Pilot of a Perinatal Verbal Autopsy System for Rohingya Refugees in Cox's Bazar, Bangladesh

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Bachelor's of Science
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Thesis Committee Members: Roger Rochat, MD (Chair)

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<u>Abstract</u>
Pilot of a Perinatal Verbal Autopsy System for Rohingya Refugees in Cox's Bazar, Bangladesh

Background: An estimated one million Rohingya live in refugee camps in Cox's Bazar, making it the largest concentration of refugees in the world. In 2018, a partial Maternal and Perinatal Death Surveillance and Response (MPDSR) system was implemented to *count* and *determine causes of death* for mothers and newborns. This system aims to count all maternal and perinatal deaths and determine causes of death for all maternal deaths. Perinatal deaths are also reviewed if they occur in health facilities to determine causes of death. However, there is a need to determine causes of death for perinatal deaths which occur in the community. This provided the rationale for creation of a Perinatal Verbal Autopsy system for Cox's Bazar.

Purpose: The purpose of this special studies project is to document the development, implementation, and pilot testing of a Perinatal Verbal Autopsy system in Rohingya refugee camps in Cox's Bazar, Bangladesh.

Methods: The author developed an initial data collection tool in May 2019 which was further developed in collaboration with CDC and local NGO partners in Cox's Bazar. The refined tool was then translated by local partners into Bangla and pilot tested in 2 rounds, where the author observed pilot testing and made significant changes to the protocol accordingly. Lastly, the author conducted informal interviews with stakeholders to determine the best methods to create a sustainable protocol.

Results: The final protocol for the Perinatal Verbal Autopsy can be broken into 12 steps, while the final form of the questionnaire contains 12 sections with a total of 235 questions. Questions are asked about maternal health and antenatal care, a narrative section about the death, a structured symptom duration checklist, and a discussion on the family's attempt to seek care. A sample training guide, completed protocol, and interview guide were created to accompany the Perinatal Verbal Autopsy questionnaire.

Recommendations: To feasibly implement a Perinatal Verbal Autopsy system in the Rohingya refugee context, several changes to the standard WHO protocol need to be made. These changes can improve data quality, create trust between the Rohingya and Bangladeshi CHW Supervisors/midwives, and form new linkages between the formal health sector and informal systems currently used in camp communities. Adaptations of this Perinatal Verbal Autopsy system have the potential to be scaled up for multiple humanitarian settings, allowing for community-based data collection practices to occur for perinatal deaths.

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Thank you all,

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Boxes:

Acronym List

ANC – antenatal care

ARV – antiretroviral drugs

CDC – Centers for Disease Control and Prevention

CHW – Community Health Worker

CRVS – Civil Registration and Vital Statistics

HIV/AIDS – Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome

ICD-10 – International Classification of Disease, 10th edition

ID - identification

IDP – Internally Displaced Persons

IUD – intrauterine device

LAM – lactational amenorrhea method

MIS – management information system

MSF – Médecins Sans Frontièrs / Doctors Without Borders

MPDSR – Maternal and Perinatal Death Surveillance and Response

NGO – non-governmental organization

OCV – oral cholera vaccine

TBA – traditional birth attendant

VA – Verbal Autopsy

WHO – World Health Organization

WRA – woman of reproductive age

Introduction

Introduction and Rationale

Currently, about one million Rohingya refugees have fled Myanmar into Bangladesh.

Most have settled in refugee camps in two areas in Cox's Bazar – Ukhiya and Teknaf.

Within these camps a preliminary death surveillance system has been set up to track

deaths which occur in the health facility and the community. To count and determine

causes of death for mothers and newborns, components of a Maternal and Perinatal

Death Surveillance and Response (MPDSR) system have been implemented in the

camps since 2018. Maternal deaths at health facilities and in the community are

currently being tracked, but the parallel system has not fully been implemented for

newborns. At the moment, health facility deaths are recorded and reviewed for causes

of death, but a significant proportion of births and newborn deaths occur in the

community. Therefore, in order to capture causes of death for perinatal deaths in the

community, a Perinatal Verbal Autopsy (VA) system was developed. No evidence was

found in the literature to support use of a Perinatal VA system in humanitarian settings.

Problem Statement

Perinatal death rates are often estimated to be higher in areas with high rates of

community births [1,2]. If the deaths occur before the newborn is taken to a health facility,

there is often no record of the death. In Rohingya refugee camps in Cox's Bazar,

Bangladesh, an estimated 48% of births occur outside of health facilities. It is currently

unknown what percentage of these newborns see a healthcare worker prior to death. As

there is no system in place for community-based data collection, there is a lack of data on causes of deaths for perinatal refugees in Cox's Bazar.

Purpose Statement

The purpose of this special studies project was to develop and pilot test a Perinatal Verbal Autopsy system in Rohingya refugee camps in Cox's Bazar. As the Perinatal Verbal Autopsy System has never been documented to have been used in humanitarian settings (acute crises, protracted crises, and refugee contexts) prior to this pilot testing, the goal of the project was to make sure the system was feasible in this context.

Project Objectives

Specific project objectives are as follows:

- To identify major issues which hinder data collection in the Rohingya refugee context and strategies to overcome them

- To develop a feasible Perinatal VA protocol which integrates into the existing camp mortality reporting system

- To create a tailored Perinatal VA Questionnaire interview guide, sample training schedule, and quality assurance system

Significance Statement

Knowledge of causes of death and barriers to care collected through the Perinatal Verbal Autopsy might be used to propose and help develop actionable responses to improve maternal and newborn care. Furthermore, successful piloting of this system in Cox's Bazar has the potential to evaluate the feasibility, including cost, of implementing the full MPDSR system in a protracted crisis or refugee situation, setting the stage for a new model for death surveillance protocols in humanitarian settings.

Background - Literature Review

This section aims to provide relevant background on the Rohingya situation and the Verbal Autopsy (VA). While published, peer-reviewed literature was used whenever possible, many of the statistics associated with the Rohingya refugee crisis come from UN or NGO reports. Due to the high level of uncertainty associated with these statistics, true statistics on mortality and morbidity may be much higher than reported values reflect. Furthermore, as the camp situation in Cox's Bazar changes rapidly the information provided may not reflect new or current practices.

Rohingya Situation in Cox's Bazar

In August 2017, widespread, coordinated attacks were carried out against the Rohingya ethnic minority in Rakhine State, Myanmar. These targeted and violent attacks resulted in a mass exodus of about 700,000 Rohingya refugees fleeing into neighboring Bangladesh. As violence continued to escalate in Myanmar, the number of Rohingya refugees seeking asylum has grown. As of October, 2019, over 200,000 households and almost a million Rohingya refugees live in Cox's Bazar District, Bangladesh, making it the largest refugee camp in the world [3]. Only 86% of these refugees are registered with the government of Bangladesh and UNHCR to receive services and identity documents and 55% of the population are under 18 years of age [4].

History in Myanmar

Discrimination, rape, and reproductive control against Rohingya have been occurring

for decades in Myanmar [5]. This violence has a long history stemming from differences

in language, appearance, and religion between the Rohingya and the Bumar, the

dominant Buddhist group in Myanmar [6]. Throughout the decades, the Rohingya have

been subject to restrictions on marriages, children, voting, citizenship, education, and

travel [7,8] . However, in August 2017, these attacks escalated and began directly targeting

Rohingya women and girls [9]. Attacks perpetrated by the Myanmar government

involved mass gang rape, beatings, shootings, and burning women and children alive

[10]. This resulted in the most recent influx of refugees into Cox's Bazar. The generational

trauma as well as restriction to medical services and education experienced by the

Rohingya refugees in Myanmar contribute to some of the challenges to refugee health

seen in refugee camps in Cox's Bazar today.

Rohingya Refugee Needs

Rohingya refugees, particularly children, are at high risk for infectious disease due to

mass violence and displacement, malnutrition, overcrowding, poor hygiene, and lack of

access to safe water and healthcare. The first main concern of health officials after the

influx of refugees into Bangladesh was a possible cholera outbreak, as Bangladesh is

endemic to the disease [11]. Beginning in November 2017, three rounds of Oral Cholera

Vaccine (OCV) were distributed en masse among the camps and host population. In

this context, host population refers to Rohingya refugees who had fled to Bangladesh

prior to the August 2017 influx, and who were recognized officially as refugees. This OCV campaign resulted in the distribution of 2.2 million doses of the vaccine [12].

On November 10, 2017, the first case of diphtheria was reported to a *Médecins sans Frontières* (MSF) facility inside the refugee camps [13]. This marked the start of multiple diphtheria outbreaks in the camps. By August 2018, there were a total of 217 confirmed infections, 2700 probable cases, and 5208 suspected cases, which resulted in three rounds of vaccination campaigns targeting children <15 years. Diphtheria outbreaks have since subsided, with about 2-4 confirmed cases confirmed weekly [14].

A couple months later, in March of 2018, about half a year after the initial influx, a 3-day rapid needs assessment of 402 Rohingya households was performed in Cox's Bazar refugee camps. High levels of mortality, low vaccination levels among children, food insecurity, and poor literacy were identified as the largest issues facing refugee health. Of the 402 surveyed households, 78 deaths were reported in the 12 months preceding the survey, 64.1% of which were male. From World Health Organization standards, all children should receive 9 doses of injectable vaccines and 4 doses of oral vaccines before their second birthday. However, as of March 2018, even after a number of mass vaccination campaigns for cholera, polio, measles, and diphtheria, 11.8% of children under 5 reported never having received an injectable vaccine in Bangladesh, while 17.6% reported never receiving any oral vaccination doses. Furthermore, 58% of refugees reported experiencing food shortages, contributing to food insecurity. Lastly,

these issues are compounded by low literacy rates – 76% of Rohingya over the age of 15 reported having no education, while 52.6% of Rohingya children (<15 years) were not attending school [15]. While these statistics are from 2018 and the UN, Bangladeshi government, and other organizations are actively working to push new initiatives to combat these issues in the camps, the data provided from the needs assessment suggest that these issues are unlikely to have resolved in the last two years.

There is limited data on the mental health and psychosocial wellbeing of Rohingya refugees in Cox's Bazar. Due to the nature of the protracted ethnic cleansing and high rates of sexual violence in Myanmar, Rohingya refugees are hypothesized to be at very high risk for post-traumatic stress disorder (PTSD), anxiety, depression, somatic complaints, functional impairment, and suicidal ideation [16]. Furthermore, within the camps, Rohingya refugees are estimated to have high rates of gender-based and sexual violence, which are exacerbated by a lack of privacy and inadequate access to mental health and psychosocial support resources [17]. Within the camps, contraception is given mainly through Inter-Agency Reproductive Health (IARH) Kits. Contraceptive access in the camps is also reported to be high overall, but is considered low for adolescent and unmarried women populations, compounding any potential sexual violence issues [18]. These issues can complicate Rohingya refugee health and willingness to seek care, which should be taken into consideration when conducting data collection procedures.

Documented Barriers to Maternal Child Health Among Rohingya Refugees

Traditionally, barriers to maternal mortality have been broken down into the Three

Delays Model, which defines Delay 1 as a lack of recognition that care is needed, Delay

2 as issues in arriving at a place of care, and Delay 3 as issues with the quality of care.

When examining maternal mortality in the Rohingya refugee context, Delay 1 is the

largest contributor to lack of care, largely due to historical, social, and political contexts.

The willingness of Rohingya refugees to seek reproductive healthcare is largely affected

by historical context. In Myanmar, the government imposed several restrictions and

controls on access to care and reproductive health services for the Rohingya minority,

even going so far as to control Rohingya marriages and place limits on the number of

children that Rohingya were allowed to have [8]. Furthermore, women and girls have

been impacted by widespread sexual violence and government-sponsored population

control measures [19]. A government-sponsored two-child policy for the Rohingya

minority has resulted in several negative consequences. An estimated one out of every

seven women has reported a history of abortion [20]. As abortion is restricted in

Myanmar, many of these abortions were likely performed using unsafe services [19]. In

Rakhine state, the rampant abuse and distrust in the system has resulted in pregnant

Rohingya women delaying seeking medical care due to fear [20]. This fear has translated

to the camps as well. An October 2018 study found that some women fear facility-based

births due to concern that their male children would be killed by the authorities or they

would not be able to implement a religious ritual marking that the child was born Muslim [21].

Cultural factors also impact Rohingya refugee women delays in seeking care. Rohingya culture is conservative, with women and girls expected to stay at home and not interact with male strangers, a belief which is supported by over 50% of Rohingya refugee women themselves [5]. Rohingya women prefer female health providers and may be hesitant to enter mixed gender health facilities [8]. These gender roles also affect literacy rates, which are suspected to be lower among women due to restrictions on education. As many women require permission or accompaniment by their husbands or Majis (male community leaders) to access healthcare, this leads to further delays in care-seeking behavior [9].

The second delay results in barriers to reach care once the decision has been made to seek it. In the camps, the majority of the camps is inaccessible by road, limiting ambulance accessibility [22]. This leaves women with the option to walk or be carried in stretchers to seek care. Furthermore, due to a lack of formal refugee status, Rohingya women are limited in their ability to access healthcare outside of the camps. Instead, Rohingya women have to go through checkpoints and receive formal approval to be transferred to a more specialized hospital [9]. These barriers create delays in accessing care through poor transportation.

Lastly, the third delay is caused by issues in accessing quality care once a woman is at a health facility. Healthcare coverage areas have been assigned, with an established system for referral between facilities. However, the quality or sufficiency of these services are currently unknown. However, the largest potential barrier for Rohingya women in this stage are language and cultural differences, as hospitals are not necessarily staffed with Rohingya workers. Rohingya and Chittagonian (the local Bangladeshi language in the area) are about 70% similar, but have key differences in health terms [9]. This has the potential to result in delays in communication and receipt of adequate services.

Current Maternal and Child Mortality Among Refugees

Data about maternal and child health and mortality in Rohingya refugee camps have been contradictory and uncertain between sources. In the camps, women and children have been estimated by the UNHCR to make up 80% of the refugee population [23]. Preliminary maternal mortality data collected between September 2017 and August 2018 found that 52 maternal deaths occurred out of 82 pregnancy-related deaths (Unpublished CDC Ramos findings). However, in the same presentation from CDC officials, it was emphasized that maternal mortality rates cannot be calculated from the data as the total number of births that would serve as the denominator is currently unknown.

Despite these findings, from the UNHCR report for December of 2019, 52.4% of births were reported to occur in health facilities, a statistic which implies that the birth rate is known or has been estimated in the Rohingya refugee population, though that rate is currently unpublished. However, from the latest UNHCR report in February 2020, that statistic has been replaced with the raw number of 450 births in health facilities, with no rate calculated [24]. The contradictions between the CDC and UNHCR reports suggest that much of the data about Rohingya refugee populations are unknown, and estimates may be inaccurate or imprecise.

The under-five mortality rates in the camps are also of questionable accuracy. In December 2019, the UNHCR status report listed an under-five mortality rate of 4.8 deaths/1,000 births per year, while in February the rate was listed as 6.72 deaths/1,000 births per year [24,25]. However, these numbers are unrealistically low, as the under-five mortality rate of Bangladesh is 30.2/1,000 births, while the rate in Myanmar is 46.2 deaths/1,000 births [26,27]. The inadequacy of mortality statistics shows the need for a method to determine actual numbers of deaths and the major causes of death and further document barriers to care for mothers and children in Cox's Bazar.

Verbal Autopsy

A Verbal Autopsy (VA) is a method of collecting data to determine probable causes of death and barriers to care for a specific population. The VA system has been in use for decades, but was standardized by the World Health Organization (WHO) in 2007 [28]. This format was updated in 2012, 2014, and most recently in 2016, solidifying its role in data collection to ascertain causes of death [29-32]. Verbal autopsies are primarily done in places without well-established civil registration and vital statistics (CRVS) systems, and are an economically feasible method to supplement a larger death surveillance and response initiative [33,34]. Verbal Autopsies can be tailored to examine a specific disease/condition or a specific population depending on the objective of the assessment method. Conditions and populations of interest which have been targeted through verbal autopsy in low and middle income countries include malaria, neurological diseases, HIV/AIDS, maternal mortality, and perinatal mortality [35-38].

Overview of Typical Perinatal VA Procedure

The WHO standard Perinatal Verbal Autopsy system was created in 2016, detailing the tool and how to implement it.[32] In order to conduct a VA a trained interviewer visits the deceased's home after a predetermined grieving period to interview the family or people who would know details about the deceased's illness. This grieving period can be anywhere from 1 week to 6 months, as deemed culturally appropriate. Interviewers are non-physicians, such as Community Health Workers (CHWs) or nurses/midwives. The specific interviewer role is determined based on context and resources available,

but typically only a single interviewer trained in the VA methodology conducts the VA

interview. After obtaining consent, the interviewers ask respondents (typically only

family members in the household with close neighbors) a series of questions designed

to determine causes of death. Answers are recorded either in paper forms or through

electronic data collection methods. A trained panel of physicians who comprise a Death

Review Committee then read the information and assign the probable cause of death.

This information is then used to inform targeted initiatives to improve community

health [33,39,40]. In tandem with the WHO's 2016 version of the Verbal Autopsy, analytical

software was also released to assist in determining cause of death from VA data [31].

Ethical Considerations within Verbal Autopsy Methodology

Due to the sensitive nature of death and disease, the Verbal Autopsy methodology is

one which has several ethical implications. Furthermore, the VA is usually conducted in

areas where there is no civil registration and vital statistics systems, where

infrastructure is weak and people are socio-economically disadvantaged [39]. Therefore,

several factors need to be considered to determine the acceptability, appropriateness,

and most ethical method of implementation of the Verbal Autopsy in a given setting.

A large component of the VA methodology is the training and use of Verbal Autopsy

interviewers. In some situations, researchers have argued that VA interviewers should

be trained in counselling methods to minimize the emotional distress caused by

interviewing respondents about the recently deceased [41,42]. Additionally, the selection of

the interviewer should be culturally appropriate – some communities may be more likely to speak to a healthcare professional, while others would prefer a community member due to distrust of government systems [39].

Another source of ethical dilemma is the concept of informed consent. A Verbal Autopsy is conducted with one or more respondents, typically family members of the deceased. In the case of a perinatal Verbal Autopsy, the primary respondent is most often the mother, but traditional birth attendants may also be used to collect data. In many instances, informed consent is obtained from the primary respondent or head of household (typically a husband or father-in-law). However, if multiple respondents are present, informed consent needs to be obtained from a person who is both culturally and contextually appropriate, which may be a mother instead of or in addition to the head of household. Furthermore, in the instance where traditional birth attendants are interviewed for maternal or perinatal VAs, the mother or family should still give their consent [39,43].

Further complexity is added when privacy and data deidentification measures are taken into consideration. Communities will also need to be consulted to determine a culturally appropriate grieving period before which a Verbal Autopsy can be conducted. The Verbal Autopsy can occur from 2 weeks up to a year after death without affecting recall [44,45]. The multitude of ethical factors associated with the Verbal

Autopsy process show the need for VA methodology to be tailored, flexible in response to input, and highly adapted to the context at hand.

Potential for Verbal Autopsy Use in Humanitarian Settings

Humanitarian settings often pose extreme challenges for implementation of data collection protocols. Humanitarian crises can result from infectious disease outbreaks, widespread violence, loss of life, displacement of populations, food insecurities, and other factors which result in decay of societal and economic structures [46]. These conditions can result in dramatic shifts in mortality trends in a short period of time and destruction of records and data collection practices such as CRVS systems, contributing to difficulty implementing data collection

practices [47].

In 2018, Thomas et al. conducted literature reviews and expert interviews to determine the feasibility and utility of the Verbal Autopsy in humanitarian contexts. From their conclusions, the VA process was consistently determined to be feasible and appropriate to use among both Internally Displaced Persons (IDP) camps and refugee populations (assuming that conditions were safe to promote data collection). However, high mobility, changing living conditions, distrust of government bodies, and other such challenges may provide barriers to achieving adequate data quality [48].

Thomas et al. also identified several recommendations for the use of the VA in humanitarian crises. First, data on morbidity, mortality, and social determinants should be collected in a timely and continuous basis during the crisis to help inform response. VA methods which are culturally appropriate and informed by the community, should be used as efficiently as possible, with the possibility of automation wherever feasible. Integration of the VA with other methods of data collection may provide a holistic understanding and efficient use of resources. Ethical considerations around protections of respondents from further harm and obtaining full informed consent are crucial components to embed in any training or data collection protocols. Lastly, to avoid issues with duplication and wastage of resources, activities should be coordinated by a single body during the crisis response [48].

Limitations of the Verbal Autopsy

While the Verbal Autopsy may have the potential for use in humanitarian crises, it is not without limitations. One of the most commonly cited limitations of using the VA methodology to determine most probable causes of death is the difficulty in discerning non-distinctive conditions. The VA does well at identifying causes of death which have clear symptoms which family or VA respondents would be likely to remember. However, when it comes to determining conditions such as malnutrition or less visible causes, the VA may not be able to correctly determine the influence of these conditions. This can result in underestimation of their effects [49].

Furthermore, widespread use of the VA is typically discouraged due to concerns about internal and external validity. The VA is not intended for individual-level use, but rather to discern causes of death at the population level. Validation studies for the VA have cited issues with validity when comparing to health facility records of deaths. However, one thing to note about this limitation is in the settings that the VA is performed, health records may also be of poor quality. This would mean that validation against hospital records would not be an accurate reflection of VA utility [50]. Despite these limitations, VAs are oftentimes the only alternative to ascertain causes of death when medical certification is unable to be obtained and can be valuable to detail major contributors to death in the community [33].

Examination of Non-Traditional Roles for Perinatal VA Implementation

From 2005-2007, the cluster randomized, controlled FIRST BREATH Trial, conducted by Eunice Kennedy Shriver National Institute of Child Health and Human Development Global Network for Women's and Children's Health Research was conducted to examine implementation of newborn care practices and newborn resuscitation in community settings [51]. During this trial, which included prospective data collection in 6 countries, two nested VA studies were conducted to examine the implications of using non-traditional roles to modify the VA

process [43,52,53].

The first of these nested studies examined the possibility of using non-physicians to analyze VA data, essentially replacing the need for physicians to be on the Death Review Committee. This would reduce the burden on limited physician resources. In 2007, Engmann et al. trained 10 physicians and 43 non-physicians in VA methodology and ICD-10 guidelines to read and interpret perinatal VA data (neonatal deaths and stillbirths) using training of trainers methodology in 38 communities in Pakistan, Zambia, the Democratic Republic of the Congo, and Guatemala. The non-physician group was comprised of CHWs (high-school graduates with 15 months or less of formal health/nursing training) and nurse-midwives/nurses. Initial results after the three day intensive training showed that improved cognitive and applied knowledge mean scores for all groups increased, and that the scores of the nurse-midwives were comparable with physicians, though CHWs were still at a lower level [52]. However, despite this initial success, end results of the study in 2008 found that causes of early neonatal death and stillbirth assigned by physicians were concordant only 47% and 57% of the time, respectively, leading researchers to conclude that using non-physicians to interpret VA results was not a reliable option for accurate results [53].

These results differed from the results found in a similar study conducted in Matlab, Bangladesh, where neonatal VAs were read by a trained team of medical assistants who were found to have comparable knowledge to physicians on VA interpretation [54]. These differences may be due to the difficulty in ascertaining causes of death for perinatal versus simply neonatal deaths, increased clinical training (medical assistants had 3

years of training), and the familiarity of the Matlab team with the VA development and implementation process [53,54]. These factors may have primed the Matlab team to succeed under optimal conditions, whereas the reality may more likely reflect the conditions described in the Engmann et al. study. This suggests that the standard protocol described by the World Health Organization should be flexible to adapt to local capacity, skills, and culture.

The second alternative role examined by the Engmann et al. team is the use of birth attendants as alternative Perinatal Verbal Autopsy respondents in place of mothers, typically the primary respondents for perinatal deaths. The rationale behind this study is to reduce the stress placed on a grieving mother/next-of-kin due to the VA interview. To assess this option, Verbal Autopsy interviews were conducted separately among mother and birth attendants one week after perinatal death in 38 communities in Pakistan, Zambia, the Democratic Republic of the Congo, and Guatemala. Using mothers as the reference standard, this study found 94% concordance across all questions for early neonatal deaths and 93% concordance for stillbirths. Overall, causes of death established through the VA were the same, regardless of the respondent used [43]. While this study conducted Verbal Autopsy interviews one week after death (the bare minimum of grieving period), it provides a basis to make the VA process less intrusive for family. In the context of Cox's Bazar where traditional birth attendants (TBAs) are present at the vast majority of community births, this strategy may help to provide valuable information to strengthen the VA approach to perinatal deaths.

Background - Maternal and Perinatal Death Surveillance and Response System in Cox's Bazar

Maternal and Perinatal Death Surveillance and Response, or MPDSR, is a system which aims to *count* and determine *causes of death* of mothers and newborns to develop targeted interventions to improve the quality of maternal and child health. Death surveillance and review can be simplified to three separate steps. First, deaths are counted through a mortality reporting system, which categorizes newborn deaths into stillbirths or neonatal deaths (<28 days at death). These deaths are monitored and tracked through EWARS, the electronic death surveillance system used in Rohingya refugee camps in Cox's Bazar. In addition to counting deaths, causes of death need to be determined. The method of data collection differs greatly between the health facility and community. The Verbal Autopsy is a data collection tool used in community settings to capture information on causes of death and barriers to care. In Cox's Bazar, information on death is collected from two separate sources, health facilities and the community. This information is gathered and reviewed for the third outcome, to improve maternal and neonatal health service and response through targeted interventions or changes in practice.

Deaths which occur at health facilities are able to be counted and examined with ease, as data is collected in real time about patient history and clinical diagnosis. At health facilities in Cox's Bazar, if a maternal or perinatal death occurs, it is first recorded into the health records. At that point, within 48 hours the death notification is also sent to

EWARS. To determine causes of death and barriers to care which contributed to the

maternal or perinatal death, medical records and patient history are then examined at a

monthly health facility death review meeting. From this meeting, **actionable** ways in

which the health facility could prevent similar deaths occurring are developed. These

solutions are then implemented in the health facility to improve maternal and perinatal

quality of health. This pathway is shown in Figure 1 below.

Figure 1. Maternal and Perinatal Deaths at Health Facilities in Cox's Bazar
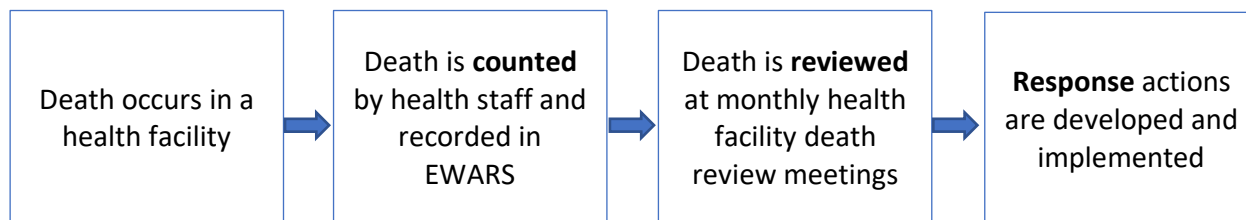
At the community level, this pathway contains an extra step – using the Verbal Autopsy

for retrospective data collection on a death. When a death occurs in the community,

Rohingya Community Health Workers (CHWs) are the first to be notified by the family

directly. This information then sets off a chain of events to complete the mortality

reporting system and enter death information into EWARS. Data collection then occurs

via Verbal Autopsy form, where interviewers returns to the house of the deceased

mother/newborn and interviews next of kin and other relevant persons. The

information captured in the Verbal Autopsy is then reviewed monthly by a trained

team of physicians, also known as a Death Review Committee. This is similar to the

health facility death review system but with a more specialized training to read Verbal

Autopsy results. The Death Review Committee determines probable causes of death

and barriers to care for the mother/newborn and develops a list of

responses/interventions to improve maternal and newborn health in the community.

This pathway can be illustrated in Figure 2 below. A more detailed step-by-step

illustration of the community death surveillance and review system can be found in the

following section: "How to Conduct a Perinatal Verbal Autopsy in Cox's Bazar."

Figure 2. Maternal and Perinatal Deaths in the Community in Cox's Bazar

Death occurs in the community	→	Death is **counted** and recorded in EWARS	→	Retrospective **data collection** on death occurs through VA	→	Death is **reviewed** at monthly Death Review Committee meetings	→	**Response** actions are developed and implemented
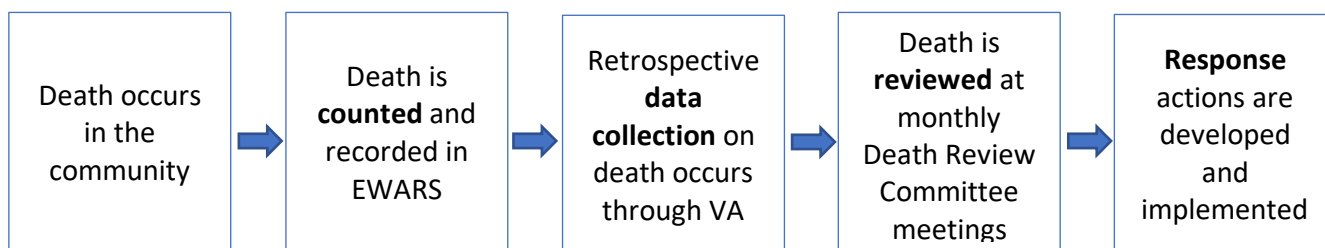
Methods – Development and Pilot Testing of the Perinatal Verbal Autopsy in Cox's Bazar

All of the methods described below are the author's own work, unless otherwise designated. In some instances, the author is referred to as "CDC Fellow."

Development of the Perinatal Verbal Autopsy Questionnaire and Protocol

The initial draft of the Perinatal VA system was adapted directly from the WHO's *Making Every Baby Count* Perinatal VA guidelines [32]. The questionnaire was altered for relevance to the Rohingya refugee context through conversations with CDC and local NGO stakeholders. The questionnaire was then translated into Bangla using a Bangladeshi NGO partner. This partner was also used to conduct the pilot testing and initial training of the Perinatal VA. The initial protocol was copied as closely to WHO guidelines as possible. Prior to pilot testing of the Perinatal VA, a selected team of CHW Supervisors and midwives were trained on the VA questionnaire and protocol. Sixteen perinatal deaths occurring in the last three months were purposively selected to have equal numbers of neonatal deaths and stillbirths which occurred in the NGO partner's catchment areas. Two interviews were unable to be completed, resulting in a total of 14 perinatal deaths (8 neonatal deaths, 6 stillbirths) being investigated. The interview was intended to be conducted by only a midwife or CHW Supervisor, which mirrored the WHO protocol and the Maternal VA protocol which already occurring in the camps. Midwives used to pilot test the Perinatal VA had already been trained in the Maternal

VA protocol. A corresponding data management system was created and programmed into KoBo, an ODK-based software which facilitated mobile data entry.

