMBAGA B'UBUVUZI .. 1 2 8 CS/DISP/PS LETA ..... 1 2 8 CS/DISP/PS BYABIHAYIMANA .... 1 2 8 IBITARO BYA LETA ..... 1 2 8 IBITARO BYABIHAYIMANA ..... 1 2 8 KIRINIKR BYIGENGA ..... 1 2 8 FARUMASI ..... 1 2 8 AHANDI ..... 1 2 8 (HAVUGE)	
906	Mu kwezi kumwe mbere yo gupfa, yaba yarabonye cg se yarakoresheje serivise z'ubuzima kangahe?	INSHURO YAGIYE KWA MUGANGA ..... <input type="text"/> NTABYO AZI ..... 9 8	
907	Umukozi wo kwa muganga yaba yarababwiye icyateye urupfu?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 909 → 909
908	Umukozi wo kwa muganga yaba yarababwiye iki?	_____ _____ _____	
909	Yaba se yarigeze abagwa kubera iyi ndwara yatumye apfa?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 1001 → 1001
910	Mbere y'uko apfa, yaramaze iminsi ingahe abazwe?	IMINSI ..... <input type="text"/> NTABYO AZI ..... 9 8	
911	Ni ikihe gice cy'umubirir yaba yarabazwe?	MUNDA ..... 1 MUGATUZA ..... 2 UMUTWE ..... 3 AHANDI ..... 6 (HAVUGE) NTABYO AZI ..... 8	

**IGICE 10. AMAKURU YATURUTSE KU CYEMEZO CYO GUPFA CYO KWA MUGANGA**

1001	Mufite se icyemezo cyo kwa muganga kuri uyu wapfuye?	YEGO ..... 1 OYA ..... 2 NTABYO AZI ..... 8	→ 1101 → 1101
1002	Nshobora se kubona icyo cyemezo cyo kwa muganga?  ANDUKURA UMUNSI, UKWEZI N'UMWAKA BYIGIHE YAPFIRIYE.	<b>UMUNSI</b> <b>UKWEZI</b> <b>MWAKA</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
1003	ANDIKA UMUNSI UKWEZI UMWAKA W'IGIHE IYO CERTIFICAT YATANGIWE NAHO YATANGIWE	<b>UMUNSI</b> <b>UKWEZI</b> <b>UMWAKA</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
1004	ANDIKA IMPAMVU Y'URUPFU YA MBERE NK'UKO BIGARAGARA KU MURONGO WA MBERE W'ICYEMEZO CYO GUPFA CYO KWA MUGANGA: _____		
1005	ANDIKA IMPAMVU Y'URUPFU YA KABIRI NK'UKO BIGARAGARA KU MURONGO WA KABIRI W'ICYEMEZO CYO GUPFA CYO KWA MUGANGA: _____		
1006	ANDIKA IMPAMVU Y'URUPFU YA GATATU NK'UKO BIGARAGARA KU MURONGO WA GATATU W'ICYEMEZO CYO GUPFA CYO KWA MUGANGA: _____		
1007	ANDIKA IMPAMVU Y'URUPFU YA KANE NK'UKO BIGARAGARA KU MURONGO WA KANE W'ICYEMEZO CYO GUPFA CYO KWA MUGANGA: _____		

**IGICE 11. AMAKURU ATURUTSE MU BITABO N'IZINDI NYANDIKO ZO KWA MUGANGA**

1101	HARI SE IZINDI NYANDIKO ZO KWA MUGANGA ZIFITE AMAKURU Y'UBUZIMA BWA NYINA CG URUHINJA RWITABY'IMANA?	YEGO ..... 1	→ 1111				
		OYA ..... 2					
1102	KURI BURI GITABO/ IZINDI NYANDIKO ZO KWA MUGANGA, VUGA INSHAMAKE Z'UKO INGENDO ZE IBYIRI ZA NYUMA ZAGENZE (NIBA ZIRENGA 2) KANDI WANDIKE ITARIKI BYABEREYEHO						
1103	URUHUSA RWO GUSHYINGURA (IMPAMVU Y'URUPFU)						
1104	IBISUBIZO BYO KWA MUGANGA NYUMA YO GUPFA (IMPAMVU Y'URUPFU)						
1105	IFISHI YO GUKINGIZA/ IKARITA YO KWIPIMISHA INDA UMUGORE ATWITE (AMAKURU Y'INGENZI)						
1106	URUPAPURO RWANDITSEHO IMITI (AMAKURU Y'INGENZI)						
1107	IFISHI YAVURIWEHO (AMAKURU Y'INGENZI)						
1108	URUPAPURO YASOHOKEYEHO IBITARO (AMAKURU Y'INGENZI)						
1109	IBISUBIZO BYA LABORATWARI (AMAKURU Y'INGENZI)						
1110	IBINDI BYANGOMBWA BY'IBITARO BIVUGE						
1111	ANDIKA IGIHE URANGIRIJE IKI KIGANIRO	AMASAHA .....	<table border="1"> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>				
		IMINOTA .....					