First Round of Pilot Testing

The first round of pilot testing was conducted over the span of 1 week in July 2019. A total of 8 Perinatal VA interviews (4 neonatal deaths, 4 stillbirths) were conducted using a single midwife or CHW Supervisor as the interviewer in 3 camps in Ukhiya and Teknaf. Community Health Workers were used to locate the address of the family to be interviewed and the CHW who family already knew remained during the VA to assist with translation and language barriers. Mobile data entry was done after the paper-based questionnaire had already been completed in the camps after technological issues were encountered initially in the field. All VA interviews were also observed by the CDC fellow to record any issues and confusion associated with the VA questionnaire and protocol. Informal interviews with the CHW Supervisors and midwives were conducted to record challenges that they observed with both the Perinatal and Maternal Verbal Autopsy systems. The MIS officer in charge of assigning the Maternal VA was also interviewed on their perspective of the existing system. Lastly, records of Maternal VA questionnaires were examined to determine common issues and challenges. Following the conclusion of the first round of pilot testing, changes were made to the VA questionnaire and protocol to address outstanding challenges.

Second Round of Pilot Testing

The second round of pilot testing a week after the conclusion of the first round. A total of 6 Perinatal Verbal Autopsy interviews (4 neonatal deaths, 2 stillbirths) were conducted using a 3-person team consisting of a midwife, CHW Supervisor, and the CHW assigned to the family. A decentralized system of data entry, tracking, and reporting was tested using a specialized CHW Supervisor who was thereafter referred to as the VA Coordinator. The same CDC fellow observed Verbal Autopsy interviews and recorded observations. Informal interviews with CHW Supervisors, midwives, and the MIS officer were conducted again to gain insight into the updated methodology and Perinatal VA System. Following the second round of pilot testing, the VA Questionnaire, protocol, interview guide, and additional training materials were finalized.

Results – Finalized Protocol

After incorporating changes from pilot testing, the full protocol to conduct a Perinatal

Verbal Autopsy in Cox's Bazar can be seen as follows.

The full Perinatal Verbal Autopsy process begins with a death in the community and

ends with the development and implementation of targeted solutions based on cause of

death and barriers to care information. This process can be broken down into 12 steps,

as seen in Figure 3 below.

Figure 3. Perinatal Verbal Autopsy Process in Cox's Bazar

1. Perinatal death occurs in the community

2. CHW completes Mortality Report

3. Mortality Report is sent to the health facility for sign-off, then given to the CHW Supervisor

4. CHW Supervisor verifies Mortality Report and informs VA Coordinator that a perinatal death has occurred

5. Perinatal death is entered into monitoring spreadsheet

6. VA Coordinator selects VA team, schedules timing of VA, and locates address

7. VA team is comprised of 3 roles: Midwife – primary interviewer CHW Supervisor – completes VA form and maintains data quality CHW – assists in translation and relationship with family of the deceased

8. VA team travels to location of deceased's family and gathers those who were present at the birth, life, and death of the deceased newborn (family and traditional birth attendants)

9. Perinatal VA Interview is conducted (2-3 hours)

10. VA data is uploaded to KoBo

11. VA data is reviewed by a team of trained physicians to determine probable causes of death and barriers to care

12. Data influences new interventions and shapes solution directions

Please note that mortality reporting procedures may change slightly as standard protocols are updated in Cox's Bazar, making the information provided here slightly out of date. However, the overall pathway of a Death occurring → Mortality Report → Verbal Autopsy → Death Review Committee Meeting → Solution Development and Implementation should remain the same.

Perinatal VA Steps

1. *A perinatal death occurs in the community* – this death can either be a neonatal death (a death that occurs within the first 28 days of life) or a stillbirth. The term perinatal encompasses both neonatal deaths and stillbirths.

2. *A Community Health Worker completes the Mortality Report* – once a death occurs in the community, the first one to be notified is the Community Health Worker (CHW) assigned to that household. The CHW then completes a mortality report form and begins the mortality reporting and verification process.

3. *The Mortality Report is sent to the health facility for sign-off, then given to the Community Health Worker Supervisor* – once a mortality report is filled out by a CHW, it is sent to the health facility for that given area for a physician to sign off on the report. Once this is complete, the report is given to the CHW Supervisor assigned to the camp.

4. ***The CHW Supervisor verifies the report and informs the VA Coordinator that a*** ***perinatal death has occurred*** – the VA Coordinator may be the same as the MIS officer in charge of overall mortality reporting, or could be a separate individual designated to train VA teams, track maternal and perinatal deaths, and assign Verbal Autopsies. The VA Coordinator is also in charge of maintaining and updating the KoBo data management software and tablets as necessary.

5. ***The Perinatal Death is entered into the Verbal Autopsy Monitoring Spreadsheet*** – tracking Verbal Autopsies is a task that is given to the VA Coordinator. An accompanying tool has also been designed to help monitor VA data and status.

6. ***Verbal Autopsy Coordinator selects the VA team, schedules timing of the VA, and*** ***locates the VA address and family for interview*** – when conducting the VA, it is important to select an appropriate team (comprised of the 3 roles defined in Step 7) and to ensure that the VA is conducted after the 2 week grieving period. The other main task of the VA Coordinator is to determine the address of the VA interview. As there are no definitive addresses and locations within the camp, the VA Coordinator should work with CHWs from the camp to locate the tent of the household where the death occurred. As there is high internal mobility within the camps, there may be instances where the family has since moved after the death, or the mother gave birth with her in-laws and has since moved back to a different location.

The Verbal Autopsy should be conducted using those who were present at the birth, lifespan, and death of the newborn. This means that interviews should include the **mother**, **family** who lived with her at the time, and **Traditional Birth Attendants (TBAs)**, if applicable. Prior to the VA interview, the VA coordinator should contact the TBA that was present at the birth of the newborn in question to request that she take part in the VA interview. When the VA Coordinator contacts the TBA, it is extremely important that they ensure that the VA process is being used to collect data, not to assign blame. The VA Coordinator should also emphasize that TBA involvement is extremely important to help the health system improve maternal and newborn health in the Rohingya population. Involving TBAs in the VA process is important to improve data quality (especially about delivery history) and to open channels of communication between the formal health system and informal systems being used in the camps.

7. *The VA Team is formed* – in conducting pilot testing in the refugee camps in Cox's Bazar, the VA team was found to function best in 3 person teams with distinct roles. This setup is important to help ensure good data quality and comfort for the family and key informants to speak to the VA team. The VA team should **always** be comprised of these roles. The roles are as follows:

> *Primary Interviewer (Midwife)* – the primary interviewer for the perinatal VA is the one who speaks most to the family and key informants. The primary interviewer does not fill out the VA paper form, but rather focuses on making the

family comfortable and **asking the VA questions.** If possible, the primary interviewer should be a midwife who has the clinical background necessary to explain signs and symptoms to the respondents. However, if it is not possible for a midwife to conduct the perinatal VA, a CHW Supervisor who has completed the training and is able to explain the relevant clinical terms to the respondents can serve as the primary interviewer.

Secondary Interviewer (CHW Supervisor) – the role of the secondary interviewer is to **ensure adequate data quality** of the VA. The secondary interviewer completes the VA paper form and ensures that no questions are skipped, or no data is missing. If necessary, the secondary interviewer can ask the primary interviewer or respondents to clarify the information provided to ensure that the VA form is completed as accurately as possible. The secondary interviewer role is filled by a trained CHW Supervisor.

Community Facilitator (CHW) – this role should **only** be filled by the CHW who is assigned to cover the specific family/household where the death occurred. The CHW should be someone that the family is familiar with and feels comfortable speaking to help facilitate the interview. The CHW will also assist with any translation or clarification issues, as CHW Supervisors and midwives often do not speak Rohingya.

8. *The Verbal Autopsy Team travels to the household of the deceased newborn* – once given the assignment from the VA Coordinator, the VA team should travel to the predetermined address of the deceased newborn's household.

Materials needed to conduct the VA Interview include:

- 2 copies of the Perinatal Verbal Autopsy Paper Form (one for the primary interviewer to read off of and the second to be completed by the secondary interviewer)

- The supplementary booklet of visual aids

- A copy of the mortality report to determine that the household/death is correct

- An inkpad to collect thumbprint for consent

- Pens/pencils

- A mobile device to record GPS coordinates

- This manual, if needed, to refer to for clarification of the VA questions

9. *The Perinatal VA Interview is conducted* – key respondents such as the family, TBAs, and anyone who was present at the birth, life, or death of the deceased newborn should be interviewed. Prior to interview the VA team should purchase water or snacks to give to the family as a thank you for their time. In conducting the VA Interview, consent should be obtained from the primary respondent (typically the mother). The VA interview can last between 2-3 hours, depending on the information obtained. More

information on the specific details and VA questions can be found in the "How to Complete the Perinatal Verbal Autopsy Questionnaire" section.

10. *Verbal Autopsy data is uploaded to KoBo* – KoBo is the data management software used to capture all VA data for analysis. After completion of the VA interview, the primary and secondary interviewers should return to the field office, where they will enter the data from the paper form into the Kobo software on tablets within 24 hours. This provides the opportunity for a second data quality check occurs as the data is transferred to ensure that all questions are answered, and all data entered is as accurate as possible.

 11. *Verbal Autopsy data is reviewed by a team of trained physicians to determine probable causes of death and barriers to care* – review of VA data occurs monthly at Death Review Committee meetings. From this probable causes of death are assigned for each perinatal death and barriers to care are listed.

12. *Verbal Autopsy data influence new interventions and shape solutions* – the data from the VA is used to help determine gaps in healthcare and create actionable solutions.

Results – Sample Training

A sample training schedule to provide guidance in how the Perinatal VA system should be taught can be found below.

Training for the Perinatal VA should occur between 3 days to a week, with in-field checks following the training. A selected group consisting of midwives and CHW Supervisors should be selected to receive this training. A sample outline of the most condensed training format can be conducted as follows:

Day 1:

- o Conduct a Pre-Test to determine existing participant knowledge
- o Explain background and significance of perinatal VA and training:
    - Existing statistics on mortality and lack of knowledge/data
    - What is a VA
    - What it is used for
    - How it relates to the mortality reporting system
    - The steps to conduct a VA
    - VA teams and roles
    - Components of data quality that are important to maintain (accuracy, completeness, timeliness)
    - Confidentiality, Honesty, Quality Assurance of interviewers

- o Begin going over the VA questionnaire question-by-question explaining and clarifying terms and intent of the questions (Sections 1-5)

Day 2:

- o Ask questions and conduct an interactive review of content learned the previous day
- o Continue review of the VA questionnaire question-by-question explaining and clarifying terms and intent of the questions (Sections 6-12)
- o Distribute tablets and have participants familiarize themselves with KoBo

Day 3:

- o Ask questions and conduct an interactive review of content learned the previous day
- o Distribute tablets, paper forms, and sample scenarios
- o Break participants up into teams and assign practice roles of primary and secondary interviewers or respondents
- o Work through scenarios provided
- o Record answers into KoBo
- o Complete Post-test to determine knowledge gained

Following this intensive training, participants should be assigned to VA teams/roles and be given actual perinatal VAs to conduct in the camps on a specific day. As the teams go to conduct the VAs, they should be accompanied by a trainer who will observe and clarify issues faced when conducting the VA interview. Participants may then begin to conduct VAs independently.

Quality Assurance

In-field checks should occur every month by the VA Coordinator to a randomly selected subsect of interview teams. Data collected during these in-field checks should then become topics which are addressed at refresher trainings, held once every 3 months. A total of 10% of Perinatal Verbal Autopsies will be randomly selected for re-interview. Re-interview results would then be analyzed for probable causes of death and barriers to care and compared to original results.

Results – Finalized Interview Guide for Perinatal Verbal Autopsy Questionnaire

Lastly, the finalized interview guide created after pilot testing can be found below.

Note: As you are going through this section, it is helpful to have a copy of the VA questionnaire in front of you to review as each question or section is discussed.

Before beginning the questionnaire, please keep in mind a few key points:

1. Be sure to ask each question on the form, unless you are directed to skip it. This must be done even if the cause of death appears obvious. The VA questionnaire is intended to be a complete record of the death, its causes, and barriers to care for anyone who reads it, not just the midwife or CHW Supervisor who conducted the interview.

2. All answers should be recorded directly as they are spoken by the respondents, even if the interviewer disagrees with the potential answer. The interviewer should record other relevant information in **Section 12, Interviewer's Observations** at the end of the VA questionnaire.

3. Some questions ask about the duration or dates of a symptom or condition. If the respondent does not know the duration, please fill in the corresponding code – "99" or 1/1/2000. This allows the physician reviewing the VA data to know that the question was asked, but information was not known. If the question is left blank, the reviewer may assume that the interviewer did not ask the question, and it may be sent back for correction.

4. For duration questions, the number of days between the start and end of the sign or symptom should be recorded. For example, if the deceased newborn started coughing 10 days before death, but the coughing stopped 2 days before death, the duration would be recorded as 8 days. In this example, if the coughing never stopped, the duration would be 10 days (date of onset until death).

5. All duration questions should be recorded as accurately as possible, with estimations given to the best of the respondent's ability. Rounding should be done at the halfway point.

6. All responses should have one answer, unless you are instructed otherwise. This should be reflected in the KoBo questionnaire entry.

7. For questions which require more than a simple "Yes/No," read aloud all responses to ensure that the best possible one is selected, unless otherwise instructed.

Skip Codes

Every VA form has skips and filter questions inside, which typically consist of a yes/no question, followed by several detailed questions about the subject. If the respondent answers "No" to the topical question, the corresponding filter questions will be skipped.

Cover Page

The cover page provided shows the different partners involved in the development of this Verbal Autopsy Questionnaire.

Informed Consent Form (Interviewer Copy)

In this VA form, two consent forms are attached: one at the beginning and one at the end of the VA questionnaire. The "Interviewer Copy" is the first of the two and will remain attached to the front of the VA questionnaire as proof of consent. The second of these is located as the last page of the VA questionnaire. This "Interviewee Copy" should be filled out and then given to the family of the deceased newborn for their records. When filling out the consent form, fill in only the English or Bangla blanks.

<u>Obtaining Consent</u>

When obtaining consent, read the consent aloud **exactly** as written. This ensures that every interviewee is presented with the same information about the VA process. Never force the consent and obtain signatures/thumbprints only after the consent form is read in its entirety. The interviewee has the right to refuse to answer any question or end the interview at any time.

Completing the Consent Form

The primary interviewer, typically a midwife should fill out the consent form, even if a secondary team member (such as a CHW Supervisor) fills out the rest of the VA questionnaire. Therefore, when filling out the consent form, the first and second blanks should contain the name and occupation of the primary interviewer:

INFORMED CONSENT FORM (INTERVIEWER COPY) (সাক্ষাৎকারের জন্য সম্মতিপত্র)

Informed Consent Form for verbal autopsy (VA) interviews
(for stillbirths and decedents 1-28 days)
মৌখিক মৃত্যু পর্যালোচনা বিষয়ক সাক্ষাৎকারের জন্য সম্মতিপত্র
(নবজাতকের মৃত্যু ১-২৮ দিনের জন্য)
Hello. My name is ___Hasna Zainul___ and I am a ___T. Supervisor___ from Partners in Health and Development. We are conducting a survey in this camp which asks about health issues of newborn babies. হ্যালো/আসসালামু-আলাইকুম আমার নাম.........................এবং আমি একজন (পদবী).....................পিএইচডিতে কাজ করছি। আমরা ক্যাম্পে নবজাতক *স্বাস্থ্য* বিষয়ক জরিপ পরিচালনা করছি।

After the interviewee asks any questions, the interviewer should ask to begin the interview. Depending on the response, the appropriate box should be checked. After checking off the box, the Interviewer should sign the line next to it, verifying that consent was or was not obtained. The respondent should then sign the line below or use an inkpad to create a thumbprint.

May I begin the interview now? আমি কি সাক্ষাৎকারটি শুরু করতে পারি?
◻ No, consent for participation not given (না,অংশ গ্রহণের জন্য সম্মতি দেওয়া হয় নি) Interviewer signature(সাক্ষাৎকারীরর স্বাক্ষর): _____
☒ X Yes, consent for participation given(হ্যাঁ,অংশ গ্রহণের জন্য সম্মতি দেওয়া হয়েছে) Interviewer signature(সাক্ষাৎকারীরর স্বাক্ষর): ___Hasna Zainul___
Respondent Signature(উওরদাতার স্বাক্ষর): _____ OR Thumbprint(আঙ্গুলের ছাপ)
If you have any questions, please contact(যদি কারোর প্রশ্ন থাকে,দয়া করে যোগাযোগ করুন):

Underneath the respondent's signature or thumbprint, the CHW Supervisor or person primarily filling out the VA questionnaire should write their name, the institutional affiliation, and their telephone number. This section, which is the same on both the

Interviewer's and Interviewee's copies, provides a contact for any follow-up questions

for the VA team.

If you have any questions, please contact(যদি কারোর প্রশ্ন থাকে,দয়া করে যোগাযোগ করুন):
Name (CHW Supervisor) (সিএইচডাব্লিও সুপারভাইজারের নাম): Wafi al-Hasan Adnan
Institutional affiliation(প্রাতিষ্ঠানিক অন্তর্ভুক্তি): Partners in Health and Development - PHD
Telephone(টেলিফোন নাম্বার): 1234-567890

Lastly, the name, signature, and date of review by the person signing off on the VA

interview (such as a Field Coordinator or VA Coordinator) should be obtained for the

consent form's completion.

Section 1. Attempted Interviewer Visits

This section is intended to depict all the appropriate information about how the interview is conducted including members of the VA interviewing team, consent, result of the interview, and how many attempts were made to reach the respondent. This section is structured partially in a table format, where each column corresponds to the number of tries each VA takes before completion. Therefore, each time the VA team tries to conduct the interview, the same VA form is used.

101. Interviewer name

This should be the name of the primary interviewer, usually a midwife. This is not the same as the person who is recording the respondent's answers in the VA form.

102. CHW Supervisor

This should be the name of the CHW Supervisor who is completing the VA questionnaire.

103. CHW(s) present

This should include the names of any CHWs who are present at the interview, including the CHW for the respondent.

104. Other members of the interviewing team present

All other people present at the interview (not including family members or respondents) should be recorded. This can include field supervisors, M&E officers, the VA coordinator, or any others. Names and designations of each additional person should be recorded in the following format:

"Wafi al-Hasan Adnan – CHW Supervisor"

105. Date

This should be the date of the attempt, even if it was unsuccessful.

106. Has the consent form been read, and consent obtained?

For this question, if no respondent was present or you were unable to conduct the VA, select "no." Consent should only be obtained if the VA will occur.

107. Interview result

This question should be left until the end of the VA interview and returned after the VA is completed. If the VA is unable to be completed at this time, the correct reason why should be recorded. If any other relevant information is gathered at this time but is not captured in the questions in this section, write the additional information in the "Supervisor's Observations" section at the end of the VA questionnaire. The following are the descriptions of the result codes:

- *Code 1: No appropriate respondent found*

  This code should be used if the household is occupied but an appropriate respondent is not available at that time, meaning that there is no one who was present at the birth, life, or death of the deceased newborn. You should try to schedule a callback time to complete the interview when an appropriate respondent will be available.

- *Code 2: Not at home*

  This code is to be used in cases in which the tent is occupied, but no one is at home. Try to find out from a neighbor when a competent adult will be present and include this information in the visit record.

- *Code 3: Postponed*

  If you contact a household, but for some reason, it is not convenient for them to be interviewed, then schedule a callback interview and enter code '3' as a result code for that visit.

- *Code 4: Refused*

  The impression you make during your initial contacts with members of a household is very important. Be careful to introduce yourself and explain the purpose of the survey. Stress that the interview information will be confidential and will be helpful to address future issues that newborns

and mothers may face. If the individual with whom you first talk is unwilling to cooperate, ask to speak with another member of the household, such as the household head. Suggest that you can return at another time if it would be more convenient. If the individual still refuses to cooperate, enter code '4' and report the problem to your supervisor.

- *Code 5: Partially completed*

    If a respondent begins an interview but needs to stop the interview before it can be completed, enter code '5'. You should try to schedule a call back time to complete the interview.

- *Code 6: Completed*

    Enter this code when you have completed the verbal autopsy interview.

- *Code 7 (Other).*

    Sometimes you cannot interview a household and the above categories do not describe the reason. An example might be if the household has been destroyed, evacuated, or cannot be located. Specify the reason that '7' has been coded. You should try to identify someone else who can be interviewed and determine the date/time of callback.

108. Date of next scheduled visit

If the VA was unable to be completed, the VA interview team and potential

respondent(s) should schedule an appropriate time to return to conduct the VA. This

date should be recorded here.

Section 1.2 Interview Location Information

This section contained identifying information about the location of the VA interview. This includes the GPS coordinates, camp locations, identification number, and resident status.

109. GPS Coordinates

Someone from the VA team should record the latitudinal and longitudinal GPS coordinates of the interview location using a smartphone.

110. Upazila

This should be either Ukhiya or Teknaf, depending on the location of the camp.

111. Location of the camp

This should be the union that the camp is located in, such as Rajapalong, Palongkhali, Kutapalong, Balukhali, etc.

112. Camp

Record camp number here. Include East or West designations as necessary. *Ex. Camp 8E*

113. Block/Subblock

This should be recorded in the following format: B-3, G-2, etc.

114. Family/Identification Card Number

This should be the most recent Family ID number which includes the primary

respondent. If the respondent is confused about which ID card to show, record multiple

numbers as necessary.

115. Deceased's resident status

Select whether the deceased newborn was part of the refugee camps or host

community. As this VA is primarily intended for use among refugees, if the deceased

newborn is a member of the host community, politely thank the respondent(s) for their

time and skip to 1108.

Section 1.3 Birth, Life, and Death of the Deceased

The primary purpose of this section is to determine the dates surrounding the newborn's death. If the newborn died after 28 days, they are no longer classified as a neonatal death, and are not the target of this VA. If this is the case, the interviewer should thank the respondent and skip to the end of the survey, at 1108.

116. What is the baby's date of birth?

If this is unknown, please record the date as 01/01/2000.

117. What is the baby's date of death?

If the baby was a stillbirth, this should be recorded as the date of delivery, even if it is known that the baby died in the womb prior to death, as the purpose of this section is to determine eligibility for this VA. If the date of death is unknown, please record as 01/01/2000.

118. How old was the baby when he/she died?

Neonatal age should be entered in minutes, hours, or days as appropriate. If the baby died less than an hour after birth, enter the age in minutes. If the baby died within a day of birth, record the age in hours. If the baby died more than 24 hours after birth, record the age in days. If the newborn was a stillbirth, record age of death as "00 minutes."

Section 2. Basic Information about the Respondent(s)

This section focuses on gathering information about the respondents of the VA interview. It specifies their relationship to the deceased newborn and determines if they were present during birth, life, and death.

201. Are you the baby's mother?

Select "Yes" if the mother is present during the VA interview. If the mother is present, she should always be the primary respondent for the VA process.

202. What is your name?

This is a filter question which should only be answered if the mother is present.

203. How old are you?

This is a filter question which should only be answered if the mother is present. If the mother is unsure of her exact age, please have her guess to the best of her ability.

204. What is your highest level of education?

This is a filter question which should only be answered if the mother is present. If no education was received, record "00."

205. *Are there associated respondents present?*

If other people are present in the room for the interview, record "Yes" for this question.

In many cases, this may be a family member, neighbor, or traditional birth attendant.

206 – 208. Associated Respondents

Associated respondents are used to gain as much information as possible about the circumstances surrounding the birth, life, and death of the newborn and answer alongside the mother during the VA interview. In cases where the mother is not able to partake in the VA questionnaire due to death, illness, or external circumstances, all other respondents are recorded in this section.

Name – Record the name of the associated respondent

Relation code – This refers to the relationship between the deceased newborn and the respondent. Use the chart of codes below question 208 to help select the appropriate response. For example, if the mother-in-law of the mother being interviewed is present, she would be the in the "Paternal grandmother/grandfather" category, and her code would be "2." If the respondent does not correspond to a given category, please write the specified relationship in the "Other" category.

Sex – Record the sex of the respondent. This will help identify the exact relationship of the associated respondent to the deceased newborn.

Present at birth/life/death? – For these 3 questions, which should be asked separately, record "1" if the associated respondent was present at each component of the newborn baby's life.

Section 3. Information on the Mother and the Respondent

This section should only be completed if the mother is NOT present for the VA interview. This section aims to collect information about the mother and her death, if applicable.

301. What is the name of the baby's mother?

Record the name of the mother and use in future questions, if appropriate. This will help establish rapport between the interviewer and the respondent(s) and make the respondents feel more comfortable.

302. What was the age of the mother at the time of delivery?

Record the age to the best of the respondent's knowledge. If the respondent does not know the exact age, the interviewer should ask the respondent to approximate the mother's age to the nearest five years (e.g. 15, 20, 25, 30 years).

303. What was the mother's highest level of education?

Record "00" if no education was received, and record "99" if it is completely unknown. Education should be recorded in number of years completed.

304. Is the mother of the deceased baby alive?

If the mother is alive but not present for the VA interview, select "Yes."

305. Did she die during or after delivery?

This is a filter question, which should only be asked if the respondent indicated that the mother was dead.

306. How long after the delivery did the mother die?

This is a filter question, which should only be asked if the respondent indicated that the mother died after delivery. Responses should be recorded in the most accurate interval. While most VA's should be conducted about 6 weeks of the perinatal death, the response option of "More than 2 months ago" is relevant when conducting retrospective data collection on newborn deaths. If the respondent does not know when the mother passed away, select "999."

307. What do you think was the primary cause of the mother's death?

This should be a free response section which is focused on collecting information on the signs and symptoms which occurred prior to the mother's death. For example, if the mother died of a respiratory infection after birth but the respondent did not know the exact cause of death, probe the respondent for details on fever, chills, length of cough, etc.

Section 4. Basic Information on the Deceased

This section aims to collect information on the deceased newborn's name, sex, and location.

401. Was the baby named?

Select "Yes" if the baby was named and proceed to question 402.

402. What was the name of the baby?

This is a filter question, which should only be answered if the respondent indicated that the baby was named. Record the name of the deceased newborn and use throughout the interview, when appropriate. This helps establish a stronger relationship between the interviewer and respondent and can make the respondent feel more at ease with the VA process.

403. What was the sex of the baby?

Record the sex of the baby. If the baby's sex was unable to be determined, select "3." If the respondent does not know the sex of the baby, select "99."

404. Was the baby's mother a resident of the camps (living in any camp for more than 6 months)?

This question aims to determine if the mother is a new refugee. This helps to determine whether any potential conditions which may have affected the mother during pregnancy were likely to have occurred in the camps or from previous conditions.

405. Was the baby born in this camp or in a different one?

In many cases, mothers travel to stay with family before birth. This can help determine the location of the birth, which can assist with any confusions or complications in mortality reporting.

406. Where did the baby die?

If the newborn died in a hospital, record the name of the specific health facility. If the newborn died elsewhere, please select "6" and record the location in the space provided.

Section 5. Respondent's Account of Illness/Events that Led to Death

This section is a narrative account of what the respondent noted during the illness or events which led to the newborn's death. This section should record the respondent's own words as accurately as possible, even if the account does not make sense to the interviewer. In the case where the interviewer believes that the narrative may be incomplete or factually inaccurate, underline any unfamiliar terms or things which do not make sense. Any additional thoughts that the interviewer has can be recorded in the "Interviewer's Observations" section in **Section 12.** The narrative should be a complete account of the events leading to death, and should include:

- First recognition of illness

- Timing of illness

- Actions taken inside and outside the home to treat the newborn

- Provider care

- Any difficulties the family may have had in attempting to seek care

Section 5: Respondent's Account of Illness/Events that Led to Death
(সেকশন ৫: উত্তরদাতার অসুস্থতার হিসাব/মৃত্যুর দিকে পরিচালিত ঘটনাগুলি)

Interviewer, ask the respondent to tell you about the illness or events that led to the baby's death in their own words. Do not prompt except to ask if there was anything else after the respondent finishes. When recording, underline any unfamiliar terms or things which do not make sense. Probe for: first recognition of illness, timing, actions taken
inside and outside the home, provider care, and any difficulties the family may have faced in attempting to seek care.

(সাক্ষাৎকারী, উত্তরদাতাকে বাচ্চার মৃত্যুর অসুস্থতা অথবা মৃত্যুর দিকে পরিচালিত ঘটনাগুলির সম্পর্কে বলতে বলুন তাদের নিজেদের ভাষায় । উত্তরদাতা শেষ হওয়ার পরে আর কিছু ছিল কিনা জিজ্ঞেস করার জন্য অনুরোধ করবেন না । রেকর্ডিংয়ের সময়,কোন অপরিচিত শর্তাদি বা জিনিসগুলি বোঝা যায় না তা আন্ডারলাইন করুন । তদন্তের জন্য:অসুস্থতার প্রথম স্বীকৃতি,সময়,পদক্ষেপ নেওয়া বাড়ির অভ্যন্তরের এবং বাইরে,সরবরাহকারীর যত্ন নিতে চেষ্টা করার ক্ষেত্রে পরিবার যে কোন সমস্যার সম্মুখীণ হতে পারে ।

The baby died suddenly after 1 day of life. The birth occurred at home with a traditional birth

attendant. The baby was born early after seven months of pregnancy and struggled to breathe

from birth. During breastfeeding, the baby suddenly choked and stopped breathing entirely.

Because the baby died so suddenly, we did not seek care.

Section 6. Antenatal Care

This section is the first main content section of the VA interview. This section aims to collect information on the pregnancy and any antenatal care which was received. Before beginning the questions in this section, the interviewer should read aloud the text at the top for the respondent. This helps for the respondent to understand what the questions will be about, and the process of the VA interview.

601. Did the mother receive any antenatal care during pregnancy?

Select "1" if the mother visited the health facility for any antenatal care during her pregnancy.

602. How many antenatal care visits did the mother have during pregnancy?

This is a filter question, to quantify the number of visits received. If the respondent initially answers "Don't know" to this question, try to probe and determine if there were more or less than 4 visits (the recommended amount) and record to the best of your ability.

603. What was the duration of pregnancy at the time of the first health facility ANC check-up?

This question should be answered as accurately as possible. The respondent may know that the recommended first visit should be done by 17 weeks and may be inclined to respond as such, but it is important to gently emphasize that the goal of this VA is to

collect information to better help inform medical services which needs the most accurate information to do so.

604. *Was the mother aware of any family planning methods during the pregnancy?*

Select "1" if the mother knew of any family planning methods during the pregnancy. If the respondent appears uncertain, the interviewer should explain the term "family planning."

605. *Did the mother ever practice any of the following family planning methods?*

This is a filter question, to determine which family planning methods are or have ever been used in the household. The interviewer should go through and ask about each method, explaining terminology to the respondent as necessary. Every type of family planning should be asked about and a response recorded. For the purposes of this guide and VA questionnaire, it is not required to record specific brands and types of contraception used in the camps, as those may vary. However, the interviewer should be aware of the different forms of contraceptive methods and how to explain them to the respondent, should clarification be needed.

> *Lactational Amenorrhea Method* – also informally known as the "breastfeeding method," the lactational amenorrhea method may be used if 1) the woman's menstrual period has not returned since delivery, 2) she is breastfeeding her baby exclusively, both night and day, and 3) her baby is less than 6 months old.

However, the interviewer should reiterate that this method is very difficult to follow and may not be the most reliable [55].

Calendar Method – this method involves tracking menstrual cycle to determine when the woman is most likely to be ovulating, and therefore most likely to conceive. This method relies on a woman's knowledge of her menstrual cycle and may be difficult to track, which may make the method unreliable [55]. From preliminary findings in pilot testing, many Rohingya women are not aware of the date of their last menstrual period or do not have consistent menstrual cycles. The interviewer should use caution when describing this method to the respondent and emphasize the need for the woman to attempt this method only if she is able to track consistent, regular menstrual cycles.

Pill – this method involves taking a daily tablet to regulate hormones and prevent pregnancy [55].

IUD – this is a long-term reversible method of family planning, where a medical practitioner can insert a small device in a woman's uterus to prevent pregnancy. IUD's can be effective for several years, and can be inserted after birth during a facility delivery [55].

Injections – this method of reversible family planning involves receiving an injection every 3 months to prevent pregnancy [55]. Among refugees in Cox's Bazar, this is the most commonly practiced method of family planning.

Implants – inch-long plastic implants may be placed in a woman's arm as a method of family planning. The implants can last up to 4 years and release hormones to regulate a woman's menstrual cycle [55].

Male Condoms – a condom is a single-use, disposable method of family planning that consists of a thin rubber sheath which is placed over the penis before sex occurs. If a woman uses this method, it is extremely important to stress that this is a single-use method of birth control [55]. If the respondent is unfamiliar with how to use male condoms, the interviewer should describe how to use the contraceptive form.

Permanent methods – also known as tubal ligation, this method of family planning involves a surgical procedure which is performed by a physician [55].

Other methods – please specify if the woman describes any other method of family planning.

No method was used/withdrawal method – given the high probability for error and low likelihood for success, the withdrawal method (where ejaculation occurs outside of the woman's vaginal canal), is not considered as valid method of family planning. If a woman states that she uses the withdrawal or pullout method of birth control, the interviewer should clarify that this is not a reliable method to prevent pregnancy, and that sperm can still be present in pre-ejaculate fluids and the timing of ejaculation may be difficult to determine [55].

606. When the mother became pregnant with this pregnancy, which method(s) of family planning was she using?

With this question, please have the mother list all methods she was previously using before conception of this child. This will help the reviewer determine issues around certain methods of family planning and education, which can guide future interventions.

607. Did the mother ever receive any tetanus vaccinations?

Select "1" if the mother has ever received any tetanus vaccines in her lifetime, either in Burma or Bangladesh.

608. When did the mother receive her last tetanus vaccination?

This is a filter question, to determine the date of the mother's most recent vaccine dose. Record 01/01/2000 if the mother does not know. If she knows the month and year,

please record the day as "01." If she only knows the year, please record that, and record the month and day as "01/01."

609. How many doses has she received?

Record the number of doses of tetanus vaccine that that the mother has received. If she does not know how many she has had, please select "99."

610. Did the mother take iron supplements during this pregnancy?

Select "1" if the mother took iron supplements during the pregnancy in question.

611. Did the mother take folic acid during this pregnancy?

Select "1" if the mother took folic acid tablets during the pregnancy in question.

612. Did the mother ever take deworming tablets?

Select "1" if the mother has ever taken deworming tablets in her lifetime.

613. Approximately when did the mother take deworming tablets?

This is a filter question, to determine the date of the mother's most recent round of deworming tablets. Record 01/01/2000 if the mother does not know. If she knows the month and year, please record the day as "01." If she only knows the year, please record that, and record the month and day as "01/01."

614. Did the mother sleep under a bednet during pregnancy?

Select "1" if the mother slept under a bednet during the pregnancy in question.

615. Was the mother ever tested for HIV/AIDS?

Select "1" if the mother has ever been tested for HIV/AIDS in her lifetime.

616. Was she HIV-positive or HIV-negative?

This is a filter question, to determine the mother's HIV status, if known.

617. How long ago was she diagnosed as HIV-positive?

This is a filter question, to determine how long the mother has been diagnosed as HIV-positive. If she was diagnosed less than 1 year ago, record her response in months. If she was diagnosed more than 12 months ago, record her response in years.

618. At the time of delivery, was the mother receiving treatment for HIV?

This is a filter question, aimed to determine if the mother was receiving treatment for HIV during pregnancy and delivery.

619. Was she taking ARVs or Septrin for HIV treatment?

This is a filter question, which aims to determine which type of medication the mother was on during her pregnancy/delivery. ARVs, or antiretroviral drugs, are a set of

medications which are used to control HIV. Septrin is a medication which can be used after the first trimester of pregnancy to safely control HIV/AIDS.

620. How long has she been taking ARVs for HIV?

This is a filter question, to determine how long the mother has been taking antiretroviral treatment. If she started them less than 1 year ago, record her response in months. If she began the treatment more than 12 months ago, record her response in years.

621. During the pregnancy, was the mother told that she suffers from any of the following known illnesses?

The interviewer should go through and ask each illness, explaining terms as necessary, to the respondent. Every condition should be asked, with an individual response recorded.

> *High blood pressure* – this is a common condition which may eventually cause health problems if left uncontrolled/untreated. This occurs when the heart is working too hard to pump blood. Treatment for this condition usually involves a low-sodium diet or blood pressure medications.

Heart disease – this is an illness which involve narrowed or blocked blood vessels. If not treated or managed, people who have heart disease are at a higher risk of heart attack or strokes.

Diabetes – this is a condition which occurs when an individual's blood sugar is too high. Treatment for this condition may include diet control and medication. Uncontrolled diabetes can be very dangerous and contribute to a number of other complications, such as heart, kidney, and nerve damage.

Epilepsy/Convulsions – this is a condition where an individual may experience seizures, convulsions, or episodes of uncontrollable shaking.

Malnutrition – this condition may be short or long-term and is caused by poor or insufficient diet.

Malaria – this is a disease which is spread by mosquitos. Treatment for this condition is medication, and mothers are advised to sleep under bednets to prevent mosquito bites and potential transmission of the disease.

TB – this condition, also known as tuberculosis, is a disease which affects the lungs, respiratory system, and other organs such as the uterus. Individuals with

this disease may be spread the disease to others easily and require medical assistance.

Anemia – this is a condition caused by low red blood cell count and is characterized by dizziness or weakness. Mothers often become anemic during pregnancy. In many cases, anemia may be caused by low iron levels, which is why mothers are prescribed iron tablets during pregnancy.

Syphilis – this condition results from a sexually transmitted infection, or STI. It is managed through medication and is especially important to manage during pregnancy. This condition is characterized by sores on the genital area.

Rubella – this, like TB, is an infectious disease. Rubella is typically characterized by a rash and requires medical attention to treat.

Other STI – record any other sexually transmitted infection that the mother describes.

Other illness – record any other illness that the mother describes.

622. *During the last 3 months of pregnancy but before labor, did the mother have any of the following symptoms?*

The interviewer should go through and ask each symptom, explaining terms as necessary, to the respondent. Every condition should be asked, with an individual response recorded. These conditions correspond to the "danger signs" which can indicate that there is an issue during pregnancy.

Vaginal bleeding – this may include spotting or heavier bleeding.

Foul smelling vaginal discharge – normal vaginal discharge is thin, white, milky, and mild smelling. Abnormal vaginal discharge can be yellow-green in color, thick, and have a strong foul odor.

Swelled fingers, face, or legs – while some swelling in the legs, ankles, and feet may be normal throughout the pregnancy, in some cases this may also be a danger sign for the mother.

Headaches – in conjunction with other danger signs, headaches during pregnancy may indicate a more serious condition.

Blurred vision – in conjunction with other danger signs, blurred vision during pregnancy may indicate a more serious condition.

Convulsions – record if the mother has experienced any convulsions during pregnancy, especially if the mother has not had issues with convulsions previously, this may be indications of a serious pregnancy complication.

Fever – record if the mother experienced any fever during pregnancy, this may indicate infection.

Severe abdominal pain – record if the mother ever experienced severe abdominal pain during pregnancy, this may indicate issues with the pregnancy.

Paleness in face/shortness of breath – record if the mother has experienced either paleness or shortness of breath. In conjunction with other danger signs, this may indicate a more serious condition.

Yellowness in eyes – this may indicate a more serious condition associate with the liver.

Other illness – record if the mother experienced any other symptom or illness during the last 3 months of pregnancy.

623. During the last three months of pregnancy but before labor, how often did the mother have little interest or pleasure in doing things, or feel down, depressed, or hopeless?

During pregnancy, shifting hormone levels may cause a woman to feel depressed and lost interest in daily activities. This can be representative of a larger issue. Before asking this question, read the prompt above the question to help the respondent understand why you are asking this. Record the response to the most accurate interval.

624. How many pregnancies, including miscarriages/abortions, did the mother have before this baby?

This question is looking for the exact number of pregnancies, not the number of births or children. This number should be inclusive of miscarriages or abortions (also referred to as menstrual regulation). Additionally, this number should not include the baby in question (the deceased newborn). If the perinatal death in question is the mother's first pregnancy, record "00." Refer to Box 1 for an example below.

625. How many births, including stillbirths, did the mother have before this baby?

This question aims to determine the exact number of births, not the number of pregnancies or alive children. For this reason, stillbirths are also included in this count, but the baby in question (the deceased newborn) is not. All children who were born (alive or dead at or after 7 months) should be counted. Refer to Box 1 for an example.

Box 1. Pregnancies and Births in the VA Questionnaire

Suppose a mother tells you she has the following children:
>Twins
>2 other children
>1 deceased child at 6 months
>1 miscarriage
>The deceased newborn in question

Her total number of **pregnancies** would be:
>1 pregnancy from the twins
>3 pregnancies from the children
>1 pregnancy from the miscarriage
>= 5 total pregnancies

>*The deceased newborn in question is not included in the calculation of pregnancies.

Her total number of **births** would be:
>2 births from the twins
>3 births from the children
>= 5 total births

>*The miscarriage and deceased newborn in question are not included in the calculation of births.

---

626. Now, let's talk about the birth of the baby who died. What was the duration of pregnancy when the baby was born?

Record the approximate length of the pregnancy in question. When possible, record the response in weeks.

627. Was the baby born before expected?

Select "1" if the respondent feels that the baby was born before expected.

628. What was the date of the last menstrual period?

This is an approximate measure of date of conception. Record 01/01/2000 if the respondent does not know. If she knows the month and year, please record the day as "01." If she only knows the year, please record that, and record the month and day as "01/01."

629. What was the expected date of delivery?

Record the expected date of delivery. Record 01/01/2000 if the respondent does not know. If she knows the month and year, please record the day as "01." If she only knows the year, please record that, and record the month and day as "01/01."

630. Was the baby a single or multiple birth?

Record the birth details of the delivery in question.

631. What was the birth order of the baby that died?

This is a filter question, to determine the birth order of the baby that died if a multiple birth occurred.

632. What was the outcome of the last pregnancy before this baby?

If the deceased newborn in question was the mothers first pregnancy, please select "8." If the mother had a prior pregnancy, please select the appropriate outcome measure.

Section 7. Delivery History

This section is the longest section of the VA interview. This section aims to collect information on the delivery procedure and any signs/symptoms that were present from the delivery. If the respondent appears tired, this would be a good moment to offer some water or snacks/chocolate. Before beginning the questions in this section, the interviewer should read aloud the text at the top for the respondent. This helps for the respondent to understand what the questions will be about, and the process of the VA interview.

701. Where did the birth take place?

If the birth occurred in a health facility, please specify which health facility.

702. Did the person who assisted in the birth listen for fetal heartbeat sounds during labor with an electronic device (Doppler) or cone-shaped stethoscope placed on the abdomen?

This question is a filter question which aims to determine delivery tools used at a health facility delivery. Use the Doppler and cone-shaped stethoscope visual aids to assist with recall.

703. Were fetal heart sounds present?

This is a filter question which is used to determine if the baby was alive at the time of birth, if the birth was a facility delivery.

704. Was an ultrasound scan done JUST before labor started or during labor?

This question is a filter question which aims to determine delivery tools used at a health facility delivery. Use the ultrasound visual aid to assist with recall.

705. After the baby was delivered, was any injection given to the mother to help the uterus contract?

This question is a filter question which aims to determine the medications used at a health facility delivery, which can help inform cause of death.

706. How soon after birth was the baby discharged?

If the newborn died before discharge from the hospital, select "777." Otherwise, record time of discharge in the hours or days as appropriate.

707. How soon after labor pains started did the mother receive skilled medical assistance with the labor and delivery?

For this question, record the number of hours between labor start and skilled medical assistance received as best as possible. However, in certain cases, this question may not apply. If the mother did not receive skilled medical assistance during delivery, select "55." If a physician determined that the baby had died in the womb and induced labor to remove the fetus, select "66." If the mother was past the expected delivery date and a

physician induced labor, select "77." Lastly, if the mother had a planned C-section, select "88."

708. Who assisted the delivery?

Record all persons that assisted in delivery. Multiple responses are allowed.

709. How many hours or days did the mother have labor pains before delivery?

If response is less than one hour, record "00" for hours. If respondent answers, "don't know," attempt to approximate if the mother was in labor for more or less than 24 hours and record.

710. Was the mother given any drugs during labor to stimulate contractions?

If the respondent answers, "yes," ask to specify the drug, if possible. If the respondent knows that the mother was given drugs during labor but does not know what they were, select "1" and write "Don't know" where the VA asks for specification.

711. Did the mother use any local herbs during pregnancy, labor, and delivery?

In this context, herbs refer to any non-prescription medication which is obtained at a local pharmacy. Record the time that any herbs were used during the pregnancy and delivery, if applicable.

712. Which local herbs were used?

This is a filter question which aims to determine the type of local herbs that were used. If the respondent has access to a container or bottle, the interviewer should ask to see that and record the name of the compound. If the respondent does not know which type of local herbs were used, but that some were, write "Don't know" in the space provided.

713. Did you see the water break?

Select "1" if the respondent was present at the time the water broke.

714. When did the water break?

Read options to the respondent before answering. If the water broke during delivery, select response code "2."

715. How many hours or days passed between the water breaking and birth?

This is a filter question, which aims to determine the possibility of infection occurring during labor. The benchmark for this question is 24 hours, so if the respondent answers that they don't know how much time passed between the water breaking and birth, try and determine if it was more or less than a day.

716. What color was the water?

This is a filter question which aims to determine some of the symptoms of an issue based on the color of the water. In a typical delivery free of complications, the water should be clear.

717. Was the water foul smelling?

This is a filter question which aims to determine some of the symptoms of an issue based on the characteristics of the water break. In a typical delivery free of complications, the water should not smell foul.

718. Was there excessive bleeding before, after, or during delivery?

Select "1" if excessive bleeding occurred at all during the delivery process.

719. Did the mother have convulsions before, after, or during delivery?

Select "1" if the mother had convulsions at all during the delivery process.

720. Did the baby stop moving in the mother's abdomen?

Select "1" if the baby ever stopped moving during pregnancy or delivery.

721. Did the baby stop moving before labor started or during labor?

This is a filter question which aims to determine when the baby stopped moving in the womb or during delivery.

722. How long before labor started did the baby stop moving in the mother's abdomen?

This is a filter question which aims to determine how long after the baby stopped moving in the womb that the mother gave birth, regardless of if delivery was induced or not.

723. What type of delivery was it?

Explain each type of delivery to the mother before recording a response.

Normal vaginal delivery – this is the most common form of birth, where the baby exits the mother's body through the vaginal canal.

Forceps/vacuum – forceps and vacuums are tools which can be used to assist the birth of the baby. These tools are usually used by physicians or midwives. If the respondent knows that some kind of instrument was used to assist in delivery but cannot list which, the interviewer should show visual aids to assist with recall.

Cesarean section – this method can only be performed at a health facility and is often done if there is some complication with the pregnancy that would make normal vaginal birth risky to the mother or child. The procedure involves cutting along the mother's abdomen and pulling the child out through the incision.

Assisted breech delivery – breech refers to a complication where the baby is in an incorrect position for normal vaginal delivery (not with the head exiting first). In an assisted breech delivery, the person assisting the birth maneuvers the baby inside the womb to reposition in the correct placement for birth.

Other – record any other method described by the respondent for type of birth.

724. Which part of the baby came first?

This question is trying to determine if the baby was breech (in the incorrect position for delivery) or not. Record which part of the baby was delivered first.

725. Did the umbilical cord come out before the baby was born?

Select "1" if the umbilical cord exited the mother's vaginal canal before the baby was delivered. Use a visual aid to assist with recall and understanding, if necessary.

726. Was the cord wrapped more than once around the neck of the baby?

Select "1" if the cord was wrapped more than once around the baby's neck. Use visual aids to assist with recall and understanding, if necessary.

727. Was there a cord knot?

Select "1" if there was a knot in the umbilical cord. Used visual aids to assist with recall and understanding, if necessary.

728. What color was the cord?

Normal cord color is white or gray, and different cord colors can indicate issues with the pregnancy/delivery. Record the color of the umbilical cord at birth.

729. Was there anything else about the cord that was different?

Record anything else that was different about the umbilical cord, if applicable.

730. Normal placentas are red/blue in color, soft, and round. Did the placenta look like this?

Many respondents may not understand what a placenta is expected to look like based on the description provided in the question. Use a visual aid to assist with recall and understanding.

731. Was the placenta foul smelling?

Select "1" if the respondent answered that the placenta smelled strongly.

732. What was the birth weight in grams?

Record the birth weight, if known. If the respondent answers in kilograms, multiply the response by 1000 to record in grams. Select "9999" if the respondent does not know the birth weight.

Text Box: Questions **733 – 739** should only be asked if the deceased newborn was not born in a health facility. If the birth occurred in a health facility, the interviewer should move to **740.**

733. On what surface did the mother deliver?

Record what surface the delivery took place on.

734. Did the person who assisted the birth wash his/her hands before examining the mother?

Select "1" if the respondent knows that the person who assisted the delivery washed his/her hands. If the mother gave birth alone, select "77." In this instance, "the person who assisted the birth" could be a traditional birth attendant, midwife, family member, or anyone else who was present at the time of delivery.

735. Did the person who assisted the birth wear gloves?

Select "1" if the respondent knows that the person who assisted the delivery wore gloves. In this instance, "the person who assisted the birth" could be a traditional birth attendant, midwife, family member, or anyone else who was present at the time of delivery.

736. Was anything applied to the umbilical stump after birth?

Select "1" if something was applied to the umbilical stump after tying/cutting.

737. What was applied to the umbilical stump after birth?

Chlorhexidine is a disinfecting solution which can be applied to the umbilical stump after birth to prevent infection. This solution would typically be applied by a health worker. Alcohol and Iodine are other non-specific solutions used to prevent infection. In this context, local herbs refer to compounds which are purchased from local pharmacies without a prescription. If local herbs were applied to the umbilical stump, it is important to record which herb was used.

738. What tool was used for cutting the cord?

In order to prevent infection, it is important that the tool used to cut the cord is clean. Ideally this would be a new blade. Record which tool was used for this process. If the cord was not cut, select "5."

739. What material was used for tying the cord?

In order to prevent infection, it is important that the material used to tie the umbilical cord is clean. Record which material was used for this process. If the umbilical cord was not tied, select "4."

740. Were there any bruises or signs of injury on the baby's body after birth?

This question aims to determine if the baby had any kind of injury directly after birth. The interviewer should use a visual aid to assist with understanding and recall, if necessary.

741. Where were the injury marks?

This is a filter question to determine the location of injury on the newborn's body directly after birth.

742. Did the baby have any major malformation at birth?

Select "1" if the newborn had an anomaly at birth.

743. What kind of malformation did the baby have?

For this question, the respondent should describe the malformation first. If necessary, use visual aids to assist in understanding and recall.

> *Swelling/defect on back* – otherwise referred to as spina bifida, this can occur where a newborn may have a weak spot or bulge on their back where the spine is vulnerable.

> *Very large head* – also referred to as macrocephaly, this may either be harmless or indicative of a more serious issue. This option should only be selected if the respondent answers that the newborn's head was much larger than normal.

> *Very small head* – similarly, this condition can also be referred to as microcephaly and can be an indication of a serious issue. This option should only be selected if

the respondent indicates that the newborn's head was much smaller than normal.

Defect of the lip and/or palate – cleft lip or cleft palate is a common birth defect which is usually very visible. In many cases, this condition can be helped with surgery as the child grows.

Extra fingers/toes – record if the deceased newborn had extra fingers or toes.

Intestines protruding through the abdomen – also known as a hernia, intestines protruding outside the body require immediate medical attention.

Other – record any other birth defect that the respondent is aware of.

744. Was the baby covered in any whitish substance right after delivery (vernix)?

It is typical for newborns to be covered in a thick, white-colored substance after birth. This is referred to as the vernix and serves a protective function for the newborn.

745. Was there any green/brown material or substance on the baby's skin?

Green/brown material on the newborn's skin may be indicative of a post-date baby.

746. *Were the baby's hands or feet swollen*?

Record "1" if the newborn's hands or feet were swollen after birth.

747. *Was the baby a stillbirth?*

Select "1" if the deceased newborn was a known stillbirth. If the respondent is

uncertain, select "2."

Box 2. Classifying Neonatal Deaths and Stillbirths in the VA Questionnaire

Question **747** represents a key decision point – if the newborn was a known stillbirth, they will go through one path which will skip most of the subsequent questions. If the newborn was a known neonatal death, the questionnaire will direct the interviewer to a separate pathway where more questions are asked. However, if the respondent does not know for sure if the newborn was a stillbirth, questions **750 – 756** aim to determine if the baby was a neonatal death or stillbirth. Therefore, some questions may be replicated in multiple question pathways, but would only ever be asked to the respondent once. This is also depicted below.

Stream 1: Known Stillbirth	Stream 2: Known Neonatal Death	Stream 3: Undetermined Stillbirth/Neonatal Death
↓	↓	↓
Questions 748 - 749	Questions 759 - end	Questions 750 - 756

Stream 1 continues:
- Questions 748 - 749 → Questions 1101 - end

Stream 3 (Questions 750 - 756) branches:
- **Stillbirth** → Questions 757 - 758 → Questions 1101 - end
- **Neonatal Death** → Questions 761 - end
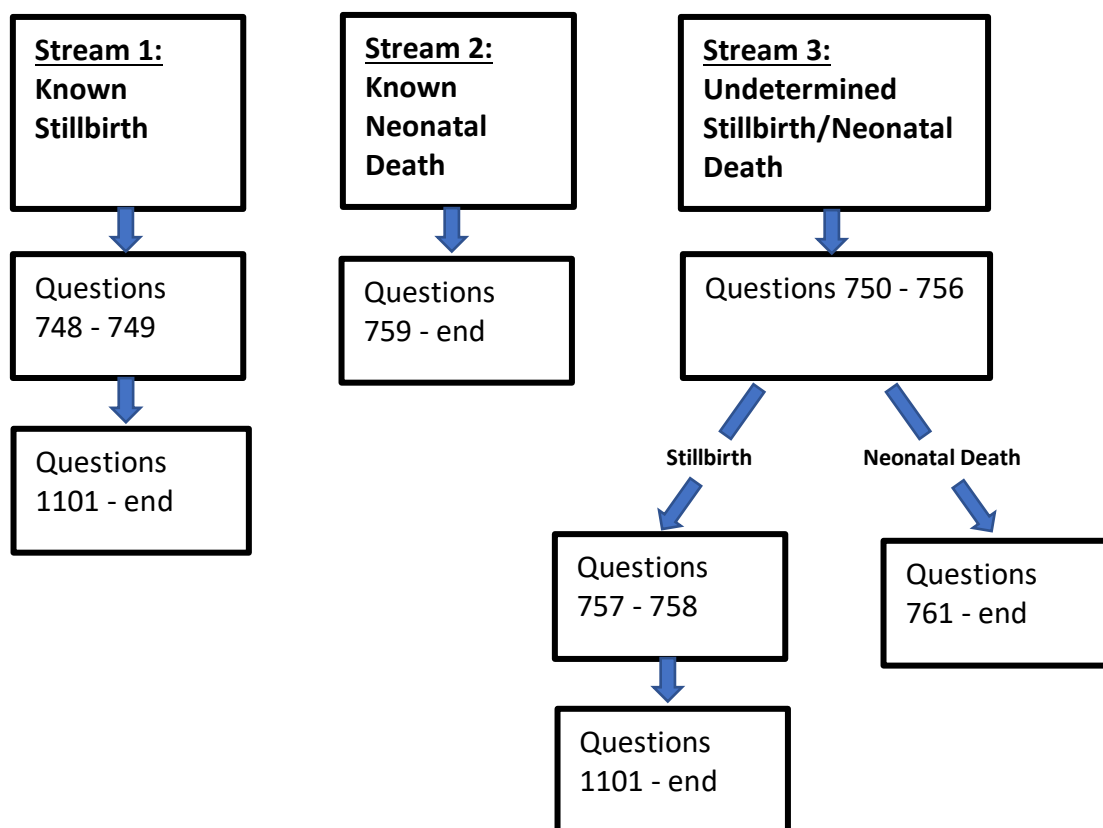
748. What was the color of the baby at birth?

This specific question is only intended to be asked if the newborn was a confirmed

stillbirth (i.e. if it was known that the newborn was not alive at birth).

749. Was the baby's skin peeling or showing signs of decay?

This is a filter question which aims to determine if the stillbirth was recent or occurred earlier during pregnancy. If the baby died in the womb before delivery, it may show signs of fetal death, also known as maceration. If necessary, use a visual aid to assist with recall and understanding.

750. Did the baby ever cry after birth, even a little?

Select "1" if the baby cried after birth.

751. How many minutes after birth did the baby first cry?

This is a filter question which aims to determine when the baby first cried after birth. If the respondent does not know when the baby cried, please select "99."

752. Did the baby ever breathe after birth, even a little?

The interviewer should record "Yes" if the baby ever had any chest movement, regardless of how irregular or small the movements were.

753. Was the baby given assistance to breathe?

The interviewer should read each option and describe the different methods which can be used to assist a newborn's breathing. Each method of assistance should be answered individually, as multiple options are allowed. Use visual aids to assist in recall and understanding, if necessary.

Stimulation – to help the newborn begin breathing, the birth assistant may stimulate the baby by patting its back or rubbing its feet.

Rubbing the back – this is another form of stimulation which may encourage the newborn to spontaneously breathe.

Bag and mask – this method may be used by a health worker and involves a mask being placed over the newborn's mouth with a bag full of air being compressed to push air into the newborn.

Suction – this method is performed by a health worker and involves a tool to clear the newborn's airway from mucous after birth.

Intubation – this method is performed by a health worker and involves a tube being placed through the newborn's mouth and throat to assist with breathing.

Other – record any other method of breathing assistance that the respondent answers.

754. Was the baby given any oxygen?

This typically happens if the newborn was born in a health facility. If necessary, use a visual aid to assist with recall and understanding.

755. Did the baby ever move, even a little?

Select "1" if the deceased newborn ever moved before death.

756. Were the arms and legs limp, or did they have some flexing?

This is a filter question which aims to determine if the baby was alive or dead at birth, given that they did not move on their own.

> Text Box – At this point, the section to determine if the baby was alive or dead at birth should be complete. If the baby ever cried, moved, or had a heartbeat, then the death would be classified as a neonatal death and the interviewer should skip ahead to **761.** If the baby showed no signs of life at the time of delivery, the death is classified as a stillbirth and the interviewer should continue to **757.**

757. What was the color of the baby at birth?

This is the second time this question appears in the VA tool (see also **748**) but would only be asked if the newborn was determined to be a stillbirth through the VA process.

758. Was the baby's skin peeling or showing signs of decay?

This is the second time this question appears in the VA tool (see also **749**) but would only be asked if the newborn was determined to be a stillbirth through the VA process.

759. Was the baby given assistance to breathe?

This is the second time this question appears in the VA tool (see also **753**) but would

only be asked if the newborn was a known neonatal death.

760. Was the baby given any oxygen?

This is the second time this question appears in the VA tool (see also **753**) but would

only be asked if the newborn was a known neonatal death.

761. Was the baby ever breastfed?

Select "1" if the baby was breastfed at any point before death.

762. How soon after birth was breastfeeding initiated?

This is a filter question which aims to determine the duration of time that passed before

the baby was breastfed. If the respondent lists a time that is less than one hour, record

"00" in hours.

763. Was the baby ever fed only with breastmilk?

Select "0" if the baby was ever fed with something other than breastmilk (i.e. cow's

milk, formula, etc.).

764. What other foods were fed to the baby?

Record the alternative foods that the baby was fed with. If the baby was never fed, write "None" in the space provided.

765. Was the baby dried right after birth?

Record "1" if the baby was dried right after delivery. This is one of the essential newborn care practices which help reduce negative health outcomes after birth.

766. Was the baby kept warm right after birth?

Record "1" if the baby was kept warm right after delivery. This is one of the essential newborn care practices which help reduce negative health outcomes after birth.

767. How was the baby kept warm after birth?

This is a filter question which aims to determine how the newborn was kept warm after birth. All options should be read and answered individually. Use visual aids to assist with recall and understanding, if necessary.

Placed skin-to-skin immediately after birth – this is the most feasible option in most settings and can reduce negative health outcomes for the newborn.

Wrapped – also referred to as swaddling, this involves wrapping an infant tightly after birth to keep it warm.

Covered with a blanket – this answer should be selected if the baby only had a blanket draped over them but was not tightly bound within it.

Placed in an incubator – this is usually done in a health facility and involves placing the baby in a clear, glass or plastic dome to keep it warm.

Other – record any other method that was used the keep the infant warm after birth.

768. How long after birth was the baby cleaned?

Record the approximate amount of time between birth and cleaning to the best measure. If the baby was not cleaned prior to death, select "777."

769. How was the baby cleaned after birth?

This is a filter question which aims to determine how the newborn was cleaned after birth. All options should be read and answered individually.

770. How many hours or days after birth was the baby examined at a hospital?

Record response in either hours or days to the best approximation possible. If the baby was not examined before death, select "777."

771. Was the baby ever admitted to a neonatal intensive care unit?

This is a filter question which aims to determine if the baby was recognized as being fatally ill if it was examined at a hospital.

772. Did the mother ever receive counselling by a health worker after birth?

Select "1" if the mother received counselling after birth, either from a CHW or other health worker.

773. What was the mother counselled on?

This is a filter question which aims to determine what type of counselling the mother received after giving birth. All options should be read and answered individually.

774. Was the mother given Vitamin A after delivery?

Vitamin A assists in improving health for mothers and children. Vitamin A supplements should be taken to improve the vitamin's concentration in the mother's breastmilk.

775. Was the baby given the BCG vaccine in the first week of life?

The BCG vaccine is used to prevent Tuberculosis or TB infection. In this context, it is typically given in the first week of life.

776. Did the baby sleep under a bednet?

Select "1" if the newborn slept under a bednet.

Section 8. History of Accidents/Injuries

This is the shortest content section of the VA interview. This section aims to determine

if an accident occurred with the child which led to the neonatal death. This section also

contains a new response "No comment." This response should be recorded if the

respondent appears resistant to answering, which may be the case if an accident did

occur due to an adult's mistake. This answer is different than the response of "Don't

know." If the interviewer notices any hesitation on the part of the respondent, they

should be careful in how they ask questions to not overstep or assign blame.

801. Did the baby die from an injury or accident?

Select "1" if the newborn died from an accident or injury which occurred after birth.

802. What kind of injury or accident?

Record the primary type of injury or accident which occurred. For example, if the

newborn was involved in a road traffic accident where he/she also suffered from burns,

the primary accident recorded should be the road traffic accident.