IBYO UWAKOZE IPEREREZA YABONYE CG SE UKO ABYUMVA  
IBI BYUZUZWA IKIGANIRO KIRANGIYE

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UKO BIGARAGARA KU BIBAZO BIMWE NA BIMWE:

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IBINDI BYAKWITABWAHO:

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UKO UMUGENZUZI ABIBONA

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IZINA RY'UMUGENZUZI \_\_\_\_\_ ITARIKI \_\_\_\_\_



# Appendix B

# International Death Certificate Used in Rwanda Verbal Autopsy Study

## INTERNATIONAL FORM OF MEDICAL CERTIFICATE OF CAUSE OF DEATH

Cluster number

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Household number

--	--

Mother line number

--	--

Child line number

--	--

Doctor's ID

--	--

Doctor's Name: \_\_\_\_\_

Cause of death		ICD - Code	Approximate interval between onset and death				
<b>PART I</b>							
Disease or conditon directly leading to death *	(a) .....	<table border="1"><tr><td></td><td></td><td></td></tr></table> . <table border="1"><tr><td></td></tr></table>					.....
	Due to (or as a consequence of)						
<b>Antecedent causes</b>							
Morbid conditons, if any, giving rise to the above cause, stating the underlying conditon last.	(b) .....	<table border="1"><tr><td></td><td></td><td></td></tr></table> . <table border="1"><tr><td></td></tr></table>					.....
	Due to (or as a consequence of)						
	(c) .....	<table border="1"><tr><td></td><td></td><td></td></tr></table> . <table border="1"><tr><td></td></tr></table>					.....
	Due to (or as a consequence of)						
	(d) .....	<table border="1"><tr><td></td><td></td><td></td></tr></table> . <table border="1"><tr><td></td></tr></table>					.....
<b>PART II</b>							
Enter <u>other significant conditons contributing to the death</u> but not related to the disease or conditon causing it. (That is, not resulting in the underlying cause given in PART I).							
_____		<table border="1"><tr><td></td><td></td><td></td></tr></table> . <table border="1"><tr><td></td></tr></table>					.....
_____							
_____							

\* This does not mean the mode of dying, e.g heart failure, respiratory failure, It means the disease, injury or complication that caused death.

UNDERLYING CAUSE OF DEATH: \_\_\_\_\_ ICD-10 CODE 

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**Appendix C****Mortality Tabulation List for Mortality Classification Groups and ICD-10 Codes**

Mortality classification groups and ICD codes below contain a glossary of the causes of death groupings used in the analysis of Rwanda VA study data, together with corresponding ICD-10 codes in 3-character codes:

<b>Classification of causes of death description</b>	<b>ICD-10 in 3-character code</b>
Intestinal infectious diseases (including diarrhoeal diseases)	A09
Tuberculosis	A16
Tetanus	A35
Viral hepatitis	B19
Human immunodeficiency virus [HIV] disease	B20, B22, B24
Malaria	B50, B54
Remainder of Infectious and parasitic diseases	A41, A50, B09
Remainder of malignant neoplasms	C64
Nutritional anaemias	D50
Malnutrition	E40, E41, E42, E46
Meningitis	G00, G03
Pneumonia	J18
Disorders of the kidney	N04
Prematurity and low birth weight	P07
Birth Asphyxia	P20, P21, P23
Perinatal and early neonatal	P00, P01, P02, P03, P08, P35, P36, P38, P39, P51, P59, P61, P76, P80
Congenital malformations of the central nervous system	Q00, Q03
Abdominal pain	R10
Fever of unknown origin	R50
Convulsions	R56
Unspecified causes of mortality	R06, R31, R46, R95, R96, R98, R99
All other diseases	D58, D62, E86, G93, I50, I75, J21, K52, K65
Exposure to smoke	X00
Accidental poisoning by exposure to noxious substance	X48
Assault	X92
All other external causes	Y83, Y88



## Appendix D Study Personnel

### Technical Staff

Robert Mswia, MEASURE Evaluation, University of North Carolina  
Stirling Cummings, MEASURE Evaluation, University of North Carolina  
Mohamed Ayad, Macro International, Calverton, Maryland  
Rathavuth Hong, Macro International, Calverton, Maryland  
Harouna Koche, Macro International, Niger  
Dr. Yusuf Hemed, Consultant  
GATARAHIIHA Jean Phillipe. Project Coordinator, Rwanda National Institute of Statistics  
Dr CONDO Jeanine, Rwanda School of Public Health  
Dr BASINGA Paulin, Rwanda School of Public Health  
Dr NKUSI Emilien, Ministry of Health

### Supervisors and Coders/certifiers

Dr SERUYANGE Eric  
Dr KAYONDO King  
Dr AWAZI Raymond  
Dr LUSUNGU Laurent

### Field Staff

MIGAMBI Gerard	MUKAMA Janvier
AKAYEZU Beata	MUSABEMUNGU Issa
MUKASEKURU Francoise	KAMAYUGI M. Grace
MUKUNDIHIRWE Genevieve	UWAMAHORO Vestine
KABANDAHO Egide	UWAMBAYIKIREZI Sabine
UMWALI Vestine	UGIRINEMA Alice
MBUGUJE Asmeen	ISHIMWE Blandine
UWANYIRIGIRA Therese	UMUGWANEZA Stella
NGIRUWONSANGA Immaculée	KAYITESI Jeanine
NDAMUKUNDA Deo Maxim	MUKAGATERA Josée

### Data Processing

*Data Processing Supervisor*  
TWAGIRUMUKIZA Augustin

#### *Office Editors*

MURENGEZI Omar

#### *Data Entry*

BAZIZERIMANA Antoine  
KWERERE Vestine  
UWIMANA Jeanne

#### *Assistant Supervisor*

SEMUCYO Pascal

KAYITESI Fides

BENIMANA Beata  
NIYONGORE Sylvie



**Some of the Rwanda verbal autopsy study personnel, during training.**

Photograph by Robert Mswia, MEASURE Evaluation