803. Was the injury or accident inflicted by someone else?

For this question, it is especially important to stress that the interviewer is not here to

assign blame to anyone, merely to collect information about the baby's death.

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

Select "1" if the baby was bitten by an animal/insect which led to death.

805. What kind of animal caused the injury/accident?

This is a filter question which aims to determine the type of animal which caused injury

to the baby.

Section 9. Signs and Symptoms Noted During the Final Illness

This section is another content section of the VA interview. This section aims to collect information on the any signs/symptoms that occurred before death, if applicable. Before beginning the questions in this section, the interviewer should read aloud the text at the top for the respondent. This helps for the respondent to understand what the questions will be about and the process of the VA interview.

901. Were there any signs, symptoms, or illness that occurred right before death?

If the respondent answers "No," the interviewer should skip to the next section.

902. How old was the baby when the illness that occurred right before death started?

Record the response received in either hours or days, as appropriate.

903. Was the baby ever able to suckle/bottle-feed?

Select "1" if the baby was able to breastfeed or bottle-feed.

904. Did the baby stop suckling/bottle-feeding?

Select "1" if the baby ever stopped feeding.

905. How many days after birth did the baby stop suckling or bottle-feeding?

This is a filter question which aims to determine the age at which the baby stopped feeding. If the respondent answers in an interval that is less than one day, record "00" in Days.

906. Did the baby have a fever?

Select "1" if the baby ever had a fever.

907. How many hours or days after birth did the fever start?

This is a filter question which aims to determine the age at which fever began. If the respondent answers in an interval that is less than one hour, record "00" in Hours.

908. How many hours or days did the fever last?

This is a filter question that aims to determine how long the fever lasted.

909. Did the baby's body feel cold when touched?

Select "1" if the baby's body ever felt cold to the touch (low body temperature).

910. How many hours or days after birth did the baby become cold to the touch?

This is a filter question which aims to determine the age at which the low body temperature began. If the respondent answers in an interval that is less than one hour, record "00" in Hours.

911. Did the baby have a cough?

Select "1" if the baby ever developed a cough.

912. How many hours or days after birth did the baby start to cough?

This is a filter question which aims to determine the age at which the cough began. If

the respondent answers in an interval that is less than one hour, record "00" in Hours.

913. Did the baby have difficulty breathing?

Select "1" if the baby ever struggled to breathe.

914. How many hours or days after birth did the baby start having difficulty breathing?

This is a filter question which aims to determine the age at which the baby began to

have difficulty breathing. If the respondent answers in an interval that is less than one

hour record "00" in Hours.

915. For how many days did the difficult breathing last?

This is a filter question which aims to determine how long the difficulty breathing

continued for. If the respondent answers in an interval that is less than one day, record

"00" in Days.

916. Did the baby have short and fast breathing?

This is also known as hyperventilation or panting. If the respondent does not understand, the interviewer should demonstrate.

917. How many hours or days after birth did the baby first start having short and fast breathing?

This is a filter question which aims to determine the age at which the short and fast breathing occurred. If the respondent answers in an interval that is less than one hour, record "00" in Hours.

918. For how many days did the short and fast breathing last?

This is a filter question which aims to determine how long the panting lasted. If the respondent answers in an interval that is less than one day, record "00" in Days.

919. Did the baby have indrawing of the chest?

Indrawing of the chest can occur when a child has pneumonia or infection of the lungs which causes difficulty breathing. Indrawn chest appears as though the child has dimples or pockets when breathing in. The interviewer should describe this term to the respondent when asking the question. Use a visual aid to assist in recall and understanding, if necessary.

920. *Did the baby have noisy breathing (grunting or wheezing)?*

The interviewer should demonstrate grunting or wheezing to the respondent, if necessary.

921. *Did the baby have convulsions?*

Select "1" if the baby ever had convulsions.

922. *How many hours or days after birth did the baby start having convulsions?*

This is a filter question which aims to determine the age at which convulsions began. If the respondent answers in an interval that is less than one hour, record "00" in Hours.

923. *Did the baby's back become stiff or arched backwards?*

This can be a symptom of neonatal tetanus. Use a visual aid to assist with recall and understanding, if necessary.

924. *Did the baby become unresponsive or unconscious?*

Select "1" if the baby ever lost consciousness or became unresponsive to touch or sound.

925. How many hours or days after birth did the baby become unresponsive or unconscious?

This is a filter question which aims to determine the age at which the baby lost consciousness. If the respondent answers in an interval that is less than one hour, record "00" in Hours.

926. During the illness that led to death, did the baby have sunken soft spots on their head (sunken fontanelles)?

Select "1" if the baby's soft spot on their head ever became sunken and pressed inwards.

927. During the illness that led to death, did the baby have protruding, bulging, or raised spots on his/her head (protruding fontanelle)?

Select "1" if the baby's soft spot on their head ever became swollen and protruding.

928. Did the baby have a swollen stomach (abdomen)?

Select "1" if the baby's abdomen ever became swollen and protruding.

929. How many days after birth did the baby develop a swollen abdomen?

This is a filter question which aims to determine the age at which the swollen abdomen began. If the respondent answers in an interval that is less than one day, record "00" in Days.

930. Did the baby vomit?

Select "1" if the baby ever vomited.

931. How many hours or days after birth did the baby start vomiting?

This is a filter question which aims to determine the age at which fever began. If the respondent answers in an interval that is less than one hour, record "00" in Hours.

932. When the vomiting was most severe, how many times did the baby vomit in one day?

This is a filter question which aims to determine how frequent the vomiting occurred when it was at its worst.

933. Did the baby vomit blood?

Select "1" if the baby ever vomited blood.

934. Did the baby have diarrhea?

Select "1" if the baby ever had diarrhea or loose, watery stool.

935. How many hours or days after birth did the baby first have diarrhea?

This is a filter question which aims to determine the age at which the diarrhea began. If the respondent answers in an interval that is less than one hour, record "00" in Hours.

936. On the day when the diarrhea was most severe, how many times did the baby pass stools in a day?

This is a filter question which aims to determine how frequent the diarrhea occurred when it was at its worst.

937. At any time during the illness that occurred before death was there blood in the stool?

Stools which contain blood are either bright red or black depending on where the internal bleed is located in the baby's body.

938. Did the baby have any redness or drainage from the umbilical stump?

Select "1" if the baby ever had any inflammation, redness, or liquid draining from the umbilical stump. This could be indicative of an umbilical stump infection.

939. During the illness that led to death, did the baby have a skin rash?

A skin rash is not linked to any specific disease but can be described as any inflammation or discoloration which affects the skin's normal appearance.

940. During the illness that led to death, did the baby develop skin ulcers or pits?

Skin ulcers look like open sores on the skin, while skin pits are deep pockets in the skin, usually resulting from disease. Use a visual aid to assist with recall and understanding, if necessary.

941. Did the baby have yellow palms or soles?

Yellow palms or soles, also called jaundice, can be indicative of issues with the liver. Select "1" if the baby ever had yellow palms or soles.

942. How many days after birth did the yellow palms or soles begin?

This is a filter question which aims to determine the age at which the baby's palms/soles began to appear yellow. If the respondent answers in an interval that is less than one day, record "00" in Days.

943. For how many days did the baby have yellow palms or soles?

This is a filter question which aims to determine how long the baby's palms/soles appeared yellow. If the respondent answers in an interval that is less than one day, record "00" in Days.

944. Did the baby have yellow discoloration of the eyes?

Yellow eyes can also be indicative of issues with the liver. Select "1" if the baby's eyes ever appeared yellow.

Section 10. Access to Care

This section is the last major content section of the VA interview. This section aims to collect information on the barriers that the family encountered when seeking care, if applicable. Before beginning the questions in this section, the interviewer should read aloud the text at the top for the respondent. This helps for the respondent to understand what the questions will be about and the process of the VA interview.

1001. Did the baby receive any treatment before he/she died?

Select "1" if the baby received any form of treatment. This can include treatment at home or at a health facility, by a local healer, or with a medical health worker.

1002. Why did the baby not receive any treatment?

This is a filter question which aims to determine the reasons why a neonate did not receive treatment. In many cases, it may be that the illness happened suddenly, or that there was no way to receive adequate treatment at the time.

1003. How was the baby treated at home?

Record the primary method that was used to treat the baby at home. If local herbs (purchased from a local pharmacy or healer) or another form of treatment not listed in the options is answered, please specify which type of treatment was used. If no home treatment was done, please select "3."

1004. What type of medicine was given to the baby at home?

The interviewer should list all options to the respondent. Each medicine type should be asked and answered individually. If the respondent is having difficulty with recall, the interviewer should ask to see what kind of medication bottles or labels the family has to assist with accurate data collection.

Malaria – record if the medication is known to be intended for malaria treatment

Septrin – this medication is used in HIV treatment.

Other antibiotic – record any other type of antibiotic that was used for the baby.

Paracetemol – this medication is used to treat pain and break fever.

Oral rehydration solution – ORS is used in cases of severe diarrhea to reduce the dangerous effects of dehydration.

Antiretroviral drugs (ARVs) – this is another medication used in the treatment of HIV.

Other – record any other medication that was given to the newborn at home

1005. How long after the onset of the illness that led to death was care initialized at home?

Record the length of time between the start of illness to when home treatment was started in either hours or days, as appropriate.

1006. As far as you know, was anyone aware that the baby needed medical help before the baby died?

Select "1" if the family was aware that the baby needed medical assistance.

1007. How long before the baby's death was the illness or health problem recognized?

This is a filter question which aims to determine the length of time that the critical nature of the newborn's illness was recognized before death. Responses should be recorded in either hours or days.

1008. Was the baby brought outside the home for care during the illness that led to his/her death?

Select "1" if the newborn was taken outside of the home to seek medical care during the illness that occurred before death.

1009. What were the reasons that the baby was not taken to care outside the home?

For this question, response options should not be listed out loud before the respondent answers. Instead, the interviewer should ask the question and listen to a short narrative from the respondent where he/she lists the reasons or story of the journey to seek care. After the response is heard, the VA questionnaire can be filled in appropriately, with any follow-up questions asked as prompts to answer each response option individually.

1010. How many hours or days after the onset of the illness that led to death was treatment initiated outside the home?

Response should be recorded in either hours or days, as appropriate.

1011. At what place was treatment sought?

The interviewer should list all response options. Every option should be asked and answered individually.

1012. List care sought in chronological order, starting with the first place where care was sought.

This question should be a list of all the places that the family took the newborn to seek care. Locations should be listed in the order visited and should depict the narrative of the family's journey to receive care. For this question, the location name should be recorded in the first column, along the "level code," "provider code," and length of time spent at the location. See the example provided below for more clarification.

1012.	List the care sought in chronological order, starting with the first place where care was sought. Use the codes below for the level that best describes the location. Record the main provider at each location using the codes below. Record the number of days spent at each place. If number of days is less than one day, record "00." (যত্নের জন্য চাওয়া হয় যেখানে, প্রথম স্থান দিয়ে শুরু সময়ানুক্রমিকভাবে চাওয়া তালিকা) (অবস্থানটির সেরা বর্ণনা করার জন্য নীচের কোডগুলি ব্যবহার করুন) (নীচের কোড ব্যবহার করে প্রতিটি অবস্থানের প্রধান প্রদানকারীর রেকর্ড করুন) (প্রতিটি স্থানে কাটানো দিনের সংখ্যা রেকর্ড করুন) (যদি একদিনের কম হয়, "০০"রেকর্ড করুন)

HOSPITAL/HEALTH FACILITY: (হাসপাতাল/স্বাস্থ্যকেন্দ্রে)	LEVEL: (স্তর)	PROVIDER: (প্রদানকারী)	NUMBER OF DAYS (দিনের সংখ্যা)
MSF Hospital – Camp 8E	1	1	2
Local Pharmacy	7	5	0

Codes for Level(স্তরের জন্য কোড):

1. Camp hospital(ক্যাম্প হাসপাতালে)
2. Government hospital (সরকারি হাসপাতালে)
3. Traditional birth attendant's work area(দাইয়ের কাজের এলাকা)
4. Traditional healer's work area(নিরাময়কারীর কাজের এলাকা)
5. Pharmacy (ফার্মেসী)
6. Imam's home(ইমামের বাড়ি)
7. Other (specify) অন্যান্য (উল্লেখ করুন): Local Pharmacy
8. Don't know(জানি না)

Codes for Provider (প্রদানকারীর কোড) :

1. Medical doctor (মেডিকেল ডাক্তার)
2. Nurse (নার্স)
3. Midwife (মিডওয়াইফ)
4. Traditional birth attendant (দাই)
5. Other (specify) অন্যান্য (উল্লেখ করুন) : Local Pharmacist
6. Don't know(জানি না)

1013. What kind of treatment was given to the baby outside the home?

The interviewer should list all treatments and describe each response option. Each response option should be asked and answered individually. Use visual aids to assist with recall and understanding, if necessary. If medicine bottles are present, the interviewer can use those to assist in data collection.

Oral rehydration solution – this is a packet of salts which are dissolved in water and given to individuals who have experienced severe diarrhea.

ARVs – this medication is used to treat HIV.

Septrin – this is another medication which is also used to treat HIV.

Other antibiotic – record any other antibiotic used for treatment outside of the home.

Blood transfusion – this is used when an individual has lost a lot of blood and involves a tube full of donated blood being placed into an individual's vein.

IV fluid – this is a common practice when an individual is dehydrated/has suffered blood loss and involves a tube filled with fluid being fed directly into an individual's vein.

Oxygen – this is used if an individual is struggling to breathe and involves an air tube or mask being placed in an individual's nose or over the nose and mouth.

NG tube feeding – this is a specialized tube that is used to give food or medicine directly to the stomach if an individual is unable to eat. It is fed in through the nose.

Surgery – select "1" if the newborn received surgery.

No treatment – select "1" if the newborn did not receive any treatment outside the home. Also make sure to select "0" for all other treatment options.

Other – record any other form of treatment received outside the home.

1014. Did a health worker tell you or anyone the cause of death of the baby?

Select "1" if the respondent was told the newborn's cause of death by a health worker.

1015. What did the health worker say?

This is a filter question which aims to determine what the health worker determined as the cause of death.

1016. What means of transportation were used to get the baby to the first place of care?

Record the method of transportation used to get the newborn to the first place of care.

Select multiple answers, if appropriate.

1017. How much total transportation time did it take to reach the first place of care?

Record response in minutes, hours, or days as accurately as possible. If the response is

less than 1 hour, record answer in Minutes. If response is less than 1 day, record answer

in Hours.

1018. Did you have difficulties when you sought healthcare for the baby at the facility?

Select "1" if the respondent experienced difficulty when trying to seek care at a health

facility.

1019. What difficulties did you have in seeking healthcare for the baby at the facility?

For this question, response options should not be listed out loud before the respondent

answers. Instead, the interviewer should ask the question and listen to a short narrative

from the respondent where he/she lists the reasons or story of the journey to seek care.

After the response is heard, the VA questionnaire can be filled in appropriately, with

any follow-up questions asked as prompts to answer each response option individually.

1020. How much time passed between when the baby reached the first place of care and when treatment was given?

Record response in minutes or hours, as appropriate. If the response is less than 1 hour, record answer in Minutes.

1021. Was the baby ever referred/transferred to another place of care during the illness that occurred before death?

Select "1" if the baby ever received care at a different location, either through referral/transferal or by the family's discretion.

1022. Where was the baby transferred?

Select the second location the family sought healthcare for the newborn from. Specify the location name as appropriate.

1023. What was the reason for referral/transferal?

For this question, response options should not be listed out loud before the respondent answers. Instead, the interviewer should ask the question and listen to a short narrative from the respondent where he/she lists the reasons or story of the journey to seek care. After the response is heard, the VA questionnaire can be filled in appropriately, with any follow-up questions asked as prompts. Multiple responses are accepted for this question.

1024. Did the baby reach the second place of care?

Select "1" if the baby made it to the second location of care.

1025. What means of transportation were used to get the baby to the place of referral/transferal?

All options should be listed, and multiple responses should be recorded, as appropriate.

1026. Why did the baby not reach the place of referrals/transfer?

The interviewer should select the largest barrier that the family faced in getting the baby to the second place of care.

Section 11. Data Abstracted from Other Health Records

This section is used to capture any information from health records, laboratory results, or prescription bottles. This information will be used to help contextualize the story of what happened to the newborn. For the categories below, it is very likely that the respondent will not have more than one type of document so the interviewer should ask for any documentation that the respondent has, then record the details as appropriate. For each type of health record, the details of the last two visits/relevant information and issue date should be recorded.

1101. Are health records/documents available?

Select "1" if any health records/documents are available.

1102. Newborn card

This card is typically given when a newborn is born in a health facility or if it is registered with a health worker.

1103. Hospital prescription/medicine packaging

Record any information from medicine packaging and who was the intended recipient (mother or baby). If the mother/baby used any local herbs, record those as well but denote that they are non-prescription treatments.

1104. Treatment cards, including immunization cards

Record type of vaccine or treatment received, vaccine dose, date received, and any other relevant information.

1105. Hospital discharge forms

Record treatment, location, condition, duration of stay, any prescription/follow-up treatments and any other relevant information.

1106. Laboratory results

Record type of test, result, location of tests run, and any other relevant information.

1107. Other hospital documents

Record any relevant information from any other hospital or medical documentation present.

1108. Thank the respondent for the interview. Record time of interview end.

This is the end of the survey. The interviewer should make sure to thank the respondent for their time and ask if they have any other follow-up questions.

Section 12. Interviewer's Observations

In most cases, this section will be filled in by the midwife or primary interviewer after the VA interview is complete. This section contains space for any other observations, comments, or question-specific comments that the interviewer had that were not captured in the VA questions. This is not necessarily asking for observations on how cooperative the respondents were, but this is where a change in address, a contradicting opinion about a medical condition, or a thought about causes of death should be recorded.

12.1 CHW Supervisor's Observation

This section is where the CHW Supervisor who has been filling out the VA questionnaire should note any other comments that he/she has on the interview.

VA Completion

In order to sign off on the VA questionnaire, the primary interviewer and CHW Supervisor who was filling out the form should sign after interview ends. The VA form should also be reviewed and checked by the VA Coordinator or Field Coordinator as appropriate. Lastly, once approval has been cleared and the VA form is entered into the KoBo data management software, the person who enters the information into the tablet or computer should sign off on the form to be complete.

Informed Consent Form (Interviewee Copy)

This is the second consent form copy. Once this form is completed, it should be torn off and given to the primary respondent for their records. This provides the respondent with a method to contact the interviewing team if they have any further information or questions.

Results - Common Perinatal Verbal Autopsy Questions and Scenarios

An FAQ-style "Common Questions and Scenarios" sheet was also created to

troubleshoot some common scenarios observed during pilot testing.

What should I do if I go to find the household and the respondent isn't there?

      If you go to an address located by the VA Coordinator and find that the primary

      respondent (typically the mother) is not present, first ask the family inside the

      house if they know where the primary respondent is. If the respondent is visiting

      someone else and will return home shortly, see if you can wait for their return. If

      the respondent will return home later, try and see if you can reschedule the

      Verbal Autopsy Interview. If the respondent has left and the people in the

      household do not know where they are, return to the field office and inform the

      VA Coordinator. Make sure that the appropriate code is recorded in the VA

      Questionnaire. If the VA interview will be conducted at a later date, make sure to

      use the same VA Questionnaire with the first response. You do not need to

      complete an electronic entry until the VA interview has occurred.

From whom should I obtain consent?

      Consent should be obtained from everyone participating in the VA interview.

      However, the consent form should be signed by the primary respondent,

      typically the mother. In some households the head of household may wish to be

consulted first. When completing the consent form, make sure to complete both the first and second consent forms. The second consent form should have the interviewer's information and contact information on it and should be given to the mother or primary respondent to keep.

The family doesn't want to give a Verbal Autopsy interview, what do I do?

If all potential respondents refuse to be interviewed regarding the death of a WRA that has been reported to you, first try to explain the importance of the information collected and where the data will be going. Stress the confidentiality of VA information. If the potential respondents still do not cooperate, try to get as many answers as possible about the death from other members or from neighbors. Stress the confidentiality of information to each person who answers questions. If you cannot find an appropriate respondent after 3 visits to the household, report this to the VA Coordinator. Every attempt to reach the household should be recorded in the VA Questionnaire.

What should we do if there is no midwife available to conduct the VA?

In the event that a midwife is unable to serve on the VA team, a trained CHW Supervisor can serve as the primary interviewer. This would still involve three roles: one CHW Supervisor would ask the questions, the second CHW Supervisor would record answers and serve as the data quality assurance, while the CHW would serve to facilitate communication between the family and the

interviewers. The Verbal Autopsy is written in such a way that the clinical terms

should be explained as simply as possible and a clinical background, while

preferred, is not needed. Use of the visual aids and consultation with this text

can assist in clarification of any terms used in the VA questionnaire.

What do I do if I find out the mortality report has an incorrect date of

death/sex/classification/etc.?

Sometimes during the Verbal Autopsy Interview, mistakes in the mortality

report may be discovered. In these instances the mistake should be noted on the

copy of the mortality report that is carried with the VA interviewing team. After

the interview is completed and the VA team returns to the field office, the

corrected mortality report should then be passed on to the appropriate MIS

Officer.

Can I skip questions if I know what happened?

No. In many instances, the interviewer will learn what happened to the newborn

early on and will know that many questions are not relevant. However, the

Verbal Autopsy questionnaire is meant to be a complete record of the death and

the conditions contributing to the delays in care. As the VA will be reviewed by

physicians who have never interacted with the respondents, the VA

questionnaire needs to be as complete as possible. Therefore, it is crucial that

every single question is answered in the survey, even if the answer is known to

the interviewer.

What do I do if I know that information provided by the respondent cannot be

right/disagrees with what the midwife believes?

In the event that the primary interviewer disagrees with the respondent based on

clinical background or other knowledge, the response recorded in the VA

questionnaire should always be the respondent's answer. However, the

Interviewer's observations should be recorded in Section 12 of the VA

questionnaire. It is necessary to record the respondent's answer to maintain the

accuracy of the data quality, even if the response received seems illogical or false.

Discussion

Successful development and testing of a contextualized Perinatal Verbal Autopsy

system occurred July-August 2019. During this time, two rounds of pilot testing were

conducted, which resulted in a protocol that differed significantly from the original

WHO format due to contextual issues in the Rohingya refugee context. Specifically,

major challenges associated with locating refugees for interview, an overly centralized

mortality reporting system, and data quality issues in the mortality reporting system

and Maternal Verbal Autopsy were noted during pilot testing and informal interviews

with key stakeholders.

Challenges and Opportunities from Pilot Testing of the Perinatal Verbal Autopsy

In order to develop the most contextually appropriate protocol for the perinatal VA in

Cox's Bazar, several factors were taken into account through pilot testing. First, within

the camps there is a very high rate of internal mobility. Often, pregnant women go to

their family homes to give birth or move away to their in-laws after marriage. This,

combined with a lack of individual-level identification numbers, can make it difficult to

determine exactly where the key respondent is for Verbal Autopsy. To overcome this, it

is important that the VA Coordinator track down the address ahead of time, to ensure

that when the VA team goes to the assigned home, they will find the key respondent.

While this task appears simple, determining the address can take up to half a day, and relies on using informal CHW networks.

Second, in Cox's Bazar, the mortality reporting system is very hierarchical for many CHWs and CHW Supervisors – in some instances a mortality report needs to be signed off on by an MIS officer or the head of organization before it gets reported. When this fact is combined with the need for mortality report verification, there is a delay between when the death occurs and when the report is filed. Therefore, the Verbal Autopsy system needs to be complementary to the mortality reporting system. From the perspective of the CHW Supervisor, the only additional step is to call the VA Coordinator once a mortality report has been filled out. This will allow for the date of death to be logged, which can trigger the two-week grieving period, allowing for VA Interviews to be planned and conducted with as little delay as possible. Tracking, management, and coordination of the VA process by a VA Coordinator also allows for a decentralized Verbal Autopsy system to run parallel to the mortality reporting system.

 Lastly, the largest challenge faced in Cox's Bazar was due to data quality issues, stemming from a variety of complex factors for which three solutions were developed. In Ukhiya and Teknaf, several refugees have a lack of trust in the formal healthcare system, believing that the government will either take away resources if refugees show improvement or that the government will try to send the refugees back to Myanmar. This lack of trust in the healthcare system contributes to the widespread use of TBAs

rather than facility-based births. Furthermore, there is a language barrier between Bangladeshi CHW Supervisors and midwives and the Rohingya. To make refugees feel more at ease, a Rohingya CHW clearly needs to be present at every single VA interaction. Having CHWs facilitate communication and explain the purpose of the VA is necessary to build trust around a sensitive topic. The second factor that helped to put the family at ease was to have the Traditional Birth Attendant who assisted in delivery present. While unconventional, incorporating TBAs into the VA interview served dual purposes to both improve data quality (especially around delivery history) and facilitate a line of communication and trust between the informal and formal health systems. The third deviation from the standard VA methodology was the addition of using visual aids of key symptoms, medical tools, or conditions to assist in recall. This helped to overcome some of the issues associated with language barriers and facilitate a better understanding between respondents and interviewers. This tool would be especially important in the event that a midwife is unable to serve on the VA interviewing team.

Lastly, the Rohingya population is extremely traumatized and lacks access to adequate psychosocial support. This created problems with recall and memory when performing data collection in the camps. While having TBAs present and using visual aids greatly assisted in recall, further research needs to be done to determine the effects of trauma, including on data collection protocols.

Further Implications of Data and the Perinatal Verbal Autopsy in Cox's Bazar

After the conclusion of pilot testing and finalization of Perinatal VA materials, the next step for this system is validation of the Perinatal VA questionnaire in Cox's Bazar. This would involve conducting enough Perinatal VA's to determine that the survey can be used to elucidate causes of death and barriers to care at the population level for newborns. This would involve determining what is an appropriate sample size for validation and how perinatal deaths should be selected for Verbal Autopsy follow-up. Currently, every single maternal death is followed up with a Maternal Verbal Autopsy. However, the Perinatal VA is longer and more comprehensive in nature than the Maternal VA questionnaire. Additionally, more newborn deaths occur in camps compared to maternal deaths, which would make conducting a Perinatal VA for every death a comparatively more resource-intensive option. Therefore, before this system is scaled up, decisions need to be made by the CDC and other stakeholders about the intended use for this tool and whether all survey questions are needed for analysis.

Another factor to consider when planning for further scaling of the Perinatal VA system in Cox's Bazar is how it will integrate with the existing Maternal VA questionnaire and mortality reporting system. On a small scale, results of pilot testing found that a decentralized system which was coordinated by a designated person worked well to track and manage VA's. However, the Maternal VA system has a completely different protocol which functions under the direction of UNFPA who uses EWARS data to

mandate and coordinate VA interviews. Furthermore, data of newborn mortality typically falls under UNICEF jurisdiction, which would require that communication occur between UNFPA and UNICEF about data sharing and Maternal and Perinatal VA coordination. The implications of having two separate VA systems also needs to be considered when implementing trainings and protocols for VA interviewers. As many of the same people selected for training on the Maternal VA would also be trained on the Perinatal VA, it would be best to integrate the two protocols as closely as possible to avoid confusion. Refresher trainings would also need to consistently be conducted to ensure that differences and specifics of each tool is well understood by interviewers.

In addition to strengthened coordination between organizational bodies, the Perinatal VA only works as well as the mortality reporting system does. In the event that a significant proportion of deaths are not reported, they will never be captured with the Perinatal VA, which can create a heavily skewed sample. In Cox's Bazar, the mortality reporting system has not been formally evaluated for gaps and challenges. However, challenges during pilot testing were faced in discerning the location and exact identity of the perinatal death. This, combined with the uncertainty around mortality estimates from UNHCR reports, indicates that the mortality reporting system may need to be strengthened. One potential contributing factor to this issue may have been also seen in pilot testing of the Perinatal VA. The same lack of trust by the Rohingya in the formal healthcare system which was found to be an issue in conducting VA interviews could potentially influence underreporting of newborn deaths.

Any data or insight collected in the Perinatal VA needs to be directly related to creating actionable responses. At the moment, Death Review Committees to read and interpret VA results are being set up in Cox's Bazar. It is unethical to collect data without using it to influence intervention directions and this is especially true of a process as sensitive as the Perinatal Verbal Autopsy. This is the rationale behind implementing a full MPDSR system in a given setting, as opposed to implementing a less involved death surveillance system. Without actual data, it is impossible to know whether the Perinatal VA is able to provide an appropriate level of detail to elucidate points to intervene.

Lastly, the secondary goal of this project was to determine whether the Perinatal Verbal Autopsy system is able to be implemented in humanitarian (acute crisis, protracted crisis, and refugee camp) settings. Results of this pilot testing indicate that the protocol is feasible to be implemented in at least refugee settings. Further testing will need to be done once validation and data review is conducted to determine whether the Perinatal VA should be recommended for these settings. However, the successes found in this project indicate the potential to expand the Perinatal VA to other contexts, so long as it is appropriately contextualized.

Conclusions

The Perinatal Verbal Autopsy system in Cox's Bazar was the first time that this methodology has been applied to the humanitarian setting. In attempting to cater to the context, a decentralized system reliant on 3 person interviewing teams has been created. This system aims to optimize data quality while creating trust and linkages within the community. Despite the challenges faced during implementation, the Perinatal Verbal Autopsy system provides unique opportunities to collect information in a highly variable setting where data is not currently being collected. Furthermore, successful piloting of the Perinatal VA in Cox's Bazar shows that the tool has the potential to be transferred to other humanitarian contexts globally if it is adapted to local context. Specifically, it may be possible to implement MPDSR systems in refugee and protracted crisis settings, setting a new model for death surveillance systems and data collection protocols globally.

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গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
স্বাস্থ্য ও পরিবার কল্যাণ মন্ত্রণালয়

Neonatal and Stillborn Mortality Verbal Autopsy for Rohingya Refugees in Cox's Bazar

(নবজাতক এবং মৃত জন্ম মৌখিক মৃত্যু পর্যালোচনা বিষয়ক ফরম)

(রোহিঙ্গা কমিউনিটি পর্যায়ে প্রযোজ্য)

PHD Partners in Health and Development

CDC CENTERS FOR DISEASE CONTROL AND PREVENTION

unicef

INFORMED CONSENT FORM (INTERVIEWER COPY) (সাক্ষাৎকারের জন্য সম্মতিপত্র)

Informed Consent Form for verbal autopsy (VA) interviews
(for stillbirths and decedents 1-28 days)
মৌখিক মৃত্যু পর্যালোচনা বিষয়ক সাক্ষাৎকারের জন্য সম্মতিপত্র
(নবজাতকের মৃত্যু ১-২৮ দিনের জন্য)

Hello. My name is _____ and I am a _____ from Partners in Health and Development. We are conducting a survey in this camp which asks about health issues of newborn babies. হ্যালো/আসসালামু-আলাইকুম আমার নাম.........................এবং আমি একজন (পদবী).....................পিএইচডিতে কাজ করছি। আমরা ক্যাম্পে নবজাতক *স্বাস্থ্য বিষয়ক জরিপ পরিচালনা করছি* ।

I am asking you to take part in this survey because I am trying to learn more about causes of death in stillbirths and newborn babies. We are asking all households in this camp that reported a stillbirth or death to a newborn baby to participate in this survey. আমি আপনাকে এই জরিপে অংশ নেওয়ার জন্য অনুরোধ করছি কারন আমি মৃত জন্মের সম্পর্কে এবং নবজাতকদের মধ্যে মৃত্যুর কারন সম্পর্কে আরও জানতে চেষ্টা করছি। আমরা এই ক্যাম্পের সকল পরিবারকে অনুরোধ করছি, এই জরিপে অংশ নেওয়ার জন্য যে, নবজাতকের মৃত্যু খবর পাওয়া গেছে।

I am here now to ask you about the circumstances that led to the death of your baby. The information you provide will help us understand health challenges faced by newborns to improve neonatal health services. The interview will take between an hour and two hours to complete. The information you provide will be kept strictly confidential and will not be shown to other persons. আমি এখন আপনার কাছে এমন পরিস্থিতি সম্পর্কে জিজ্ঞেস করবো যা আপনার শিশুর মৃত্যুর কারন হয়ে দাঁড়িয়েছে। আপনার দেওয়া তথ্যটি আমাদের নবজাতকের স্বাস্থ্য সমস্যাগুলোর মুখোমুখি হতে *সাহায্য করবে,*যা সরকার এবং এনজিও গুলোকে স্বাস্থ্যসেবা উন্নত করার উপায় সম্পর্কে আরও ভালভাবে বুঝতে সহায়তা করবে। এই সাক্ষাৎকারটি নিতে সময় লাগবে দেড় ঘন্টা বা দুই ঘন্টা। আপনি যে তথ্য সরবরাহ করেছেন তা কঠোরভাবে গোপন রাখা হবে এবং অন্য ব্যক্তিদের কাছে দেখানো হবে না।

Participation in this interview is voluntary, so if we should come to any question you do not want to answer, just let me know and I will move on to the next question. You can also stop the interview at any time. You should be aware that your answers about the deceased may say something about your own health. However, the information that you provide is strictly confidential. At this time, do you want to ask me anything about the information we are collecting or the survey? এই সাক্ষাৎকারে অংশগ্রহণ সেচ্ছামূলক,যদি আমাদের কোন প্রশ্নের উওর আপনি দিতে না চান,তাহলে আমাকে জানান এবং আমি পরবর্তী প্রশ্নে চলে যাবো; অথবা আপনি সাক্ষাৎকারটি যে কোন সময় বন্ধ করতে পারেন। আপনি সচেতন হন যে, আপনার উত্তর মৃত ব্যক্তির সম্পর্কে যা বলবেন তা নিজের স্বাস্থ্য সাথে সম্পৃক্ত। যাহোক,আপনার দেওয়া প্রদত্ত তথ্য গোপনীয়তা বজায় থাকবে। আমরা কি ধরণের তথ্য সংগ্রহ করছি বা কি জরিপ করছি সে সম্পর্কে জানতে চাইলে আমাকে জিজ্ঞেস করতে পারেন?

I will also give you a signed copy of this consent form (attached to the back of this verbal autopsy packet) so that you are able to contact PHD with any further questions you may have. আমি আপনাকে একটি স্বাক্ষরিত সম্মতি ফরম দিব (মৌখিক ময়না তদন্ত ফরমের পিছনে সংযুক্ত) কোন প্রশ্ন থাকলে পিএইচডি সাথে যোগাযোগ করতে পারবেন।

May I begin the interview now? আমি কি সাক্ষাৎকারটি শুরু করতে পারি?

☐ No, consent for participation not given (না,অংশ গ্রহণের জন্য সম্মতি দেওয়া হয় নি) Interviewer signature(সাক্ষাৎকারীরর স্বাক্ষর): _____

☐ Yes, consent for participation given(হ্যাঁ,অংশ গ্রহণের জন্য সম্মতি দেওয়া হয়েছে) Interviewer signature(সাক্ষাৎকারীরর স্বাক্ষর): _____

Respondent Signature(উওরদাতার স্বাক্ষর): _____ OR Thumbprint(আঙ্গুলের ছাপ): ☐

If you have any questions, please contact(যদি কারোর প্রশ্ন থাকে,দয়া করে যোগাযোগ করুন):

Name (CHW Supervisor) (সিএইচডাব্লিও সুপারভাইজারের নাম):

Institutional affiliation(প্রাতিষ্ঠানিক অন্তর্ভুক্তি) : Partners in Health and Development - PHD(পিএইচডি)

Telephone(টেলিফোন নাম্বার):

Full name of Field Coordinator
(কোর্ডিনেটরের সম্পূর্ণ নাম):   Signature(স্বাক্ষর):   Date(তারিখ):

_____   _____   _____

Section 1. Attempted Interviewer Visits (সেকশন ১.সাক্ষাৎকার গ্রহণকারীর পরিদর্শন)					
No. (নাম্বার)		1st Attempt (প্রথম প্রচেষ্টা)	2nd Attempt (২য় প্রচেষ্টা)	3rd Attempt (৩য় প্রচেষ্টা)	Final Attempt (চূড়ান্ত প্রচেষ্টা)
101.	Interviewer Name (সাক্ষাৎকার গ্রহণকারীর নাম)	_____			
102.	CHW Supervisor (সিএইচডাব্লিও সুপারভাইজার)	_____			
103.	CHW(s) present (উপস্থিত সিএইচডাব্লিও)	_____			
104.	Other members of the interviewing team present RECORD NAMES AND DESIGNATION (সাক্ষাৎকার গ্রহণকারী দলে অন্য কেউ থাকলে তাদের নাম এবং পদবী)	_____ _____ _____ _____			
105.	Date(তারিখ)				
106.	Has the consent form been read, and consent obtained? (সম্মতি পত্র কি পড়া হয়েছে এবং সম্মতি প্রাপ্ত)? 1. Yes (হ্যাঁ) 2. No (না)				
107.	Interview result: (সাক্ষাৎকারের ফলাফল) 1. No appropriate respondent found (কোন উপযুক্ত উত্তরদাতা খুঁজে পাওয়া যায় নি) 2. Not at home (বাড়িতে না) 3. Postponed(বাতিল) 4. Refused (প্রত্যাখান) 5. Partially completed (আংশিকভাবে সম্পূর্ণ) 6. Completed (সম্পন্ন)				

	7.Other (specify): অন্যান্য(উল্লেখ করুন)				
108.	Date of next scheduled visit (if applicable) পরবর্তী পরিদর্শনের নির্ধারিত তারিখ(যদি প্রযোজ্য)				

Section 1.2. Interview Location Information (সেকশন ১.২ সাক্ষাৎকার অবস্থানগত তথ্য)		
109.	GPS Coordinates (জিপিএস কোর্ডিনেটস)	_____ N _____ E
110.	Upazila (উপজেলা) (Ukhiya/Teknaf) (উখিয়া/টেকনাফ)	_____
111.	Location of camp (ক্যাম্পের অবস্থান) (Union)(ইউনিয়ন)	_____
112.	Camp (ক্যাম্প)	_____
113.	Block/Subblock (ব্লক/সাবব্লক)	_____
114.	Family/Identification card number (পরিবার/হলুদ কার্ড নাম্বার)	_____
115.	Deceased's resident status (মৃতের ঠিকানা)	REFUGEE(শরণার্থী)... 1 HOST COMMUNITY(স্থায়ী জনগোষ্ঠী).................................. 2

	Section 1.3. Birth, Life, and Death of the Deceased (সেকশন১.৩. জন্ম,জীবিত এবং মৃত্যের মৃত্যু)	
116.	What is the baby's date of birth? (বাচ্চার জন্ম তারিখ)?	 D D M M Y Y Y Y
117.	What is the baby's date of death? (বাচ্চার মৃত্যুর তারিখ)? IF THE BABY WAS STILLBORN, RECORD DATE OF DELIVERY (যদি বাচ্চা মৃত হয়,বাচ্চার প্রসবের তারিখ লিখুন)	 D D M M Y Y Y Y
118.	How old was the baby when he/she died? (বাচ্চার বয়স কত ছিল যখন সে মারা যায়)? ENTER NEONATAL DEATH AGE IN MINUTES, HOURS, OR DAYS (নবজাতকের বয়স মিনিট,ঘন্টা অথবা দিন লিখুন) IF THE BABY WAS STILLBORN, ENTER "00" FOR MINUTES (যদি বাচ্চা মৃত হয়,"০০" লিখুন)	MINUTES (মিনিট) .... 1 **OR**(অথবা) HOURS (ঘন্টা)................................. 2 **OR**(অথবা) DAYS (দিন) .... 3 DON'T KNOW(জানি না).. 999

Interviewer, check resident status and neonatal age at death. If the baby was not a refugee or was more than 28 days old at death, thank the respondent and skip to the end of the survey (**1108**).
(সাক্ষাৎকার গ্রহণকারী,বসবাসের অবস্থান এবং নবজাতকের মৃত্যুর বয়স চেক করুন । যদি বাচ্চাটি শরণার্থী না হয় বা মৃত্যুর ২৮ দিনের বেশি হয়, তাহলে উওরদাতাকে ধন্যবাদ জানান এবং জরিপের শেষে যান (১১০৮) ।

Section 2. Basic Information about the Respondent(s) (সেকশন ২.উত্তরদাতা সম্পর্কে প্রাথমিক তথ্য)			
No. (নাম্বার)	**Question**(প্রশ্ন)	**Coding Categories**(শ্রেণী বিন্যাস)	**Skip** (বাদ দিন)
201.	Are you the baby's mother? (আপনি কি বাচ্চার মা)?	YES (হ্যাঁ)... 1 NO (না)... 2	→ 206
202.	What is your name? (আপনার নাম কি)?	_____	
203.	How old are you? (আপনার বয়স কত বছর)?	☐☐ YEARS(বছর)	
204.	What is your highest level of education? (আপনার সর্ব উচ্চ শিক্ষাগত যোগ্যতা কত)? RECORD "00" IF NO EDUCATION WAS RECEIVED (যদি শিক্ষাগত যোগ্যতা না থাকে "০০" লিখুন)	☐☐ YEARS(বছর)	
205.	Are there associated respondents present? (সহযোগী উত্তরদাতা কি উপস্থিত ছিল?)	YES (হ্যাঁ)... 1 NO (না)... 2	→ 401
		Name(নাম)	**Relation Code** (সম্পর্কিত কোড)	**Sex** (লিঙ্গ)	**Present at birth?** (জন্মের সময় উপস্থিত ছিল)	**Present for life?** (জীবিত সময়ে ছিল)	**Present at death?** (মৃত্যুর সময় উপস্থিত ছিল)
206.	Associated Respondent 1 সহযোগী উত্তরদাতা ১						
207.	Associated Respondent 2 সহযোগী উত্তরদাতা ২						

208.	Associated Respondent 3 সহযোগী উত্তরদাতা ৩						

CODE(কোড)

Relation with the Deceased Baby (মৃত বাচ্চার সাথে সম্পর্ক):

Sex(লিঙ্গ):

1. Father (বাবা)
2. Paternal grandmother/grandfather (পৈতৃক মাতামহ/পিতামহ)
3. Maternal grandmother/grandfather (মাতৃক মাতামহ/পিতামহ)
4. Paternal aunt/aunt's husband (ফুপু/ফুপা)
5. Maternal aunt/aunt's husband (খালা/খালু)
6. Paternal uncle/uncle's wife (চাচা/চাচী
7. Maternal uncle/uncle's wife (মামা/মামী)
8. Other relative (specify) অন্যান্য আত্মীয় স্বজন(উল্লেখ করুন): _____
9. Traditional birth attendant(দাই)
10. Neighbor (প্রতিবেশি)
11. Family friend (পারিবারিক বন্ধু)

Other (specify) অন্যান্য (উল্লেখ করুন): _____

1. Male (পুরুষ)
2. Female (মহিলা)

Presence(উপস্থিত):
1. Yes(হ্যা)
2. No(না)

No. (নাম্বার)	Question(প্রশ্ন)	Coding Categories (শ্রেণী বিন্যাস)	Skip (বাদ দিন)
	Section 3. Information on the Mother and Respondent (সেকশন ৩ .মায়ের এবং উত্তরদাতা সম্পর্কে প্রাথমিক তথ্য)		
301.	What is the name of the baby's mother? (বাচ্চার মায়ের নাম কি?)	_____	
302.	What was the age of the mother at the time of delivery? (প্রসবের সময় মায়ের বয়স কত ছিল?)	YEARS(বছর) DON'T KNOW (জানি না).. 99	
303.	What was the mother's highest level of education? (মায়ের সর্ব উচ্চ শিক্ষাগত যোগ্যতা কত ছিল?)? RECORD "00" IF NO EDUCATION WAS RECEIVED (যদি শিক্ষাগত যোগ্যতা না থাকে "০০" লিখুন)	YEARS(বছর) DON'T KNOW (জানি না).. 99	
304.	Is the mother of the deceased baby alive? (মৃত শিশুর মা কি জীবিত?)	YES (হ্যাঁ).. 1 NO (না)... 2	→ 401
305.	Did she die during or after delivery? (সে কি প্রসবের সময় নাকি প্রসবের পরে মারা গেছেন?)	DURING DELIVERY (প্রসবের সময়)............................... 1 AFTER DELIVERY (প্রসবের পরে)................................. 2 DON'T KNOW (জানি না)... 99	→ 307 → 307
306.	How long after the delivery did the mother die? (প্রসবের কতক্ষণ পরে মা মারা গেছেন ?) ENTER TIME INTERVAL IN MINUTES, HOURS, OR DAYS (মিনিট,ঘন্টা,দিন লিখুন)	MINUTES (মিনিট) .... 1 **OR**(অথবা) HOURS(ঘন্টা) .... 2 **OR**(অথবা) DAYS (দিন) .... 3 MORE THAN 2 MONTHS AGO (২ মাসের অধিক আগে).. 777 DON'T KNOW (জানি না).. 999	
307.	What do you think was the primary		

cause of the mother's death? (মায়ের মৃত্যুর প্রাথমিক কারণ কি মনে করেন?) PROBE THE MOTHER FOR SIGNS/ SYMPTOMS (মায়ের মৃত্যুর লক্ষণ বা প্রতীক কি ছিল?)	_____ _____ _____ _____ _____	

No. (নাম্বার)	Question(প্রশ্ন)	Coding Categories (শ্রেণী বিন্যাস)	Skip (বাদ দিন)
	Section 4. Basic Information on the Deceased (সেকশন ৪. মৃত্যুর মৌলিক তথ্য)		
401.	Was the baby named? (বাচ্চার কি নাম রাখা হয়েছিল?)	YES (হ্যাঁ)... 1 NO (না).. 0 DON'T KNOW (জানি না).. 99	→ 403 → 403
402.	What was the name of the baby? (বাচ্চার নাম কি ছিল?) RECORD THE NAME OF THE BABY AND USE THROUGHOUT THE INTERVIEW (বাচ্চার নাম লিখুন এবং সাক্ষাৎকারের মাধ্যমে লিপিবদ্ধ করুন)	NAME(নাম): _____	
403.	What was the sex of the baby? (বাচ্চা কোন লিঙ্গের ছিল?)	MALE (পুরুষ).. 1 FEMALE (মহিলা) .... 2 UNDETERMINED (অনির্ধারিত)................................... 3 DON'T KNOW (জানি না).. 99	
404.	Was the baby's mother a resident of the camps (living in any camp for more than 6 months)? (বাচ্চার মা কি ক্যাম্পের বাসিন্দা ছিল?(অন্য যে কোন ক্যাম্পে ৬ মাসের বেশি বসবাস করেছিলেন কি না?)	RESIDENT IN CAMP (ক্যাম্পের বাসিন্দা) .... 0 NON-RESIDENT (অনাবাসিক) .... 1 DON'T KNOW (জানি না).. 99	
405.	Was the baby born in this camp or in a different one? (বাচ্চা ক্যাম্পে বা অন্য কোথাও জন্মে ছিল?)	BABY BORN IN A HEALTH FACILITY OUTSIDE OF CAMPS (বাচ্চার জন্ম ক্যাম্পের বাইরের স্বাস্থ্য কেন্দ্রে).. 1 BORN IN THIS CAMP (ক্যাম্পে জন্ম)........................... 2 BORN IN ANOTHER CAMP (অন্য ক্যাম্পে জন্ম)........... 3 SPECIFY(উল্লেখ করুন):_____ DON'T KNOW(জানি না) 99	
406.	Where did the baby die? (বাচ্চা কোথায় মারা গিয়েছিল?)	OWN HOME (নিজ বাড়ী) .... 1 ON THE WAY TO HOSPITAL/HEALTH FACILITY (স্বাস্থ্য কেন্দ্রে যাওয়ার পথে/হাসপাটালে) .... 2 CAMP HOSPITAL (ক্যাম্প হাসপাটাল) .... 3 SPECIFY(উল্লেখ করুন): _____ GOVERNMENT HOSPITAL (সরকারী হাসপাটাল)..4	

		SPECIFY(উল্লেখ করুন): _____ PRIVATE HOSPITAL(বেসরকারী হাসপাটালে):.. 5 SPECIFY(উল্লেখ করুন): _____ OTHER (অন্যান্য) .... 6 SPECIFY(উল্লেখ করুন):_____ DON'T KNOW (জানি না).. 99	

Section 5: Respondent's Account of Illness/Events that Led to Death
(সেকশন ৫: উত্তরদাতার অসুস্থতার হিসাব/মৃত্যুর দিকে পরিচালিত ঘটনাগুলি)

Interviewer, ask the respondent to tell you about the illness or events that led to the baby's death in their own words. Do not prompt except to ask if there was anything else after the respondent finishes. When recording, underline any unfamiliar terms or things which do not make sense. Probe for: first recognition of illness, timing, actions taken inside and outside the home, provider care, and any difficulties the family may have faced in attempting to seek care.

(সাক্ষাৎকারী, উত্তরদাতাকে বাচ্চার মৃত্যুর অসুস্থতা অথবা মৃত্যুর দিকে পরিচালিত ঘটনাগুলির সম্পর্কে বলতে বলুন তাদের নিজেদের ভাষায় । উত্তরদাতা শেষ হওয়ার পরে আর কিছু ছিল কিনা জিজ্ঞেস করার জন্য অনুরোধ করবেন না । রেকর্ডিংয়ের সময়,কোন অপরিচিত শর্তাদি বা জিনিসগুলি বোঝা যায় না তা আন্ডারলাইন করুন । তদন্তের জন্য:অসুস্থতার প্রথম স্বীকৃতি,সময়,পদক্ষেপ নেওয়া বাড়ির অভ্যন্তরের এবং বাইরে,সরবরাহকারীর যত্ন নিতে চেষ্টা করার ক্ষেত্রে পরিবার যে কোন সমস্যার সম্মুক্ষীণ হতে পারে ।

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Section 6. Antenatal Care (সেকসন ৬.প্রসব পূর্ববতী চেকআপ)

I am now going to ask you questions about the mother's antenatal care and pregnancy. Some of these questions may not appear to be directly related to the baby's death. However, they will help give us the whole picture of all possible symptoms that the deceased had. (আমি এখন আপনাকে মায়ের প্রসবকালীন এবং গর্ভকালীন সেবা সম্পর্কে জিজ্ঞেস করতে যাচ্ছ। এই প্রশ্নগুলো সরাসরি বাচ্চার মৃত্যুর সাথে সম্পর্কিত নাও হতে পারে। যাহোক, তারা আমাদের মৃত্যুর সম্ভাব্য উপসর্গগুলির চিএ দিতে সহায়তা করবে।)

No. (নাম্বার)	Question(প্রশ্ন)	Coding Categories (শ্রেণী বিন্যাস)	Skip (বাদ দিন)
601.	Did the mother receive any antenatal care during pregnancy? (গর্ভকালীন সময়ে মা কি কোনও প্রসব পূর্ববতী চেকআপ নিয়েছিলেন)?	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না)............................ 99	→604 →604
602.	How many antenatal care visits did the mother have during pregnancy? (গর্ভবস্থায় মা কত বার গর্ভকালীন সেবা নিয়েছিলেন)? IF RESPONDENT ANSWERS "DON'T KNOW," PROBE TO ESTIMATE IF GREATER OR LESS THAN 4 VISITS (যদি উত্তরদাতার উত্তর "জানি না"হয়,তাহলে অনুমান তদন্ত করুন ৪ বারের অধিক বা কম ভিজিট নিয়েছিল কি না)	☐☐ VISITS(পরিদর্শন) DON'T KNOW(জানি না) 99	
603.	What was the duration of pregnancy at the time of the first health facility ANC check-up? (গর্ভকালীন সময় প্রথম চেকআপ কত মাসে নেওয়া হয়েছিল?)	☐☐ WEEKS(সপ্তাহ) DON'T KNOW (জানি না).. 99	

604.	Was the mother aware of any family planning methods during the pregnancy? (মা কি গর্ভকালীন সময়ে পরিবার পরিকল্পনা পদ্ধতি সম্পর্কে সচেতন ছিলেন)?	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না) 99	→607 →607
605.	Did the mother ever practice any of the following family planning methods? (মা কি কখনও পরিবার পরিকল্পনার কোনো পদ্ধতি গ্রহণ করেছিলেন?) LIST ALL OPTIONS (সব তালিকা লিখুন)		

Table for 605:

	YES(হ্যা)	NO(না)	DON'T KNOW(জানি না)
LACTATIONAL AMENORRHOEA METHOD (BREASTFEEDING METHOD) (বুকের দুধ খাওয়ানোর পদ্ধতি)	1	0	99
CALENDAR METHOD (ক্যালেন্ডার পদ্ধতি)	1	0	99
PILL (পিল)	1	0	99
IUD (আইউডি).........................	1	0	99
INJECTIONS (ইনজেকশন)	1	0	99
IMPLANTS (ইমপ্লান্টস)..................	1	0	99
CONDOMS (কনডম)..................	1	0	99
PERMANENT METHODS (স্থায়ী পদ্ধতি)...........................	1	0	99
OTHER METHODS (অন্যান্য পদ্ধতি)............................	1	0	99
SPECIFY(উল্লেখ করুন): _____			

606.	When the mother became pregnant with this pregnancy, which method(s) of family planning was she using? (এবারের গর্ভবতী হওয়ার সময়, মা কোন পরিবার পরিকল্পনা পদ্ধতি ব্যবহার করেছিলেন?) MULTIPLE ANSWERS ALLOWED (একাধিক উত্তর অনুমোদিত)	LACTATIONAL AMENORRHOEA METHOD (ল্যাকটেশনাল এ্যামেনোরিয়া পদ্ধতি)... 1 CALENDAR METHOD (ক্যালেন্ডার পদ্ধতি)... 2 PILL (পিল).. 3 IUD (আইউডি)... 4 INJECTIONS (ইনজেকশন)... 5 IMPLANTS (ইমপ্লান্টস)... 6 CONDOMS (কনডম).. 7 PERMANENT METHODS (স্থায়ী পদ্ধতি) .... 8 OTHER METHODS (অন্যান্য পদ্ধতি) .... 9 SPECIFY(উল্লেখ করুন):_____ NO METHOD WAS USED/WITHDRAWAL METHOD (কোন পদ্ধতি ব্যবহার করা হয়নি/আজল পদ্ধতি)........................ 10	
607.	Did the mother ever receive any tetanus vaccinations?	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না)... 99	→610 →610

	(মা কি কখনো কোনও ধনুষ্টংকারের টিকা পেয়েছিলেন?)		
608.	When did the mother receive her last tetanus vaccination? (মা শেষ কখন ধনুষ্টংকারের টিকা গ্রহণ করেছিলেন/ পেয়েছিলেন?) RECORD DATE AS "01/01/2000" IF DO NOT KNOW("০১/০১/২০০০" লিখুন যদি না জানেন)	☐☐ ☐☐ ☐☐☐☐ D D M M Y Y Y Y	
609.	How many doses has she received? (তিনি কত পরিমাণ ডোজ গ্রহণ করেছিলেন?)	☐☐ DOSES(ডোজ) DON'T KNOW (জানি না)... 99	
610.	Did the mother take iron supplements during this pregnancy? (মা কি গর্ভবস্থার সময় আয়রণ ট্যাবলেট গ্রহণ করেছিলেন?)	YES (হ্যাঁ)... 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	
611.	Did the mother take folic acid during this pregnancy? (মা কি গর্ভবস্থার সময় ফলিক এসিড গ্রহণ করেছিলেন?)	YES (হ্যাঁ)... 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	
612.	Did the mother ever take deworming tablets? (মা কি কখনও কৃমিনাশক ঔষুধ গ্রহণ করেছিলেন?)	YES (হ্যাঁ)... 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	→614 →614
613.	Approximately when did the mother take deworming tablets? (আনুমানিক মা কখন কৃমিনাশক ঔষুধ গ্রহণ করেছিলেন?)	☐☐ ☐☐ ☐☐☐☐ D D M M Y Y Y Y	

	RECORD DATE AS "01/01/2000" IF DO NOT KNOW ("০১/০১/২০০০" লিখুন যদি না জানেন)		
614.	Did the mother sleep under a bednet during pregnancy? (গর্ভাবস্থার সময় মা কি মশারীর নিচে ঘুমাতেন?)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না)……………………………………… 99	
615.	Was the mother ever tested for HIV/AIDS? (মাকে কি কখনও এইচআইভি/ এইডসের পরীক্ষা করেছিলেন?)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না)……………………………………… 99	→621 →621
616.	Was she HIV-positive or HIV-negative? (তিনি কি এইচআইভি পজেটিভ অথবা এইচআইভি নেগেটিভ ছিলেন?)	HIV-POSITIVE (এইচআইভি পজেটিভ)……………………………… 1 HIV-NEGATIVE (এইচআইভি নেগেটিভ) ……………………………… 0 DON'T KNOW (জানি না)……………………………………… 99	→621 →621
617.	How long ago was she diagnosed as HIV-positive? (তিনি কতদিন পূর্বে এইচআইভি পজিটিভ চিহ্নিত হয়েছিলেন)? IF LESS THAN 1 YEAR, RECORD IN MONTHS (যদি ১ বছরের কম হয়,মাস রের্কড করুন) IF GREATER THAN 12 MONTHS, RECORD IN YEARS (১২ মাসের বেশি হয়,বছর রের্কড করুন)	WEEKS AGO(সপ্তাহের আগে)................ 1 ☐☐ OR(অথবা) MONTHS AGO (মাসের আগে)................ 2 ☐☐ OR(অথবা) YEARS AGO (বছর আগে).................... 3 ☐☐ DON'T KNOW(জানি না).. 999	
618.	At the time of delivery, was the mother receiving treatment for HIV?	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না)……………………………………… 99	→621 →621

	(প্রসবের সময় মা কি এইচআইভি চিকিৎসার জন্য সেবা গ্রহণ করেছিলেন?)		
619.	Was she taking ARVs or Septrin for HIV treatment? (তিনি কি এইচআইভি চিকিৎসার জন্য এআরভিএস বা সেপন্ট্রিন গ্রহণ করেছিলেন?)	ARVS(এআরভিএস) .... 1 ARVS AND SEPTRIN (এআরভিএস /সেপন্ট্রিন) .... 2 SEPTRIN (সেপন্ট্রিন).. 3 DON'T KNOW (জানি না)... 99	→621 →621
620.	How long has she been taking ARVs for HIV? (তিনি কতদিন যাবৎ এইচআইভি চিকিৎসার জন্য এআরভিএস গ্রহণ করেছিলেন?) IF LESS THAN 1 YEAR, NOTE NUMBER OF MONTHS (যদি ১ বছরের কম হয়,মাস লিখুন) IF GREATER THAN 12 MONTHS, NOTE NUMBER OF YEARS (যদি ১২ মাসের বেশি হয়,বছর লিখুন)	WEEKS (সপ্তাহ)............................... 1 ☐☐ **OR**(অথবা) MONTHS (মাস)............................... 2 ☐☐ **OR**(অথবা) YEARS (বছর).................................. 3 ☐☐ DON'T KNOW(জানি না).. 999	

621.	During the pregnancy, was the mother told that she suffers from any of the following known illnesses? (গর্ভকালীন সময় মা কি বলেছিলেন যে তিনি নিম্ন লিখিত কোনও অসুখে ভুগেছিলেন?) READ ALL OPTIONS (সব অবসন পড়ুন)		YES(হ্যাঁ)	NO(না)	DON'T KNOW(জানি না)
		HIGH BLOOD PRESSURE (উচ্চ রক্ত চাপ)	1	0	99
		HEART DISEASE (হৃদরোগ)............	1	0	99
		DIABETES (ডায়াবেটিস)...................	1	0	99
		EPILEPSY/CONVULSIONS (মৃগীরোগ/ খিঁচুনি)	1	0	99
		MALNUTRITION (অপুষ্টি)..............	1	0	99
		MALARIA(ম্যালেরিয়া)	1	0	99
		TB(টিবি)..	1	0	99
		ANEMIA(এনামিয়া)................................	1	0	99
		SYPHILIS(সিফিলিস)	1	0	99
		RUBELLA (রুবেলা)...............................	1	0	99
		OTHER STI (অন্যান্য এসটিআই).................	1	0	99

		SPECIFY(উল্লেখ করুন): _____				
		OTHER ILLNESS (অন্যান্য অসুখ) 1 0 99				
		SPECIFY(উল্লেখ করুন): _____				

622.	During the last 3 months of pregnancy but before labor, did the mother have any of the following symptoms? (প্রসবের পূর্বে শেষ ৩ মাসের মধ্যে, মায়ের কি নিম্ন লিখিত কোনো উপসর্গ ছিল?)		YES(হ্যাঁ)	NO(না)	DON'T KNOW(জানি না)	
		VAGINAL BLEEDING (যোনির পথ দিয়ে রক্তক্ষরণ)............................	1	0	99	
		FOUL SMELLING VAGINAL DISCHARGE (দূর্গন্ধযুক্ত যোনি স্রাব)	1	0	99	
		SWELLED FINGERS, FACE, OR LEGS (ফোলা আঙ্গুল, মুখ অথবা পা)	1	0	99	
		HEADACHES (মাথাব্যাথা)................................	1	0	99	
	READ ALL OPTIONS (সব অবসন পড়ুন)	BLURRED VISION (ঝাপসাদৃষ্টি).....................	1	0	99	
		CONVULSIONS (খিঁচুনি).............	1	0	99	
		FEVER (জ্বর)	1	0	99	
		SEVERE ABDOMINAL PAIN (সাংঘাতিক পেটে ব্যাথা)	1	0	99	
		PALENESS IN FACE / SHORTNESS OF BREATH (মুখ ফেখাসে হয়ে যাওয়া)/ (শ্বাস নিতে কষ্ট হওয়া).....................................	1	0	99	
		YELLOWNESS IN EYES (চোখ হলুদে হওয়া)...............................	1	0	99	
		OTHER ILLNESS (অন্যান্য অসুখ)....	1	0	99	
		SPECIFY(উল্লেখ করুন): _____				

READ: *"It is common for a woman during and after pregnancy to feel down or depressed. This can mean that she no longer feels interest to take part in daily activities or feels hopeless. This is a problem which can occur because of the hormones that the woman's body can produce during pregnancy."* পড়ুন " (একটি মায়ের জন্য প্রসবকালীন এবং প্রসবের পরে অস্বস্তি বোধ অথবা বিষন্নতা অনুভব করা সাধারণ ব্যাপার । এতে বুঝা যায় যে সে দৈনন্দিন কাজকর্মে আগ্রহী না অথবা কাজ করতে স্বাছন্দ্য বোধ করে না । গর্ভকালীন সময়ে মায়ের শরীরের উৎপাদিত হরমোনের কারণে এই সমস্যা হতে পারে ।")

623.	During the **last three months of pregnancy but before labor**, how often did the mother have little interest or pleasure in doing things, or	NOT AT ALL (একদমই না)... 1	
		SEVERAL WEEKS (কয়েক সপ্তাহ)................................. 2	
		MORE THAN HALF OF THE TIME (OF THE 3 MONTHS)..3 অর্ধেকেরও বেশি সময়(৩ মাস)	
		NEARLY EVERY DAY প্রায় প্রতিদিন)............................. 4	
		DON'T KNOW (জানি না)... 99	

	feel down, depressed, or hopeless? (প্রসবের পূর্বে কিন্তু গর্ভবস্থার সময় শেষের ৩ মাসে,মা কি পরিমাণে আগ্রহ বা উৎসাহ,বিষন্ন অথবা হতাশা অনুভব করতেন?)		
624.	How many pregnancies, including miscarriages/ abortions, did the mother have **before this baby?** (এই শিশুর আগে, মায়ের গর্ভস্রাব/ গর্ভপাত সহ কতবার গর্ভধারণ করেছিলেন?) IF THIS NEONATAL DEATH/STILLBIRTH IS THE FIRST ONE, RECORD "00". (যদি এইটা প্রথম নবজাতক মৃত্যু/মৃত জন্ম হয়,"০০" রেকর্ড করুন)	☐☐ PREGNANCIES (গর্ভধারণ) DON'T KNOW(জানি না) 99	
625.	How many births, including stillbirths, did the mother have **before this baby?** (এই শিশুর আগে, মায়ের মৃতবাচ্চা সহ কতটা বাচ্চা জন্মেছিল?) COUNT ALL BABIES BORN ALIVE OR DEAD AT OR AFTER 7 MONTHS (সব জীবিত বাচ্চা লিপিবদ্ধ করুন অথবা মৃত অথবা ৭ মাসের পরে)	☐☐ BIRTHS(জন্ম) DON'T KNOW (জানি না).. 99	
626.	Now, let's talk about the birth of the baby who died.	WEEKS (সপ্তাহ) .... 1 ☐☐ **OR** (অথবা)	

	What was the duration of pregnancy when the baby was born? (এখন যে বাচ্চা মারা গেছে তার সম্পর্কে কথা বলব । বাচ্চা যখন জন্ম হয়েছিল গর্ভবস্থার সময় কত ছিল?) RECORD IN WEEKS WHENEVER POSSIBLE (যদি সম্ভব হয় সপ্তাহ লিখুন)	MONTHS (মাস)................................ 2 ☐☐ DON'T KNOW (জানি না).. 999	
627.	Was the baby born before expected? (প্রত্যাশিত সময়ের আগে বাচ্চার কি জন্ম হয়েছিল?)	YES (হ্যাঁ)... 1 NO (না) .... 0 DON'T KNOW (জানি না).. 99	
628.	What was the date of the last menstrual period? (শেষ মাসিকের তারিখ কত ছিল?) RECORD DATE AS "01/01/2000" IF DO NOT KNOW ("০১/০১/২০০০" লিখুন যদি না জানেন)	☐☐ ☐☐ ☐☐☐☐ D D M M Y Y Y Y	
629.	What was the expected date of delivery? (প্রসবের প্রত্যাশিত তারিখ কত ছিল?) RECORD DATE AS "01/01/2000" IF DO NOT KNOW ("০১/০১/২০০০" লিখুন যদি না জানেন)	☐☐ ☐☐ ☐☐☐☐ D D M M Y Y Y Y	
630.	Was the baby a single or multiple birth? (বাচ্চাটি কি একক বা একের অধিক জন্মে ছিল?)	SINGLE (একক) .... 1 TWINS(জমজ) .... 2 TRIPLET OR MORE (তিন বা তার অধিক)....................... 3 DON'T KNOW (জানি না) 99	→632 →632
631.	What was the birth order of the baby that died? (যে বাচ্চাটি মারা গেছে সে	FIRST (প্রথম)... 1 SECOND (দ্বিতীয়) .... 2 THIRD (তৃতীয়).. 3	

No.	Question	Coding Categories	Skip
	কততম বাচ্চা ছিল?)	OTHER (অন্যান্য)... 4 SPECIFY(নিদিষ্ট): _____ DON'T KNOW (জানি না) 99	
632.	What was the outcome of the last pregnancy before this baby? (এই বাচ্চার আগে শেষ গর্ভাবস্থার ফলাফল কি ছিল?)	SINGLE LIVE BIRTH (একক জন্ম) .... 1 MULTIPLE BIRTH (ALL ALIVE) (একাধিক জন্ম (সব জীবিত)............................... 2 MULTIPLE BIRTH (AT LEAST ONE ALIVE) একাধিক জন্ম (একটা হলেও জীবিত)................ ....3 MULTIPLE BIRTH (ALL DEAD) একাধিক জন্ম (সব মৃত)..................................... 4 SINGLE STILLBIRTH (একক মৃত জন্ম)...................................... 5 ABORTION (গর্ভপাত) .... 6 MISCARRIAGE (গর্ভস্রাব)............................... 7 NO PREVIOUS PREGNANCY (আগে গর্ভবর্তী ছিল না)...................................... 8 DON'T KNOW (জানি না) 99	

Section 7. Delivery History (সেকসন ৬. প্রসব ইতিহাস)

I am now going to ask you questions about the mother's condition during delivery, as well as directly after birth. (আমি এখন আপনাকে প্রসবের সময় মায়ের অবস্থা ,পাশাপশি জন্মের পরের অবস্থা প্রশ্ন জিজ্ঞেস করতে যাচ্ছ ।)

No. (নাম্বার)	Question (প্রশ্ন)	Coding Categories (শ্রেণী বিন্যাস)	Skip (বাদ দিন)
701.	Where did the birth take place? (কোথায় জন্ম হয়েছিল?)	OWN HOME (নিজের বাড়িতে)... 1 ON THE WAY TO HOSPITAL/HEALTH FACILITY (হাসপাতালে/স্বাস্থ্য কেন্দ্রে যাওয়ার পথে)... 2 CAMP HOSPITAL (ক্যাম্প হাসপাতালে)................................. 3 SPECIFY(উল্লেখ করুন): _____ GOVERNMENT HOSPITAL(সরকারি হাসপাতালে) .... 4 SPECIFY(উল্লেখ করুন): _____ PRIVATE HOSPITAL (বেসরকারি হাসপাতালে)............................ 5 SPECIFY(উল্লেখ করুন): _____ OTHER(অন্যান্য) .... 5 SPECIFY(উল্লেখ করুন): _____ DON'T KNOW(জানি না) 99	→ 707 → 707 → 707 → 707
702.	Did the person who assisted in the birth listen for fetal heartbeat sounds during labor with an electronic device (Doppler) or cone-shaped	YES, DOPPLER (হ্যা,ডোপ্লার)... 1 YES, STETHOSCOPE(হ্যা,স্টেথোস্কোপ) .... 2 NO (না).. 3 DON'T KNOW(জানি না) 99	

	stethoscope placed on the abdomen? (জন্মের সময় সাহায্যকারী ব্যক্তিটি কি ইলেক্ট্রনিক যন্ত্র (ডোপ্লার) বা শঙ্কর-আকৃতির স্টেথোস্কোপ দিয়ে পেটের ভ্রূণের হার্টবিট শুনেছিলেন?) **DESCRIBE THE USE OF A CONE-LIKE INSTRUMENT** (যন্ত্র ব্যবহারের বর্ণনা করুন)	
703.	Were fetal heart sounds present? (ভ্রূণের হার্টবিট কি শুনা গিয়েছিল?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না).. 99	
704.	Was an ultrasound scan done JUST before labor started or during labor? (প্রসব শুরু হওয়ার আগে বা প্রসবের সময় কি আল্ট্রাসাউন্ড স্ক্যান করা হয়েছিল?)	JUST BEFORE LABOR STARTED (প্রসব শুরু হওয়ার আগে).. 1 DURING LABOR (প্রসবকালীন সময়).. 2 NEITHER BEFORE NOR DURING LABOR (কোনটাই না)... 3 DON'T KNOW (জানি না).. 99	
705.	After the baby was delivered, was any injection given to the mother to help the uterus contract? (বাচ্চা জন্ম হওয়ার পরে, মায়ের জরায়ু যাতে সংকোচিত না হয় সে জন্য কোনো ইনজেকশন কি দেওয়া হয়েছিল?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না).. 99	
706.	How soon after birth was the baby discharged? (জন্মের কতক্ষণ পরে বাচ্চাটি ছাড় পেয়েছিল)? **ENTER IN HOURS OR DAYS** (মিনিট,ঘন্টা বা দিন	MINUTES (মিনিট).............................. 1 ☐☐ HOURS (ঘন্টা).................................... 2 ☐☐ **OR** (অথবা) DAYS (দিন)... 3 ☐☐	

		লিখুন)	
		DIED BEFORE DISCHARGE(ছাড় পাওয়ার আগে মারা যায়) ...... 777 DON'T KNOW (জানি না)... 999	
707.	How soon after labor pains started did the mother receive skilled medical assistance with the labor and delivery? (প্রসব বেদনা শুরু হওয়ার কতক্ষণ পরে মা দক্ষ মেডিকেল সহকারীর সহায়তা পেয়েছিলেন প্রসবের জন্য)? IF ANSWER IS IN DAYS, TRY TO ESTIMATE IN HOURS (যদি উত্তর দিন হয়,ঘন্টা অনুমান করার চেষ্টা করুন)	☐☐ HOURS(ঘন্টা) DIDN'T RECEIVE SKILLED MEDICAL ASSISTANCE DURING DELIVERY (প্রসবের সময় কোন দক্ষ মেডিকেল সহকারীর সহায়তা পাইনি).. 55 INDUCTION OF LABOR FOR FETAL DEATH (মৃত ভ্রণের জন্য কৃত্রিম ব্যবস্থা গ্রহণ করা) .... 66 INDUCTION OF LABOR/POSTDATE BABY (কৃত্রিম ভাবে/বাচ্চার প্রত্যাশিত পার হওয়ার তারিখ) .... 77 NO LABOR, PLANNED C-SECTION (ব্যাথা ছিল না/পরিকল্পিত সি-সেকশন)... 88 DON'T KNOW (জানি না).. 99	
708.	Who assisted the delivery? (কে প্রসব করিয়েছিলেন?) MULTIPLE ANSWER ALLOWED (একাধিক উত্তর অনুমোদিত)	DOCTOR (ডাক্তার)... 1 CLINICAL OFFICER/MEDICAL ASSISTANT (ক্লিনিক্যাল অফিসার/সহকারী চিকিৎসক).. 2 NURSE (নার্স)... 3 MIDWIFE (মিডওয়াইফ).. 4 TRADITIONAL BIRTH ATTENDANT (দাই) .... 5 RELATIVE (আত্মীয়)................. .... 6 MOTHER BY HERSELF (মা নিজেই)..................................... 7 OTHER (অন্যান্য).. 8 SPECIFY: (উল্লেখ করুন) _____ DON'T KNOW(জানি না) 99	
709.	How many hours or days did the mother have labor pains before delivery? (প্রসবের পূর্বে মায়ের কত ঘন্টা বা দিনের প্রসব বেদনা ছিল?) IF LESS THAN 1 HOUR, RECORD "00" FOR HOURS (যদি ১ ঘন্টার কম হয়, "০০") IF RESPONDENT	HOURS (ঘন্টা) .... 1 ☐☐ OR(অথবা) DAYS (দিন).. 2 ☐☐ DON'T KNOW (জানি না).. 999	

	SAYS "DON'T KNOW," TRY TO ESTIMATE IF MOTHER WAS IN LABOR FOR MORE OR LESS THAN 24 HOURS (উত্তরদাতা যদি "জানি না" উত্তর দেয় তাহলে মায়ের ২৪ ঘন্টার অধিক বা কম সময় প্রসব বেদনা হয় তা নির্ধারণ করার চেষ্টা করুন)		
710.	Was the mother given any drugs during labor to stimulate contractions? (প্রসবের সময় সংকোচকে উদ্দীপ্ত করার জন্য মাকে কোনও ঔষুধ দেওয়া হয়েছিল?)	YES (হ্যাঁ).. 1 SPECIFY(উল্লেখ করুন): _____ NO (না).. 2 DON'T KNOW (জানি না)....................................... 99	
711.	Did the mother use any local herbs during pregnancy, labor, and delivery? (গর্ভবতী মা গর্ভবস্থায়, প্রসব বেদনা এবং প্রসবের সময় কি কোনও স্থানীয় গাছগাছালির ঔষুধ ব্যবহার করেছিল?) READ ALL RESPONSES OPTIONS EXCEPT "DON'T KNOW" "(জানি না" বাদে সব প্রতিক্রিয়া অপশন পড়ুন)"	DID NOT USE HERBS (কোন গাছগাছালির ঔষুধ ব্যবহার করে নি).................................. 1 DURING PREGNANCY BUT BEFORE LABOR (গর্ভবস্থার সময় কিন্তু,প্রসব ব্যাথার আগে)..2 DURING LABOR AND DELIVERY (প্রসব ব্যাথা এবং প্রসবের সময়)... 3 AFTER DELIVERY (প্রসবের পরে).. 4 DURING PREGNANCY, LABOR, AND DELIVERY (গর্ভবস্থা, প্রসব ব্যাথা এবং প্রসবের সময়)... 5 DON'T KNOW (জানি না)... 99	→713
712.	Which local herbs were used? (কোন স্থানীয় গাছগাছালির ঔষুধ ব্যবহার করা হয়েছিল?)	_____	
713.	Did you see the water break? (আপনি কি পানি ভাঙ্গা	YES (হ্যাঁ)... 1 NO (না).. 0	→ 718

	দেখেছেন)?		
714.	When did the water break? (কখন পানি ভাঙ্গা শুরু হয়েছিল?) READ OPTIONS (অবসন পড়ুন)	BEFORE LABOR STARTED (প্রসব ব্যাথা শুরু হওয়ার আগে)................................... 1 AFTER LABOR STARTED (প্রসব ব্যাথা শুরু হওয়ার পরে).................................. 2 DON'T KNOW (জানি না)... 99	
715.	How many hours or days passed between the water breaking and birth? (পানি ভাঙ্গার কত সময় পরে জন্ম হয়েছিল?) PROBE: IF RESPONDENT ANSWERS "DON'T KNOW," TRY TO DETERMINE IF WATER BROKE >24 HOURS INTO LABOR (তদন্ত: উত্তরদাতা যদি "জানি না" উত্তর দেন তাহলে প্রসবকালের ২৪ ঘন্টার বেশি পানি ভাঙ্গে কি না তা নির্ধারণ করার চেষ্টা করুন)	HOURS (ঘন্টা)................................... 1 ▢▢ **OR**(অথবা) DAYS (দিন).. 2 ▢▢ DON'T KNOW (জানি না).................................. 999	
716.	What color was the water? (পানির রং কি ছিল?)	CLEAR (পরিস্কার).......................................1 YELLOW/GREEN(হলুদ/সবুজ) .... 2 GREEN/BROWN (সবুজ/বাদামী .... 3 DARK RED (কালছে লাল)... 4 BRIGHT RED (উজ্জল লাল).................................... 5 DON'T KNOW(জানি না) 99	
717.	Was the water foul smelling? (পানি কি দূর্গন্ধ যুক্ত?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	
718.	Was there excessive bleeding before, after, or during delivery? (প্রসবের আগে,পরে বা	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	

	প্রসবের সময় অতিরিক্ত রক্তক্ষরণ হয়েছিল?)		
719.	Did the mother have convulsions before, after, or during delivery? (প্রসবকালীন আগে,পরে বা প্রসবের সময় মায়ের কি খিঁচুনী হয়েছিল?)	NO (না)... 0 BEFORE DELIVERY (প্রসবকালীন আগে)... 1 DURING DELIVERY(প্রসবকালীন সময়) .... 2 AFTER DELIVERY (প্রসবকালীন পরে).. 3 BOTH BEFORE AND AFTER DELIVERY (উভয় প্রসবের আগে বা পরে)... 4 DON'T KNOW(জানি না) 99	
720.	Did the baby stop moving in the mother's abdomen? (বাচ্চাটি কি মায়ের পেটে নড়াচড়া বন্ধ করে দিয়েছিল?)	YES (হ্যাঁ) .... 1 NO (না)... 0 DON'T KNOW (জানি না).. 99	→ 723 → 723
721.	Did the baby stop moving before labor started or during labor? (প্রসবকালের পূর্বে বা প্রসবকালে বাচ্চাটি কি পেটে নড়াচড়া বন্ধ করে দিয়েছিল?)	BEFORE LABOR STARTED (প্রসবকালীন আগে)........................ 1 DURING LABOR (প্রসবকালীন সময়)................................. 0 DON'T KNOW(জানি না) 99	→ 723 → 723
722.	How long before labor started did the baby stop moving in the mother's abdomen? (প্রসবকাল শুরু হওয়ার কতক্ষণ আগে বাচ্চাটি মায়ের পেটে নড়াচড়া বন্ধ করে দিয়েছিল?)	HOURS (ঘন্টা).................................... 1 ☐☐ **OR**(অথবা) DAYS (দিন)... 2 ☐☐ **OR**(অথবা) WEEKS (সপ্তাহ)................................... 3 ☐☐ DON'T KNOW (জানি না) 999	
723.	What type of delivery was it? (এটা কি ধরণের প্রসব পদ্ধতি ছিল?) EXPLAIN EACH OPTION AS LIST (তালিকায় প্রতিটি অপশন	NORMAL VAGINAL DELIVERY (নরম্যাল ডেলিভারি)... 0 FORCEPS/VACUUM (সাঁড়াশি/ভ্যাকুম)... 1 CESAREAN SECTION (সিজারিয়ান)... 2 ASSISTED BREECH DELIVERY (সহায়তাপ্রাপ্ত ব্রিচ	

		ব্যাখ্যা করুন)	ডেলিভারি).. 3 OTHER (অন্যান্য).. 4 SPECIFY(উল্লেখ করুন): _____ DON'T KNOW(জানি না) 99	
724.	Which part of the baby came first? (বাচ্চার কোন অংশ আগে বের হয়েছিল?)	HEAD(মাথা) .... 0 BOTTOM (নীচের অংশ)... 1 FEET(পা) .... 2 ARM/HAND (বাহু/হাত).. 3 OTHER (অন্যান্য).. 4 SPECIFY(উল্লেখ করুন)_____ DON'T KNOW (জানি না).. 99	
725.	Did the umbilical cord come out before the baby was born? (বাচ্চা জন্ম হওয়ার আগে কি নাড়ি বের হয়েছিল?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না) 99	
726.	Was the cord wrapped more than once around the neck of the baby? (বাচ্চার ঘাড়ের চারপাশে কি নাড়ি একাধিক বার মোড়ানো ছিল?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	
727.	Was there a cord knot? (সেখানে কি নাড়ির গিঁট ছিল?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না).. 99	
728.	What color was the cord? (নাড়ির রং কি ছিল?)	NORMAL WHITE/GRAY COLOR (স্বাভাবিক সাদা/ধূসর রং) .... 0 RED/BROWN(লাল/বাদামী .... 1 GREEN/YELLOW (সবুজ/হলুদ).. 2 OTHER (অন্যান্য)..3 SPECIFY(উল্লেখ করুন): _____ DON'T KNOW (জানি না).. 99	
729.	Was there anything else about the cord that was different? (নাড়িতে অন্য আরও কিছু কি ছিল?)	YES (হ্যাঁ)... 1 SPECIFY(উল্লেখ করুন): _____ NO (না).. 0 DON'T KNOW(জানি না) 99	
730.	Normal placentas are red/blue in color, soft, and	YES (হ্যাঁ) .... 1 NO (না).. 0	

		round. Did the placenta look like this? (স্বাভাবিক গর্ভফুলের রং হচ্ছে লাল/আকাশী, নরম এবং বৃত্তাকার । গর্ভফুল কি দেখতে এ রকম?) SHOW IMAGE TO ASSIST WITH ACCURATE RECALL (সঠিক পুনঃস্থাপন সহ সহায়তা করার জন্য চিত্র প্রদর্শন করুন)	DON'T KNOW (জানি না).. 99	
731.	Was the placenta foul smelling? (গর্ভফুল কি দুর্গন্ধ যুক্ত ছিল)?	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না).. 99	
732.	What was the birth weight in grams? (জন্মের ওজন কত গ্রাম ছিল?) IF ANSWERED IN KILOGRAMS, MULTIPLY BY 1000 AND RECORD IN GRAMS (যদি উত্তর কিলোগ্রামে হয়, ১০০০ দ্বারা গুণ করে গ্রামে রেকর্ড করুন)	☐☐☐☐ GRAMS (গ্রাম) DON'T KNOW (জানি না).. 9999	

Interviewer, if birth was at a health facility, skip to 740.
(জন্ম যদি স্বাস্থ্য কেন্দ্রে হয়,চলে যান ৭৪০)

733.	On what surface did the mother deliver? (মা কিসের উপরে বাচ্চা জন্ম দিয়েছিল?)	LABOR BED(প্রসবের বেড) .... 1 MATTRESS ON THE FLOOR(মেঝের উপরে ম্যাট্রেস) .... 2 FLOOR WITH PLASTIC COVER (মেঝের উপরে পাস্টিকের আবরণ)... 3 MAT ON THE FLOOR (মেঝের উপরে ম্যাট)............................... 4 DIRECTLY ON THE FLOOR(সোজা মেঝের উপরে) .... 5 OTHER (অন্যান্য).. 6 SPECIFY(উল্লেখ করুন): _____ DON'T KNOW (জানি না).. 99	
734.	Did the person who assisted the birth wash his/her hands before	YES (হ্যাঁ) .... 1 NO (না).. 0 MOTHER GAVE BIRTH ALONE (মা একাই জন্ম দিয়েছে)........... 77	→ 736

	examining the mother? (মাকে পরীক্ষা করানোর আগে যে প্রসব করিয়েছিলেন সে কি হাত গুলো ধুয়েছিল?)	DON'T KNOW (জানি না).. 99	
735.	Did the person who assisted the birth wear gloves? (সে কি হাতে গ্লাভস পরেছিল?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না)....................................... 99	
736.	Was anything applied to the umbilical stump after birth? (জন্মের পরে নাভিতে কিছু কি প্রয়োগ করা হয়েছিল?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না)....................................... 99	→ 738 → 738

737.	What was applied to the umbilical stump after birth? (জন্মের পরে নাভিতে কি প্রয়োগ করা হয়েছিল?)	CHLORHEXIDINE
		 (ক্লোরহেক্সিডিন).. 0
		 ALCOHOL/IODINE(অ্যালকোহল/আয়োডিন)
		 1
		 HERBS (ওষুধি) 2
		     SPECIFY(উল্লেখ করুন): _____
		 ASHES (ছাই) 3
		 OTHER(অন্যান্য) 4
		     SPECIFY(উল্লেখ করুন): _____
		 DON'T KNOW (জানি না)....................................... 99	

738.	What tool was used for cutting the cord? (নাড়ি কাটার জন্য কোন সরঞ্জামটি ব্যবহার হয়েছিল?)	SURGICAL BLADE (সার্জিকেল ব্লাড).. 0 NEW RAZOR BLADE (নতুন রেজার ব্লাড).. 1 OLD RAZOR BLADE (পুরাতন রেজার ব্লাড).. 2 SCISSORS (কাঁচি)... 3 OTHER (অন্যান্য).. 4 SPECIFY(উল্লেখ করুন): _____ CORD NOT CUT(নাড়ি কাটা হয়নি).........................5 DON'T KNOW (জানি না)....................................... 99	
739.	What material was used for tying the cord? (নাড়ি বাঁধার জন্য কোন উপাদান ব্যবহার করা হয়েছিল?)	CLEAN PIECE OF THREAD (পরিষ্কার সুতা)... 0 UNCLEAN PIECE OF THREAD (অপরিষ্কার সুতা)... 1 CORD CLAMP (নাড়ি ক্ল্যাম) .... 2 OTHER (অন্যান্য).. 3 SPECIFY(উল্লেখ করুন): _____	

		CORD NOT TIED (নাড়ি বাঁধা হয় নি)................................... 4	
		DON'T KNOW (জানি না)... 99	
740.	Were there any bruises or signs of injury on the baby's body after birth? (বাচ্চার দেহে জন্মের পরে কোনা আঘাতের চিহ্ন বা লক্ষণ ছিল কি?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	→ 742 → 742
741.	Where were the injury marks? (কোথায় আঘাতের চিহ্ন ছিল?)	SPECIFY(উল্লেখ করুন): _____	
742.	Did the baby have any major malformation at birth? (জন্মের সময় বাচ্চার কোনও বড় ধরণের ত্রুটি ঘটেছিল?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	→ 744 → 744
743.	What kind of malformation did the baby have? (বাচ্চাটির কী ধরণের ত্রুটি ঘটেছিল?) HAVE PARTICIPANT DESCRIBE MALFORMATION, USE IMAGES TO ASSIST RECALL IF NECESSARY (অংশগ্রহণকারী কি ত্রুটির বর্ণনা দিয়েছেন,প্রয়োজন হলে সাহায্যের জন্য ছবি ব্যবহার করুন)	SWELLING/DEFECT ON THE BACK (ফোলা/পিঠে ত্রুটি)... 1 VERY LARGE HEAD (বড় মাথা) .... 2 VERY SMALL HEAD (ছোট মাথা)... 3 DEFECT OF THE LIP AND/OR PALATE (ঠোঁটে/তালুতে ত্রুটি)... 4 EXTRA FINGERS/TOES (অতিরিক্ত হাতের আঙ্গুল/পায়ের আঙ্গুল)... 5 INTESTINES PROTRUDING THROUGH THE ABDOMEN (তলপেটের মাধ্যমে বাহিরে ঠেলে চলে আসে).. 6 OTHER (অন্যান্য)....................................... 7 SPECIFY(উল্লেখ করুন): _____ DON'T KNOW (জানি না)....................................... 99	
744.	Was the baby covered in any whitish substance right after delivery (vernix)? (বাচ্চা জন্মের পরে সাদা আবরণে কি আবৃত ছিল?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	
745.	Was there any green/brown	YES (হ্যাঁ) .... 1 NO (না).. 0	

	material or substance on the baby's skin? (বাচ্চার ত্বকে কোনও সবুজ/বাদামী আবরণ ছিল কি?)	DON'T KNOW (জানি না)... 99	
746.	Were the baby's hands or feet swollen? (বাচ্চাটির হাত বা পা কি ফোলা ছিল?)	YES (হ্যা) .... 1 NO (না)... 0 DON'T KNOW (জানি না)... 99	
747.	Was the baby a stillbirth? (বাচ্চা কি মৃত জন্মগ্রহণ করেছিল?) PROBE TO MAKE SURE THAT RESPONDENT IS SURE THAT BABY WAS DEAD AT BIRTH, IF ANY UNCERTAINTY, SKIP TO 750 (উত্তরদাতা তদন্ত করে নিশ্চিত করুন যে বাচ্চাটি মৃত জন্মেছিল,যদি কোনো অনিশ্চয়তা থাকে ৭৫০ স্কিপ করুন)	YES (হ্যা)...1 NO (না)... 0 UNCERTAIN (অনিশ্চিত)... 2 DON'T KNOW(জানি না) 99	→ 759 → 750 →750
748.	What was the color of the baby at birth? (জন্মের সময় বাচ্চাটির গায়ের রং কি ছিল?)	NORMAL/PINK (স্বাভাবিক/গোলাপি).. 1 PALE ALL OVER (সারা গায়ে ফ্যাকাশে).. 2 BLUE ALL OVER (সারা গায়ে নীল) .... 3 PALE/BLUE HANDS AND FEET (ফ্যাকাশে /নীল হাত এবং পা)... 4 OTHER (অন্যান্য).. 5 SPECIFY(উল্লেখ করুন): _____ DON'T KNOW (জানি না)... 99	
749.	Was the baby's skin peeling or showing signs of decay? (বাচ্চার ত্বকে কি ছিদ্র বা ক্ষয় লক্ষণ ছিল?) ASK ONLY IF THE	YES (হ্যা) .... 1 NO (না)... 0 DON'T KNOW (জানি না)... 99	→1101 →1101 →1101

	RESPONDENT WAS CERTAIN OF A STILLBIRTH (কেবলমাত্র জিজ্ঞাসা করুন, যদি উত্তরদাতা বাচ্চা মৃত জন্ম সম্পর্কে নিশ্চিত থাকে?)		
750.	Did the baby ever cry after birth, even a little? (বাচ্চাটি কি জন্মের পরে কখনও একটু হলেও কান্নাকাটি করেছিল?)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না).. 99	→ 752 → 752
751.	How many minutes after birth did the baby first cry? (বাচ্চাটি জন্মের কত মিনিট পরে প্রথম বারের মত কান্নাকাটি করেছিল?)	☐☐ MINUTES(মিনিট) DON'T KNOW (জানি না).. 99	
752.	Did the baby ever breathe after birth, even a little? (বাচ্চাটি কি কখনও জন্মের পরে একটু হলেও শ্বাস নিয়েছিল?) PROBE FOR THE PRESENCE OF CHEST MOVEMENT, CHOOSE YES EVEN IF ONLY SMALL/IRREGULAR MOVEMENTS WERE PRESENT (বুকের চলাচল আছে কি না দেখুন,যদি ছোট/অনিয়মিত চলাচল থাকলে হ্যাঁ নির্বাচন করুন)	YES (হ্যাঁ) .... 1 NO (না).. 0 DON'T KNOW (জানি না).. 99	
753.	Was the baby given assistance to breathe? (বাচ্চাকে কি শ্বাস নিতে সাহায্য করা হয়েছিল?) READ EACH		DON'T KNOW(জানি না)
			YES(হ্যাঁ) NO(না)
		STIMULATION (প্রসারণ) 1 0 99	
		RUBBING THE BACK (পিছনে মালিস করা)............................. 1 0 99	
		BAG AND MASK (ব্যাগ বা 1 0 99	

	OPTION AND DESCRIBE (প্রতি অপশন পড়ুন এবং বর্ণনা করুন) MULTIPLE OPTIONS ALLOWED (একাধিক অপশন অনুমোদিত	মাস্ক)... SUCTION (সাকশন)...................................... 1 0 99 INTUBATION (ইন্টুবেশন)............................. 1 0 99 OTHER (অন্যান্য).. 1 0 99 SPECIFY(উল্লেখ করুন): _____		
754.	Was the baby given any oxygen? (বাচ্চাকে কি কোনও অক্সিজেন দেওয়া হয়েছিল?)	YES (হ্যাঁ)... 1 NO (না) .... 0 DON'T KNOW (জানি না)... 99		
755.	Did the baby ever move, even a little? (বাচ্চা কি কখনও একটু হলেও নড়াচড়া করেছিল?)	YES (হ্যাঁ)... 1 NO (না) .... 0 DON'T KNOW (জানি না)... 99	→ 761	
756.	Were the arms and legs limp, or did they have some flexing? (বাহু এবং পা নিস্তেজ অথবা বাঁকানো ছিল কি?)	YES (হ্যাঁ)... 1 NO (না) .... 0 DON'T KNOW (জানি না)... 99		

Interviewer, check to see if the baby cried, breathed, moved, or had a heartbeat. If **ALL** are **"NO,"** continue. If any are **"YES,"** skip to **761.** .(সাক্ষাৎকারী,বাচ্চার কান্না,শ্বাস ফেলা,নড়াচড়া অথবা হার্টবিট ছিল কিনা তা পরীক্ষা করে দেখুন.যদি সব "না" হয় চালিয়ে যান, যদি "হ্যাঁ" হয় ৭৬১ এ চলে যান ।

757.	What was the color of the baby at birth? (জন্মের সময় বাচ্চাটির গায়ের রং কি ছিল?)	NORMAL/PINK(স্বাভাবিক/গোলাপি)... 1 PALE ALL OVER (সারা গায়ে ফ্যাকাশে)... 2 BLUE ALL OVER (সারা গায়ে নীল) .... 3 PALE/BLUE HANDS AND FEET (ফ্যাকাশে /নীল হাত এবং পা)... 4 OTHER(অন্যান্য).. 5 SPECIFY: (উল্লেখ করুন) _____ DON'T KNOW (জানি না)... 99		
758.	Was the baby's skin peeling or showing signs of decay?	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না).. 99	→1101 →1101 →1101	

	(বাচ্চার ত্বকে কি ছিদ্র বা ক্ষয়ের লক্ষণ ছিল?) ASK ONLY IF THE BABY WAS BORN DEAD (জিজ্ঞাসা করুন,যদি বাচ্চা মৃত জন্ম হয়েছিল)			

759.	Was the baby given assistance to breathe? (বাচ্চাকে কি শ্বাস নিতে সহায়তা করা হয়েছিল?) READ EACH OPTION AND DESCRIBE (প্রতি অপশন পড়ুন এবং বর্ণনা করুন) MULTIPLE OPTIONS ALLOWED (একাধিক অপশন অনুমোদিত)	YES(হ্যাঁ) NO(না) DON'T KNOW(জানি না) STIMULATION (প্রসারণ)……………………… 1 0 99 RUBBING THE BACK …………… 1 0 99 (পিছনে মালিস করা) BAG AND MASK ………………… 1 0 99 (ব্যাগ বা মাস্ক) SUCTION (সাকশন)……………… 1 0 99 INTUBATION(ইন্টুবেশন)……………… 1 0 99 OTHER (অন্যান্য)………………… 1 0 99 SPECIFY: (উল্লেখ করুন)_____	
760.	Was the baby given any oxygen? (বাচ্চাকে কি কোনও অক্সিজেন দেওয়া হয়েছিল?)	YES (হ্যাঁ)……………………………………………… 1 NO (না)……………………………………………… 0 DON'T KNOW (জানি না) ……………………… 99	
761.	Was the baby ever breastfed? (বাচ্চাকে কখনও বুকের দুধ কি খাওয়ানো হয়েছিল?)	YES (হ্যাঁ)……………………………………………… 1 NO (না)……………………………………………… 0 DON'T KNOW (জানি না) ……………………… 99	→764 →765
762.	How soon after birth was breastfeeding initiated?	HOURS(ঘন্টা) ……………………… 1 ☐☐ OR(অথবা) DAYS (দিন ……………………… 2 ☐☐	

	(জন্মের কতক্ষণ পরে বুকের দুধ খাওয়ানো হয়েছিল?) IF LESS THAN ONE HOUR, RECORD "00" HOURS (যদি এক ঘন্টা কম, রের্কড "০০")	DON'T KNOW (জানি না) 99	
763.	Was the baby only ever fed with breastmilk? (বাচ্চাকে শুধু কি বুকের দুধ খাওয়ানো হয়েছিল?)	YES (হ্যাঁ)... 1 NO (না).. 0 DON'T KNOW (জানি না) 99	→765 →765
764.	What other foods were fed to the baby? (বাচ্চাকে অন্যান্য কি খাবার খাওয়ানো হয়েছিল?) IF BABY WAS NEVER FED, RECORD "NONE" (যদি বাচ্চাকে কখনও বুকের দুধ খাওয়ানো হয়নি,তাহলে "কোন কিছুই" রের্কড করবে না)	SPECIFY(উল্লেখ করুন): _____	
765.	Was the baby dried right after birth? (বাচ্চাকে কি জন্মের সাথে সাথে শুকানো হয়েছিল?)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না) 99	
766.	Was the baby kept warm	YES (হ্যাঁ)... 1 NO (না).. 0	→768

	right after birth? (বাচ্চাকে কি জন্মের সাথে সাথে উষ্ণ রাখা হয়েছিল?)	DON'T KNOW (জানি না) 99	→768

767. How was the baby kept warm after birth?

(বাচ্চাকে জন্মের সাথে সাথে কিভাবে উষ্ণ রাখা হয়েছিল?)

READ ALL OPTIONS MULTIPLE ANSWERS ALLOWED (সব অপশন পড়ুন) (একাধিক অপশন অনুমোদিত)

	YES(হাঁ)	NO(না)	DON'T KNOW(জানি না)
PLACED SKIN-TO-SKIN (ত্বকে-ত্বক স্পর্শ) IMMEDIATELY AFTER BIRTH(অবিলম্বে জন্মের পর)	1	0	99
WRAPPED (মোড়ানো)........................	1	0	99
COVERED WITH A BLANKET(কম্বল দিয়ে আবৃত)..	1	0	99
PLACED IN AN INCUBATOR (ইনকুবেটরে রাখা)................................	1	0	99
OTHER(অন্যান্য).................................	1	0	99
SPECIFY(উল্লেখ করুন): _____			

768. How many hours or days after birth was the baby cleaned? (বাচ্চাকে জন্মের কত ঘন্টা বা দিনের পরে পরিষ্কার করা হয়েছিল?)

MINUTES (মিনিট)............................... 1 ☐☐

HOURS (ঘন্টা).................................... 2 ☐☐
OR(অথবা)

DAYS (দিন).. 3 ☐☐

BABY NOT CLEANED (বাচ্চা পরিষ্কার না)..................................... 777 →770
DON'T KNOW (জানি না)... 999

769. How was the baby cleaned after birth? (জন্মের পরে বাচ্চাকে কিভাবে পরিষ্কার করা হয়েছিল?)

BATHING WITH COLD WATER
(ঠান্ডা পানির সাথে গোসল) 1
BATHING WITH WARM WATER
(গরম পানির সাথে গোসল 2
WIPING WITH FABRIC(ফ্যাব্রিক দিয়ে মুচানো) 3
OTHER (অন্যান্য)... 4
    SPECIFY(উল্লেখ করুন): _____
DON'T KNOW(জানি না) 99

770.	How many hours or days after birth was the baby examined at a hospital? (বাচ্চাকে কত ঘন্টা বা দিনের পরে হাসপাতালে পরীক্ষা করা হয়েছিল?) ENTER IN HOURS OR DAYS (ঘন্টা বা দিন প্রবেশ করুন)	HOURS (ঘন্টা)................................. 1 ☐☐ **OR (অথবা)** DAYS (দিন)..................................... 2 ☐☐ BABY NOT EXAMINED (বাচ্চাকে পরীক্ষা করা হয় নি)........................ 777 DON'T KNOW (জানি না) 999	→772
771.	Was the baby ever admitted to a neonatal intensive care unit? (বাচ্চা কি নবজাতক নিবির যত্ন ইউনিটে ভর্তি হয়েছিল?)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না) 99	
772.	Did the mother ever receive any counselling by a health worker after birth? (মা প্রসবের পরে কখনও কি স্বাস্থ্যকর্মী দ্বারা পরামর্শ গ্রহণ করেছিলেন?)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না) 99	→774 →774
773.	What was the mother counselled on? (মাকে কিসের পরামর্শ দেয়া হয়েছিল? READ ALL	YES(হ্যাঁ) NO(না) DON'T KNOW (জানি না) BREASTFEEDING (বুকের দুধ খাওয়ানো)................. 1 0 99 IMMUNIZATION(টিকা) .... 1 0 99 PNC(জন্মের পরবর্তী সেবা) .... 1 0 99 DANGER SIGNS (বিপদ চিহ্ন)..... 1 0 99	

	OPTIONS MULTIPLE ANSWERS ALLOWED (সব অপশন পড়ুন) (একাধিক উত্তর অনুমোদিত)	FAMILY PLANNING (পরিবার পরিকল্পনা)..................... 1 0 99 OTHER (অন্যান্য)..................... 1 0 99 SPECIFY(উল্লেখ করুন): _____			
774.	Was the mother given Vitamin A after delivery? (প্রসবের পরে কি মাকে ভিটামিন "এ" দেয়া হয়েছিল?)	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না) 99			
775.	Was the baby given the BCG vaccine in the first week of life? (বাচ্চাকে জন্মের প্রথম সপ্তাহে কি বিসিজি টিকা দেওয়া হয়েছিল?)	YES (হ্যাঁ)... 1 NO (না).. 0 DON'T KNOW (জানি না) 99			
776.	Did the baby sleep under a bednet? (বাচ্চা কি মশারির নিচে বিছানায় ঘুমায়?)	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না) 99			

Section 8. History of Accidents/Injuries(সেকশন ৮.দুর্ঘটনা বা আঘাতের ইতিহাস)			
No.(নাম্বার)	**Question**(প্রশ্ন)	**Coding Categories**(শ্রেণী বিন্যাস)	**Skip**(বাদ দিন)
801.	Did the baby die from an injury or accident? (বাচ্চা কি আঘাতে বা দুর্ঘটনায় মারা গেয়েছিল?)	YES (হ্যাঁ)..1 NO (না)...0 DON'T KNOW (জানি না)....................................99 NO COMMENT (মন্তব্য নেই)..............................77	→ 901 → 901
802.	What kind of injury or accident? (কি ধরণের আঘাত বা দুর্ঘটনা ঘটেছিল?)	ROAD TRAFFIC ACCIDENT (সড়ক দুর্ঘটনা)..................1 FALL (পড়ে গিয়ে)...2 DROWNING(পানিতে ডুবে) ....3 POISONING (বিষ প্রয়োগে)................................4 BURNS(আগুনে পুড়ে) ....5 VIOLENCE/ASSAULT (HOMICIDE/ABUSE) (সহিংসতা/হামলা)...6 CHOKING (বিষম)..7 OTHER (অন্যান্য)..8 SPECIFY(উল্লেখ করুন): _____ NO COMMENT (মন্তব্য নেই) ....77 DON'T KNOW(জানি না)......................................99	
803.	Was the injury or accident inflicted by someone else? (অন্য কারো দ্বারা আঘাত করা বা দুর্ঘটনা ছিল?)	YES (হ্যাঁ)..1 NO (না)...0 NO COMMENT (মন্তব্য নেই) ....77 DON'T KNOW(জানি না) 99	
804.	Did the baby suffer from any animal/insect bite that led to his/her death? (বাচ্চা কি কোনও প্রাণীর/পোকার কামড়ের শিকার হয়েছিল যার কারণে তার মৃত্যু হয়?)	YES (হ্যাঁ)..1 NO (না)...0 DON'T KNOW(জানি না) 99	→ 901 → 901
805.	What kind of animal caused the injury/accident? (বাচ্চা কি ধরণের প্রাণী/পোকার কামড়ের শিকার হয়েছিল যার কারণে তার মৃত্যু হয়?)	DOG (কুকুর) ....1 SNAKE (সাপ)..2 INSECT (পোকা)...3 OTHER (অন্যান্য)..4 SPECIFY: (উল্লেখ করুন) _____ DON'T KNOW (জানি না)......................................99	

Section 9. Signs and Symptoms Noted During the Final Illness (সেকশন ৯.চূড়ান্ত অসুস্থতা সময় উল্লেখিত লক্ষণ এবং উপসর্গ)			

I am now going to ask you questions about the signs and symptoms that the baby may have showed during the illness or health problem that led to his/her death. Some of the questions may not appear to be directly related to the death, but please bear with me and answer all the questions you can. This will help us get a clear picture of all possible symptoms that the deceased baby had. (আমি এখন বাচ্চার অসুখ বা স্বাস্থ্যের সমস্যা দেখানোর যে লক্ষণগুলি দেখেয়েছি তার লক্ষণ এবং উপসর্গ সম্পর্কে আপনাকে প্রশ্ন করতে যাচ্ছি যা তার মৃত্যুর দিকে পরিচালিত করেছিল ।কিছু প্রশ্ন মৃত্যুর সাথে সম্পর্কিত নাও হতে পারে, দয়া করে আমার সাথে থাকুন এবং সমস্ত প্রশ্নের উত্তর দিন ।এটি আমাদের মৃত বাচ্চার যে সব সম্ভাব্য উপসর্গ ছিল একটি পরিক্ষার ছবি পেতে সাহায্য করবে ।)

No. (নাম্বার)	Question(প্রশ্ন)	Coding Categories (শ্রেণী বিন্যাস)	Skip (বাদ দিন)
901.	Were there any signs, symptoms, or illness that occurred before death? (মৃত্যুর আগে কোনও লক্ষণ,উপসর্গ বা অসুখ ছিল?)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না).. 99	→ 1001 → 1001
902.	How old was the baby when the illness occurred right before death started? (মৃত্যুর পূর্বে বাচ্চাটির যখন অসুখ হয়েছিল তার বয়স কত ছিল?) ENTER IN HOURS OR DAYS (দিন বা ঘন্টা প্রবেশ করুন)	HOURS (ঘন্টা)..................................... 1 ☐☐ **OR**(অথবা) DAYS (দিন)... 2 ☐☐ DON'T KNOW(জানি না).. 999	
903.	Was the baby ever able to suckle/bottle-feed? (বাচ্চা কখনও কি দুধপান /বোতল ফিডারে এ খাওয়ার সক্ষম ছিল?)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না).. 99	→ 906 → 906
904.	Did the baby stop suckling/bottle-feeding? (বাচ্চা দুধপান /বোতল ফিডিংয়ে খাওয়া কি বন্ধ করেছিল?)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না).. 99	→ 906 → 906
905.	How many days after birth did the baby stop suckling or	☐☐ DAYS(দিন)	

	bottle-feeding? (বাচ্চা জন্মের কতদিন পর দুধপান /বোতল ফিডিং বন্ধ করা হয়েছিল?) IF LESS THAN ONE DAY, RECORD "00" IN DAYS (যদি এক দিনের কম,দিনে "০০" রেকর্ড করুন)	DON'T KNOW(জানি না) 99	
906.	Did the baby have a fever? (বাচ্চার কি জ্বর ছিল?)	YES (হ্যা).. 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	→ 909 → 909
907.	How many hours or days after birth did the fever start? (জন্মের কত ঘন্টা বা দিনের পরে জ্বর শুরু হয়েছিল?) IF LESS THAN ONE HOUR, RECORD "00" IN HOURS (যদি এক ঘন্টার কম হয়,ঘন্টায় "০০" রেকর্ড করুন)	HOURS (ঘন্টা)...................................... 1 ☐☐ OR (অথবা) DAYS (দিন)... 2 ☐☐ DON'T KNOW (জানি না)....................................... 999	
908.	How many hours or days did the fever last? (জ্বর কত ঘন্টা বা দিন ধরে ছিল?)	HOURS (ঘন্টা)...................................... 1 ☐☐ OR (অথবা) DAYS (দিন)... 2 ☐☐ DON'T KNOW(জানি না)....................................... 999	
909.	Did the baby's body feel cold when touched? (বাচ্চার শরীরে স্পর্শ করলে কি ঠান্ডা লাগে?)	YES (হ্যা).. 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	→ 911 → 911
910.	How many hours or days after birth did the baby become cold to the touch? (জন্মের কত ঘন্টা বা দিনের পর বাচ্চাটির ঠান্ডা লেগেছিল?)	HOURS (ঘন্টা)...................................... 1 ☐☐ OR (অথবা) DAYS (দিন)... 2 ☐☐ DON'T KNOW (জানি না)...................................... 999	

911.	Did the baby have a cough? (বাচ্চার কি কাঁশি ছিল?)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না)................................. 99	→ 913 → 913
912.	How many hours or days after birth did the baby start to cough? (জন্মের কত দিন পর বাচ্চার কাঁশি শুরু হয়েছিল?)	HOURS (ঘন্টা)................................... 1 ☐☐ OR(অথবা) DAYS (দিন).................................... 2 ☐☐ DON'T KNOW (জানি না)................................. 99	
913.	Did the baby have difficulty breathing? (বাচ্চার শ্বাস নিতে কি সমস্যা হয়েছিল?)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না)................................. 99	→ 916 → 916
914.	How many hours or days after birth did the baby start having difficulty breathing? (জন্মের কত ঘন্টা বা দিন পরে বাচ্চার শ্বাস নিতে সমস্যা শুরু হয়েছিল?)	HOURS (ঘন্টা) .... 1 ☐☐ OR (অথবা) DAYS (দিন)................................. 2 ☐☐ DON'T KNOW (জানি না)............................... 999	
915.	For how many days did the difficult breathing last? (কত দিন ধরে নিশ্বাস নিতে কষ্ট হয়েছিল?	☐☐ DAYS(দিন) DON'T KNOW(জানি না) 99	
916.	Did the baby have short and fast breathing? (বাচ্চার কি অল্প এবং দ্রুত শ্বাস ছিল?) DEMONSTRATE (প্রদর্শন করুন)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না)................................. 99	→ 919 → 919
917.	How many hours or days after birth did the baby first start having short and fast breathing? (জন্মের কত ঘন্টা বা দিন পর বাচ্চা অল্প এবং দ্রুত শ্বাস নিতে শুরু করেছিল?) IF LESS THAN ONE DAY, RECORD "00" IN	HOURS (ঘন্টা)................................. 1 ☐☐ OR(অথবা) DAYS (দিন)................................. 2 ☐☐ DON'T KNOW (জানি না)..................................... 999	

	DAYS (যদি এক দিনের কম,দিনে "০০" রেকর্ড করুন)		
918.	For how many days did the short and fast breathing last? (দ্রুত এবং অল্প শ্বাস কত দিন ধরে ছিল?)	⬜⬜ DAYS(দিন) DON'T KNOW(জানি না) 99	
919.	Did the baby have indrawing of the chest? (বাচ্চার বুক কি ডেবে গিয়েছিল?) DESCRIBE(বর্ণনা করুন)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না)............................ 99	
920.	Did the baby have noisy breathing (grunting or wheezing)? (বাচ্চার শ্বাসে কি শোরগোল ছিল?) DEMONSTRATE WHEEZING (শোরগোল প্রদর্শন করুন)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না)............................ 99	
921.	Did the baby have convulsions? (বাচ্চার কি খিঁচুনী ছিল?)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না)............................ 99	→ 923 → 923
922.	How many hours or days after birth did the baby start having convulsions? (জন্মের কত দিন পর বাচ্চার খিঁচুনী শুরু হয়েছিল?)	HOURS (ঘন্টা) .... 1 ⬜⬜ **OR** (অথবা) DAYS (দিন).. 2 ⬜⬜ DON'T KNOW (জানি না)....................................... 999	
923.	Did the baby's back become stiff and arched backwards? (বাচ্চার ঘাড় কি কুঁজো বা বেঁকে গিয়েছিল?) DEMONSTRATE, USE IMAGE TO IMPROVE RECALL IF NEEDED (প্রয়োজনে,ছবি ব্যবহার করে প্রদর্শন করুন)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না)............................ 99	

924.	Did the baby become unresponsive or unconscious? (বাচ্চা কি অজ্ঞান বা নেতিয়ে পড়েছিল?)	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না).. 99	→ 926 → 926
925.	How many hours or days after birth did the baby become unresponsive or unconscious? (বাচ্চা জন্মের কত ঘন্টা বা দিন পরে অজ্ঞান বা নেতিয়ে পড়েছিল?) IF LESS THAN ONE HOUR, RECORD "00" IN HOURS (যদি এক ঘন্টার কম হয়,ঘন্টায় "০০" রেকর্ড করুন)	HOURS (ঘন্টা)...................................... 1 ☐☐ **OR** (অথবা) DAYS (দিন)... 2 ☐☐ DON'T KNOW (জানি না)..................................... 999	
926.	During the illness that led to death, did the baby have sunken soft spots on their head (sunken fontanelles)? (যে অসুস্থতা মৃত্যুর দিকে পরিচালিত করেছিল, সে সময়ে বাচ্চার মাথায় কি নরম দাগ ডুবিয়েছিল?) DESCRIBE(বর্ণনা করুন)	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না).. 99	
927.	During the illness that led to death, did the baby have protruding, bulging, or raised spots on his/her head (protruding fontanelle)? (যে অসুস্থতা মৃত্যুর দিকে পরিচালিত করেছিল, সে সময়ে বাচ্চার মাথায় কি নরম দাগের উপরে ফোলা বা ফুঁক দেখা গিয়েছিল?)	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না).. 99	

928.	Did the baby have a swollen stomach (abdomen)? (বাচ্চার পেট কি ফাঁপা ছিল?)	YES (হ্যাঁ)... 1 NO (না).. 0 DON'T KNOW (জানি না)............................... 99	→ 930 → 930
929.	How many days after birth did the baby develop a swollen abdomen? (জন্মের কত দিন পর বাচ্চার পেট ফাঁপা হয়েছিল?) IF LESS THAN ONE DAY, RECORD "00" IN DAYS (যদি এক দিনের কম,দিনে ০০ রেকর্ড করুন)	☐☐ DAYS(দিন) DON'T KNOW (জানি না)............................. 99	
930.	Did the baby vomit? (বাচ্চা কি বমি করেছিল?)	YES (হ্যাঁ)... 1 NO (না).. 0 DON'T KNOW (জানি না)............................... 99	→ 934 → 934
931.	How many days after birth did the baby start vomiting? (জন্মের কত দিন পরে বাচ্চার বমি শুরু হয়েছিল?) IF LESS THAN ONE DAY, RECORD "00" IN DAYS(যদি এক দিনের কম,দিনে ০০ রেকর্ড করুন)	HOURS (ঘন্টা)....................................... 1 ☐☐ OR(অথবা) DAYS (দিন) ....2 ☐☐ DON'T KNOW (জানি না)......................... 99	
932.	When the vomiting was most severe, how many times did the baby vomit in a day? (বাচ্চার যখন বমি তীব্র ছিল, দিনে কত বার বমি করেছিল?)	☐☐ TIMES(সময়) DON'T KNOW (জানি না)............................. 99	
933.	Did the baby vomit blood? (বাচ্চা কি রক্ত বমি করেছিল?)	YES (হ্যাঁ)... 1 NO (না).. 0 DON'T KNOW (জানি না)............................... 99	
934.	Did the baby have diarrhea? (বাচ্চার কি পাতলা পায়খানা হয়েছিল?)	YES (হ্যাঁ)... 1 NO (না).. 0 DON'T KNOW (জানি না)............................... 99	→ 937 → 937
935.	How many hours or days after birth did	HOURS (ঘন্টা)....................................... 1 ☐☐	

	the baby first have diarrhea? (জন্মের কত ঘন্টা বা দিন পরে বাচ্চার প্রথম পাতলা পায়খানা হয়েছিল?)	OR(অথবা) DAYS (দিন)...2 [ ][ ] DON'T KNOW(জানি না) 99	
936.	On the day when the diarrhea was most severe, how many times did the baby pass stools in a day? (যখন ডায়রিয়া তীব্র হয়েছিল,দিনে কত বার বাচ্চা পাতলা পায়খানা করেছিল?	[ ][ ] TIMES(সময়) DON'T KNOW (জানি না)...99	
937.	At any time during the illness that occurred before death was there blood in the stool? (মৃত্যু ঘটার আগে, অসুখের যে কোনও সময়ে পায়খানাতে কোন রক্ত ছিল?)	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না)...99	
938.	Did the baby have any redness or drainage from the umbilical stump? (বাচ্চার নাভি থেকে কোন লালচে বা পুঁজ বের হয়েছিল?)	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না)...99	
939.	During the illness that led to death, did the baby have a skin rash? (যে অসুস্থতা মৃত্যুর দিকে পরিচালিত করেছিল, সে সময়ে বাচ্চার ত্বক কি লালচে হয়েছিল?)	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না)...99	
940.	During the illness that led to death, did the baby develop skin ulcers or pits? ((যে অসুস্থতা মৃত্যুর দিকে পরিচালিত করেছিল, সে সময়ে বাচ্চার ত্বকে কি ঘা বা ফোস্কা হয়েছিল?) DESCRIBE AND USE IMAGE TO IMPROVE	YES (হ্যাঁ)... 1 NO (না)... 0 DON'T KNOW (জানি না)...99	

	RECALL, IF NEEDED (প্রয়োজনে,ছবি ব্যবহার করে বর্ণনা করুন)		
941.	Did the baby have yellow palms or soles? (বাচ্চার হাত বা পায়ের পাতা কি হলুদে ছিল?)	YES (হ্যাঁ) ………………………………………………… 1 NO (না)…………………………………………………… 0 DON'T KNOW (জানি না)…………………………… 99	→ 944 → 944
942.	How many days after birth did the yellow palms or soles begin? (জন্মের কত দিন পর হাত বা পায়ের পাতা হলুদে হওয়া শুরু করেছিল?)	☐☐ DAYS(দিন) DON'T KNOW(জানি না) …………………………………… 99	
943.	For how many days did the baby have yellow palms or soles? (বাচ্চার কত দিন হাত বা পায়ের পাতা হলুদে ছিল?) IF LESS THAN ONE DAY, RECORD "00" IN DAYS (যদি এক দিনের কম,দিনে "০০" রেকর্ড করুন)	☐☐ DAYS(দিন) DON'T KNOW (জানি না)…………………………………… 99	
944.	Did the baby have yellow discoloration of the eyes? (বাচ্চার চোখ কি হলুদে হয়ে গিয়েছিল?)	YES (হ্যাঁ)………………………………………………… 1 NO (না) ………………………………………………… 0 DON'T KNOW (জানি না)………………………………… 99	

Section 10. Access to Care (সেকশন ১০. স্বাস্থ্যসেবা নেওয়)			
I am now going to ask you questions about any attempts to seek healthcare for the baby, to best determine barriers which exist.(আমি এখন বাচ্চার জন্য স্বাস্থ্যসেবা চাইতে কোন প্রচেষ্টা সম্পর্কে আপনাকে প্রশ্ন করতে যাচ্ছি,যা বিদ্যমান বাধাগুলি নির্ধারণ করে)			
No.(নাম্বার)	**Question(প্রশ্ন)**	**Coding Categories(শ্রেণী বিন্যাস)**	**Skip (বাদ দিন)**
1001.	Did the baby receive any treatment before he/she died? (মৃত্যুর আগে বাচ্চা কি কোনও চিকিৎসা গ্রহণ করেছিল?)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	→1003 →1006
1002.	Why did the baby not receive any treatment? (বাচ্চা কেন কোনও চিকিৎসা গ্রহণ করেনি?)	_____	→1006

1003.	How was the baby treated at home? (বাচ্চাকে কিভাবে বাড়িতে চিকিৎসা করা হয়েছিল?)	WITH DRUGS (ঔষুধ দিয়ে) 1
		 WITH HERBS (প্রাকৃতিক ঔষুধি দিয়ে).. 2
		   SPECIFY(উল্লেখ করুন): _____
		 NO HOME TREATMENT 3
		 OTHER (অন্যান্য).. 4
		   SPECIFY(উল্লেখ করুন): _____
		 DON'T KNOW (জানি না)... 99
			
			 →1005
			
			 →1006
			 →1005
			
			 →1006

1004.	What type of medicine was given to the baby at home? (বাচ্চাকে বাড়িতে কি ধরণের ঔষুধ দেওয়া হয়েছিল?) LIST ALL OPTIONS (সব অপশন লিখুন)	<table><tr><td></td><td>YES(হ্যাঁ</td><td>NO(না)</td><td>DON'T KNOW (জানি না)</td></tr><tr><td>MALARIA (ম্যালেরিয়ার ঔষুধ) .... SPECIFY(উল্লেখ করুন): _____</td><td>1</td><td>0</td><td>99</td></tr><tr><td>SEPTRIN (সেপট্রিন) ....</td><td>1</td><td>0</td><td>99</td></tr><tr><td>OTHER ANTIBIOTIC (অন্যান্য অ্যানটিবায়োটিক)........................... SPECIFY: (উল্লেখ করুন) _____</td><td>1</td><td>0</td><td>99</td></tr><tr><td>PARACETEMOL প্যারাসিতামল)......</td><td>1</td><td>0</td><td>99</td></tr><tr><td>ORAL REHYDRATION SALINE (ওরস্যালাইন).................................</td><td>1</td><td>0</td><td>99</td></tr><tr><td>ARVS (এআরভিএস) ....</td><td>1</td><td>0</td><td>99</td></tr><tr><td>OTHER (অন্যান্য)........................... SPECIFY(উল্লেখ করুন): _____</td><td>1</td><td>0</td><td>99</td></tr></table>	

1005.	How long after the onset of the illness that led to death was care initialized at home? (মৃত্যুর দিকে পরিচালিত অসুস্থতার সূএপাতের কত ঘন্টার পরে বাড়িতে যত্ন নেওয়া শুরু হয়েছিল?)	HOURS (ঘন্টা)............................... 1 ☐☐ **OR** (অথবা) DAYS (দিন)............................... 2 ☐☐ DON'T KNOW (জানি না)................................. 999	
1006.	As far as you know, was anyone aware that the baby needed medical help before the baby died? (আপনি যতদূর জানেন, বাচ্চাটি মারা যাওয়ার আগে তার চিকিৎসার প্রয়োজন ছিল কি না, তা কেউ কি জানত?)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না) 99	→1101 →1008
1007.	How long before the baby's death was the illness or health problem recognized? (বাচ্চাটি মৃত্যুর কত সময় আগে তার অসুস্থতা বা স্বাস্থ্য সমস্যার চিহ্নিত করা হয়েছিল?)	HOURS (ঘন্টা)................................... 1 ☐☐ **OR** (অথবা) DAYS (দিন).. 2 ☐☐ DON'T KNOW (জানি না)................................. 999	
1008.	Was the baby brought outside the home for care during the illness that led to his/her death? (অসুস্থতার সময় বাচ্চাকে কি সেবার জন্য বাড়ির বাইরে নেয়া হয়েছিল যা তার মৃত্যুর কারণ হয়েছিল?)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না) 99	→1010 →1101
`	What were the reasons the baby was not taken to care outside the home? (বাচ্চাকে বাড়ির বাইরে সেবা না নেওয়ার কারণ কি ছিল?) MULTIPLE ANSWERS ALLOWED		

	YES(হ্যাঁ)	NO (না)	DON'T KNOW (জানি না)	
BABY DIED SUDDENLY (বাচ্চার হঠাৎ মৃত্যু)...................	1	0	99	1101
DID NOT REALIZE HOW SERIOUS ILLNESS WAS (গুরুতর অসুস্থতা ছিল জানা ছিল না)	1	0	99	
DID NOT KNOW WHERE TO	1	0	99	

	(একাধিক উত্তর অনুমোদিত)	GO (কোথায় যাবে জানা ছিল না) ………………………………… HAD NO ONE TO TAKE CARE OF OTHER CHILDREN (বাকি বাচ্চাদের যত্ন নেওয়ার কেউ ছিল না)……………………………	1	0	99	
		ROAD CONDITIONS WERE BAD(রাস্তার অবস্থা খারাপ ছিল) …..	1	0	99	
		WEATHER WAS BAD(আবহাওয়া খারাপ ছিল) ……	1	0	99	
		HEALTH FACILITY WAS TOO FAR AWAY(স্বাস্থ্য সেবা কেন্দ্র অনেক দূরে ছিল) ……………………	1	0	99	1101
		DID NOT TRUST QUALITY OF HEALTHCARE (স্বাস্থ্যের গুণগত মান বিশ্বাস করে না)……….	1	0	99	
		FEARED STAFF WOULD BLAME MOTHER FOR HOME DELIVERY(স্বাস্থ্যকর্মী মাকে দোষারোপ করতে পারে বাড়িতে প্রসবের জন্য) ……………………….	1	0	99	
		AFRAID TO TRAVEL AT NIGHT (রাতে যেতে ভয় পাই) …… OTHER(অন্যান্য) SPECIFY(উল্লেখ করুন): _____	1	0	99	

| 1010. | How many hours or days after the onset of the illness that led to death was treatment initiated outside the home? (অসুস্থতার সূত্রপাতের কত ঘন্টা বা দিনের পর বাড়ির বাইরে চিকিৎসা শুরু হয়ে মৃত্যু ঘটেছিল?) | HOURS (ঘন্টা)………………………… 1 ☐☐ OR (অথবা) DAYS (দিন)………………………… 2 ☐☐ DON'T KNOW (জানি না)………………………… 999 | | | | |

1011.	At what place was treatment sought? (কোন জায়গায় চিকিৎসা চাওয়া হয়েছিল?) LIST ALL OPTIONS (সব অবশন লিখুন) MULTIPLE ANSWERS ALLOWED (একাধিক উত্তর অনুমোদিত)		YES(হ্যাঁ)	NO(না)	DON'T KNOW (জানি না)	
		CAMP HOSPITAL (ক্যাম্প হাসপাতাল)………………… SPECIFY(উল্লেখ করুন): _____	1	0	99	
		GOVERNMENT HOSPITAL (সরকারি হাসপাতাল)……………… SPECIFY(উল্লেখ করুন): _____	1	0	99	
		PRIVATE HOSPITAL (বেসরকারি হাসপাতাল)………………	1	0	99	

		SPECIFY(উল্লেখ করুন): _____	
		TRADITIONAL BIRTH ATTENDANT (দাই)............... 1 0 99 OTHER (অন্যান্য)..................... 1 0 99 SPECIFY(উল্লেখ করুন): _____	

1012.	List the care sought in chronological order, starting with the first place where care was sought. Use the codes below for the level that best describes the location. Record the main provider at each location using the codes below. Record the number of days spent at each place. If number of days is less than one day, record "00." (যত্নের জন্য চাওয়া হয় যেখানে, প্রথম স্থান দিয়ে শুরু সময়ানুক্রমিকভাবে চাওয়া তালিকা) (অবস্থানটির সেরা বর্ণনা করার জন্য নীচের কোডগুলি ব্যবহার করুন) (নীচের কোড ব্যবহার করে প্রতিটি অবস্থানের প্রধান প্রদানকারীর রেকর্ড করুন) (প্রতিটি স্থানে কাটানো দিনের সংখ্যা রেকর্ড করুন) (যদি একদিনের কম হয়, "০০"রেকর্ড করুন)

HOSPITAL/HEALTH FACILITY: (হাসপাতাল/স্বাস্থ্যকেন্দ্রে) _____ _____ _____ _____	LEVEL: (স্তর) _____ _____ _____ _____	PROVIDER: (প্রদানকারী) _____ _____ _____ _____	NUMBER OF DAYS (দিনের সংখ্যা) _____ _____ _____ _____

Codes for Level(স্তরের জন্য কোড)**:**
1. Camp hospital(ক্যাম্প হাসপাতালে)
2. Government hospital (সরকারি হাসপাতালে)
3. Traditional birth attendant's work area(দাইয়ের কাজের এলাকা)
4. Traditional healer's work area(নিরাময়কারীর কাজের এলাকা)
5. Pharmacy (ফার্মেসী)
6. Imam's home(ইমামের বাড়ি)
7. Other (specify) অন্যান্য (উল্লেখ করুন): _____
8. Don't know(জানি না)

Codes for Provider (প্রদানকারীর কোড) **:**
1. Medical doctor (মেডিকেল ডাক্তার)
2. Nurse (নার্স)
3. Midwife (মিডওয়াইফ)
4. Traditional birth attendant (দাই)
5. Other (specify) অন্যান্য (উল্লেখ করুন) : _____
6. Don't know(জানি না)

1013.	What kind of treatment was given to the baby outside the home? (বাড়ির বাইরে বাচ্চাকে কি ধরণের চিকিৎসা দেয়া হয়েছিল?) LIST ALL TREATMENTS, DESCRIBE (সব চিকিৎসার তালিকা করে বর্ণনা করুন)		YES(হ্যাঁ)	NO(না)	DON'T KNOW (জানি না)	
		ORAL REHYDRATION SOLUTION (ওরস্যালাইন).........................	1	0	99	
		ARVS (এআরভিএস).............................	1	0	99	
		SEPTRIN (সেপট্রিন).........................	1	0	99	
		OTHER ANTIBIOTIC (অন্যান্য অ্যান্টিবায়োটিক)...........................	1	0	99	
		SPECIFY(উল্লেখ করুন): _____				
		BLOOD TRANSFUSION (রক্ত পরিসঞ্চালন)	1	0	99	
		IV FLUID (আইভি ফ্লুইড)................	1	0	99	
		OXYGEN (অক্সিজেন)................	1	0	99	
		NG TUBE FEEDING (এনজি টিউব ফিডিং).............................	1	0	99	
		SURGERY(সার্জারি)	1	0	99	
		NO TREATMENT (কোন প্রতিকার নাই)............................	1	0	99	
		OTHER (অন্যান্য).......................	1	0	99	
		SPECIFY(উল্লেখ করুন): _____				
1014.	Did a health worker tell you or anyone the cause of death of your baby? (স্বাস্থ্যকর্মী কি আপনাকে বা অন্য কাউকে বাচ্চার মৃত্যু কারণ বলেছিলেন?)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না)... 99				→ 1016 → 1016
1015.	What did the health worker say? (স্বাস্থ্যকর্মী কি বলেছিলেন?)	_____				
1016.	What means of transportation were used to get the baby to the first place of care? (বাচ্চাকে প্রথম স্বাস্থ্যকেন্দ্রে নিয়ে যেতে কি ধরণের যানবাহন ব্যবহার করা হয়েছিল?)	BABY WAS BORN AT FIRST PLACE OF CARE (প্রথম স্বাস্থ্যসেবা কেন্দ্রে জন্মেছিল) .... 1 ON FOOT (পায়ে হেটে)... 2 BY AMBULANCE (এ্যাম্বুলেন্সে)................................... 3 OTHER (অন্যান্য).. 4 SPECIFY(উল্লেখ করুন): _____				→ 1018

	MULTIPLE ANSWERS ALLOWED (একাধিক উত্তর অনুমোদিত)			
1017.	How much total transportation time did it take to reach the first place of care? (প্রথম স্বাস্থ্য সেবা কেন্দ্রে পৌঁছানোর জন্য মোট কতক্ষণ সময় লেগেছিল?)	MINUTES (মিনিট) .... 1 ☐☐ **OR**(অথবা) HOURS (ঘন্টা)................................... 2 ☐☐ **OR**(অথবা) DAYS (দিন).. 3 ☐☐ DON'T KNOW (জানি না)... 999		
1018.	Did you have difficulties when you sought healthcare for the baby at the facility? (বাচ্চার জন্য যখন স্বাস্থ্যসেবা নিতে গিয়েছিলেন, স্বাস্থ্যকেন্দ্রে কি কোনও সমস্যার সম্মুখীন হয়েছিলেন?)	YES (হ্যাঁ).. 1 NO (না)... 0 DON'T KNOW (জানি না)... 99		→ 1020 → 1020
1019.	What difficulties did you have in seeking healthcare for the baby at the facility? (বাচ্চার জন্য যখন স্বাস্থ্যসেবা নিতে গিয়েছিলেন স্বাস্থ্যকেন্দ্রে কি ধরণের সমস্যার সম্মুখীন হয়েছিলেন?) MULTIPLE ANSWERS ALLOWED (একাধিক উত্তর অনুমোদিত)			

For question 1019, the response options with columns YES(হ্যাঁ) / NO (না) / DON'T KNOW (জানি না):

	YES(হ্যাঁ)	NO (না)	DON'T KNOW (জানি না)
HAD BEEN TURNED AWAY (বাচ্চাকে বিভিন্ন কক্ষে নেওয়া হয়েছিল)...............	1	0	99
WAITED A LONG TIME TO BE SEEN (দেখার জন্য দীর্ঘ সময় ধরে অপেক্ষা)..........................	1	0	99
LACK OF QUALIFIED STAFF(দক্ষ কর্মীর অভাব)	1	0	99
LACK OF EQUIPMENT (সরঞ্জামের অভাব)	1	0	99
LACK OF MEDICATION (ঔষুধের অভাব).........................	1	0	99
LACK OF OTHER SUPPLIES(অন্যান্য সরবরাহের অভাব)	1	0	99
NO ELECTRICITY(বিদ্যুৎ নেই)...	1	0	99
TREATED POORLY/ DISRESPECTED (খারাপ চিকিৎসা/ অসম্মানিত)	1	0	99
TREATMENT NOT	1	0	99

		AVAILABLE (চিকিৎসা পাওয়া যায় না)........................... . REFERRAL FOR BETTER CARE WAS DELAYED (ভাল সেবার জন্য বিলম্বিত রেফারেল			
			1	0	99
		BABY DIED WITHOUT BEING GIVEN CARE (সেবা না পাওয়াতে বাচ্চা মারা গেছে)........................	1	0	99
		OTHER(অন্যান্য) .... SPECIFY(উল্লেখ করুন): _____	1	0	99
1020.	How much time passed between when the baby reached the first place of care and when treatment was given? (হাসপাতালে পৌঁছানোর পর প্রথম চিকিৎসা নিতে কতক্ষণ সময় লেগেছিল?)	MINUTES (মিনিট)........................... 1 ☐☐ OR (অথবা) HOURS (ঘন্টা) .... 2 ☐☐ NO CARE RECEIVED (সেবা গ্রহণ করেনি) .... 777 DON'T KNOW (জানি না).. 999			
1021.	Was the baby ever referred/transferred to another place of care during the illness that occurred before death? (মৃত্যুর আগে বাচ্চাকে কি অন্য জায়গায় সেবার জন্য স্থানান্তরিত করা হয়েছিল?)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না)... 99	→ 1101 → 1101		

1022.	Where was the baby transferred? (বাচ্চাকে কোথায় স্থানান্তরিত করা হয়েছিল?)	CAMP HOSPITAL (ক্যাম্প হাসপাতালে)........................... 1
		    SPECIFY(উল্লেখ করুন): _____
		GOVERNMENT HOSPITAL (সরকারি হাসপাতালে)......... 2
		    SPECIFY(উল্লেখ করুন): _____
		PRIVATE HOSPITAL (বেসরকারি হাসপাতালে)....................... 3
		    SPECIFY(উল্লেখ করুন): _____
		TRADITIONAL HEALER (ট্রেডিশনাল নিরাময়কারী) 4
		OTHER (অন্যান্য)... 5
		    SPECIFY(উল্লেখ করুন): _____
		DON'T KNOW (জানি না)... 99			

1023.	What was the reason for the	LACK OF EQUIPMENT (সরঞ্জামের অভাব)..................... 1 FOR BETTER CARE (ভাল সেবার জন্য)........................ 2			

	referral/transferal? (স্থানান্তরিত করার কারণ কি ছিল?)	LACK OF BLOOD (রক্তের অভাব)................................ 3 LACK OF DRUGS (ঔষুধের অভাব) .... 4 LACK OF OXYGEN (অক্সিজেনের অভাব) .... 5 OTHER (অন্যান্য).. 6 SPECIFY(উল্লেখ করুন): _____ DON'T KNOW(জানি না) 99	
1024.	Did the baby reach the second place of care? (বাচ্চা কি যত্নের দ্বিতীয় জায়গায় পৌঁছেছিল?)	YES (হ্যাঁ).. 1 NO (না).. 0 DON'T KNOW (জানি না).. 99	→ 1026 →1101

1025.	What means of transportation were used to get the baby to the place of referral/transferal? (বাচ্চাকে স্থানান্তরিত করতে কি ধরণের যানবাহন ব্যবহার করা হয়েছিল?) LIST ALL OPTIONS (সব অবশন তালিকা করুন) MULTIPLE ANSWERS ALLOWED (একাধিক উত্তর অনুমোদিত)	ON FOOT (পায়ে হেঁটে).. 1 BY AMBULANCE (এ্যাম্বুলেন্সে)................................. 2 OTHER(অন্যান্য) .... 3 SPECIFY(উল্লেখ করুন): _____ DON'T KNOW (জানি না)... 99	⎫ ⎬ 1101 ⎭
1026.	Why did the baby not reach the place of referrals/transfer? (বাচ্চা কেন স্থানান্তরিত জায়গায় পৌছায় নি?)	BABY DIED BEFORE REACHING PLACE OF REFERRAL/TRANSFERRAL (স্থানান্তরিত জায়গায় পৌঁছার আগে মারা গেছে) .... 1 FAMILY THOUGHT IT WAS NOT NECESSARY (পরিবার প্রয়োজন মনে করেনি)..................................... 2 FAMILY HOPED/WAITED FOR IMPROVEMENT (পরিবার উন্নত চিকিৎসার জন্য অপেক্ষা করেছিল) .... 3 LACK OF MONEY(টাকার অভাব) .... 4 LACK OF TRANSPORT (যানবাহনের অভাব)......................... 5 OTHER(অন্যান্য)..6 SPECIFY(উল্লেখ করুন):_____ DON'T KNOW (জানি না)... 99	

No.(নাম্বার)	Question(প্রশ্ন)	Coding Categories(শ্রেণী বিন্যাস)	Skip (বাদ দিন)

Section 11. Data Abstracted from Other Health Records সেকশন ১১.অন্যান্য স্বাস্থ্য সম্পর্কিত নথিপত্র থেকে সংগৃহীত তথ্যাবলী

No.(নাম্বার)	Question(প্রশ্ন)	Coding Categories(শ্রেণী বিন্যাস)	Skip (বাদ দিন)
1101.	Are health records/documents available? (স্বাস্থ্যের কাগজপত্র গুলো পর্যাপ্ত আছে কি?)	YES (হ্যাঁ)...1 NO (না)..0	→1108

FOR EACH TYPE OF HEALTH RECORD, SUMMARIZE DETAILS OF LAST 2 VISITS AND ISSUE DATE(স্বাস্থ্য রেকর্ডের প্রতিটি প্রকারের জন্য,সর্বশেষ ২টি দর্শন এবং প্রদানের তারিখের সংক্ষিপ্ত বিবরণ)

No.	Question
1102.	Newborn card (নবজাতকের কার্ড) Date of issue (প্রদানের তারিখ): _____ _____ _____
1103.	Hospital prescription/medicine packaging(হাসপাতাল প্রেসক্রিপশন/ঔষুধ প্যাকেজিং) Date of issue(প্রদানের তারিখ): _____ _____ _____
1104.	Treatment cards, including immunization cards(চিকিৎসার কার্ড, সাথে টিকার কার্ড) Date of issue(প্রদানের তারিখ): _____ _____ _____
1105.	Hospital discharge forms (হাসপাতাল থেকে ছাড়ার ফর্ম) Date of issue(প্রদানের তারিখ): _____ _____ _____
1106.	Laboratory results (ল্যাবরেটরি ফলাফল) Date of issue(প্রদানের তারিখ): _____ _____ _____

1107.	Other hospital documents (অন্য হাসপাতালের তথ্য) Date of issue(প্রদানের তারিখ): _____ _____ _____

1108.	Thank the respondent for the interview. Record time of interview end. (সাক্ষাৎকারের জন্য উত্তরদাতাকে ধন্যবাদ জানান। সাক্ষাৎকারের শেষ সময় লিখুন)
	☐☐ : ☐☐ AM/PM ☐☐ ☐☐ ☐☐☐☐ D D M M Y Y Y Y

Section 12. Interviewer's Observations সেকশন ১২.সাক্ষাৎকার গ্রহণকারীর পর্যবেক্ষণ

TO BE COMPLETED AFTER THE INTERVIEW'S COMPLETION সাক্ষাৎকারের সমাপ্তির পরে সম্পন্ন করা হবে

Observations(পর্যবেক্ষণ):

_____
_____
_____
_____
_____
_____

Comments on specific questions(নির্দিষ্ট প্রশ্নের মন্তব্য করুন):

_____
_____
_____
_____
_____
_____

Any other comments(অন্যান্য মন্তব্য):

_____
_____
_____
_____
_____

Section 12.1 CHW Supervisor's Observations   সেকশন ১২.১(সুপারভাইজারের পর্যবেক্ষণ)

_____
_____
_____
_____
_____
_____
_____

Name of Interviewer(সাক্ষাৎকারীর নাম): _____

Date(তারিখ): _____

Name of CHW Supervisor(সুপারভাইজারের নাম): _____

Date(তারিখ): _____

Name of Field Coordinator(কোর্ডিনেটরের নাম: _____

Date(তারিখ): _____

Name of Data Entry Personnel((তথ্য প্রবেশকারীর নাম): _____

Date(তারিখ): _____

Informed Consent Form for verbal autopsy (VA) interviews
(for stillbirths and decedents 1-28 days)
(মৌখিক মৃত্যু পর্যালোচনা বিষয়ক সাক্ষাৎকারের জন্য সম্মতিপত্র)
(নবজাতকের মৃত্যু ১-২৮ দিনের জন্য)

Hello. My name is _____ and I am a _____ from Partners in Health and Development. We are conducting a survey in this camp which asks about health issues of newborn babies.
(হ্যালো/আসসালামু-আলাইকুম আমার নাম.......................এবং আমি একজন (পদবী).....................পিএইচডিতে কাজ করছি। আমরা ক্যাম্পে নবজাতক *স্বাস্থ্য বিষয়ক জরিপ পরিচালনা করছি।)*

I asked you to take part in this survey because I am trying to learn more about causes of death in stillbirths and newborn babies. We are asking all households in this camp that reported a stillbirth or death to a newborn baby to participate in this survey.
(আমি আপনাকে এই জরিপে অংশ নেওয়ার জন্য অনুরোধ করেছিলাম কারন আমি মৃত জন্মের সম্পর্কে এবং নবজাতকদের মৃত্যুর কারন সম্পর্কে আরও জানতে চেষ্টা করছি। আমরা এই ক্যাম্পের সকল পরিবারকে অনুরোধ করছি, এই জরিপে অংশ নেওয়ার জন্য যে, নবজাতকের মৃত্যু খবর পাওয়া গেছে।)

I came here to ask you about the circumstances that led to the death of your baby. The information you have provided will help us understand health challenges faced by newborns to improve neonatal health services. This information is kept strictly confidential and will not be shown to other persons.
At this time, do you want to ask me anything about the information we are collecting or the survey or have anything further to add?
(আমি এখন আপনার কাছে এমন পরিস্থিতি সম্পর্কে জিজ্ঞেস করবো যা আপনার শিশুর মৃত্যুর কারন হয়ে দাঁড়িয়েছে। আপনার দেওয়া তথ্যটি আমাদের নবজাতকের স্বাস্থ্য সমস্যাগুলোর মুখোমুখি হতে সাহায্য করবে,যা সরকার এবং এনজিও গুলোকে স্বাস্থ্যসেবা উন্নত করার উপায় সম্পর্কে আরও ভালভাবে বুঝতে সহায়তা করবে। আপনি যে তথ্য সরবরাহ করেছেন তা কঠোরভাবে গোপন রাখা হবে এবং অন্য ব্যক্তিদের কাছে দেখানো হবে না। আমরা কি ধরণের তথ্য সংগ্রহ করছি বা কি জরিপ করছি বা কোন কিছু যোগ করতে চাইলে সে সম্পর্কে জানতে আমাকে জিজ্ঞেস করতে পারেন?)

This copy of the consent form is for you to hold on to as proof that you have completed a verbal autopsy for your deceased newborn. At the bottom of this page is contact information for the CHW Supervisor in charge of this interview. Please contact him/her if you have any questions or concerns about this interview.
(সম্মতিপত্রের এই কপিটি আপনার মৃত নবজাতকের জন্য মৌখিক মৃত্যু সম্পন্ন করার প্রমাণ হিসাবে আপনি রাখতে পারবেন।এই পৃষ্ঠার নীচে এই সাক্ষাৎকারের দায়িত্বে থাকা সিএইচডব্লিও সুপারভাইজারের যোগাযোগের তথ্য রয়েছে।এই সাক্ষাৎকারটি সম্পর্কে আপনার যদি কোন প্রশ্ন বা উদ্বেগ থাকে দয়া করে তার সাথে যোগাযোগ করতে পারবেন।)

☐ No, consent for participation not given (না,অংশ গ্রহণের জন্য সম্মতি দেওয়া হয় নি)   Interviewer signature(সাক্ষাৎকারীরর স্বাক্ষর): _____

☐ Yes, consent for participation given(হ্যাঁ,অংশ গ্রহণের জন্য সম্মতি দেওয়া হয়েছে)   Interviewer signature(সাক্ষাৎকারীরর স্বাক্ষর): _____

Respondent Signature(উত্তরদাতা স্বাক্ষর): _____ OR   Thumbprint(আঙ্গুলের ছাপ): ☐

If you have any questions, please contact(যদি কারোর প্রশ্ন থাকে,দয়া করে যোগাযোগ করুন):
Name (CHW Supervisor)(সিএইচডব্লিও সুপারভাইজারের নাম):
Institutional affiliation(প্রাতিষ্ঠানিক অন্তর্ভুক্তি): Partners in Health and Development – PHD (পিএইচডি)
Telephone(টেলিফোন নাম্বার):

Appendix 2: Visual Aids to Accompany the Perinatal Verbal Autopsy in Cox's Bazar, Bangladesh

*Please note, this supplemental material has not yet been finalized

Stethoscope:

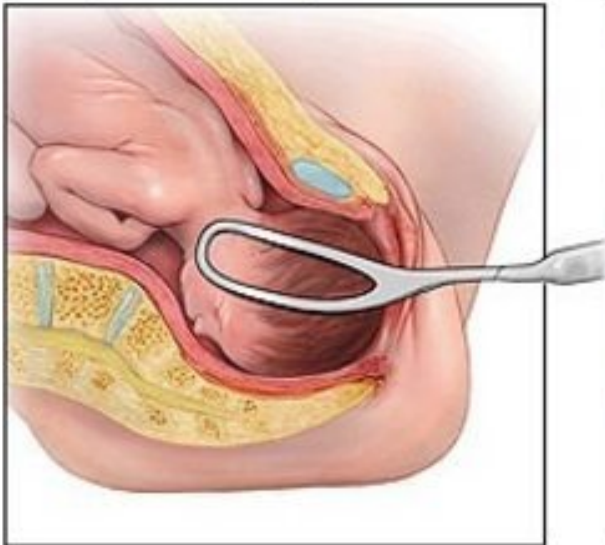Photo Credit: Best Stethoscope Guide

Photo Credit: Amazon

Ultrasound:

Photo Credit: UT Southwestern Medical Center

Forceps/Vacuum:

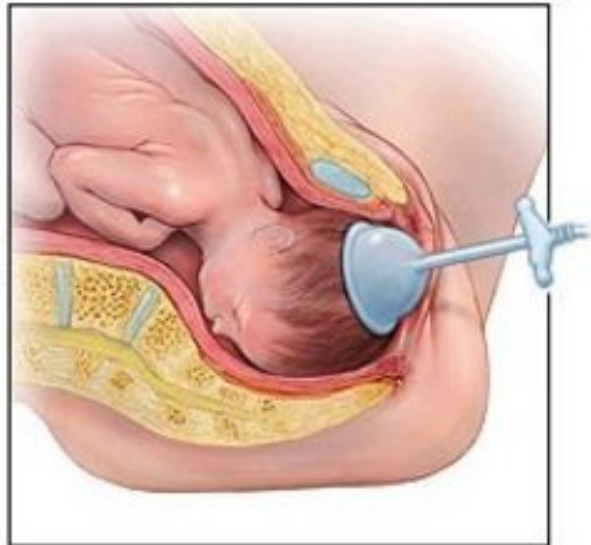**Forceps Delivery**   **Vacuum Extraction Delivery**

Photo Credit: ABC Law Centers

Cord prolapse:

Photo Credit: ABC Law Centers

Cord wrapped more than once around the baby's neck:

Photo Credit: ET Studio

Cord knot:

Photo Credit: Med-Health.net

Normal placenta:
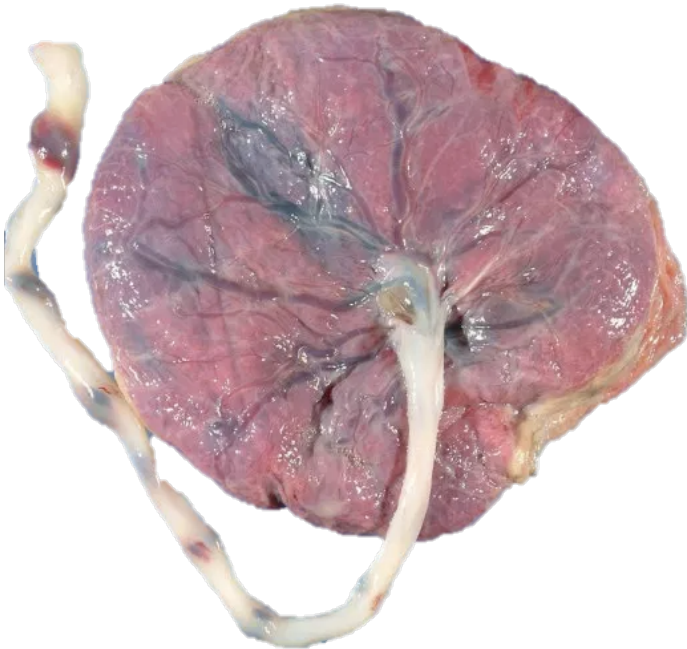
Photo Credit: HumPath
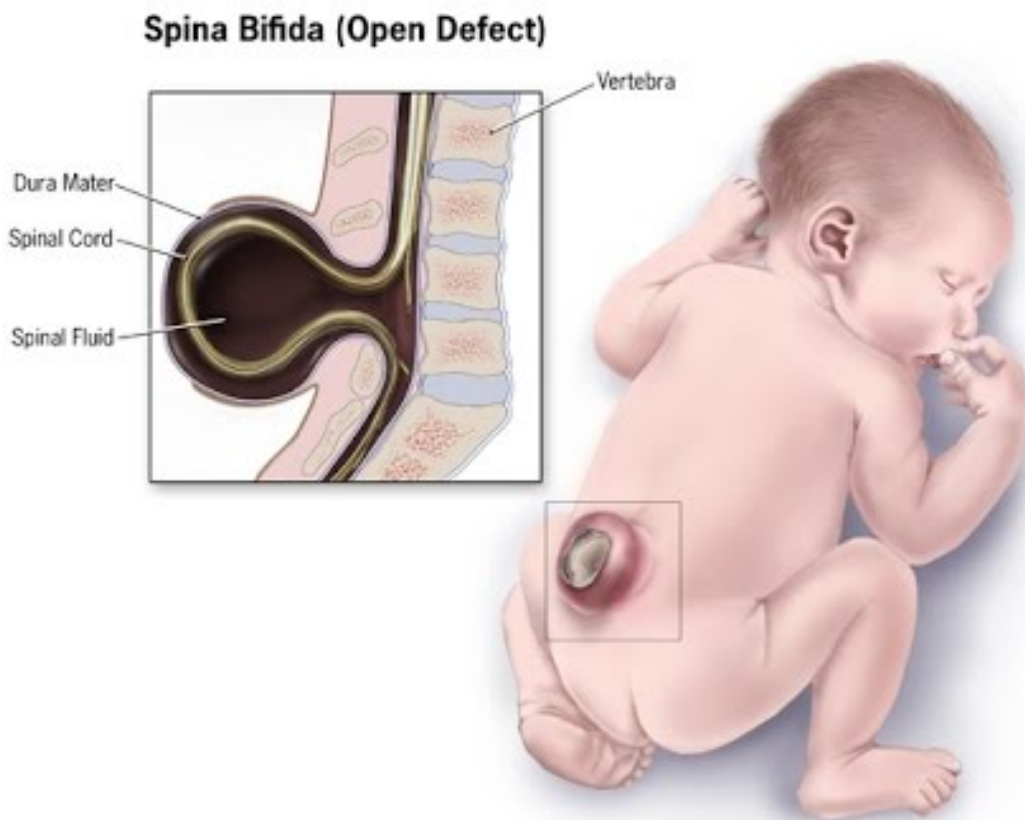
Bruising:

Photo Credit: Thinkstock

Back defect:

Photo Credit: Wikipedia

Cleft lip/palate:

Baby with cleft lip

Baby with cleft palate

Photo Credit: CDC

Protruding intestines:

Photo Credit: Wikipedia
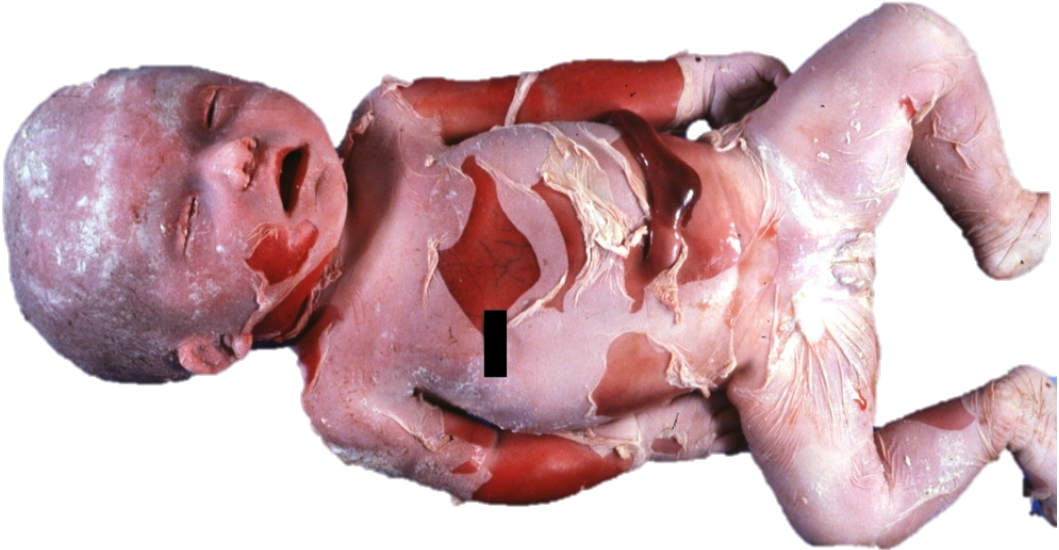
Macerated stillbirth

Photo Credit: SpringerLink

Intubation:

Photo Credit: The Royal Children's Hospital

Oxygen:

Photo Credit: Shutterstock

Incubator:

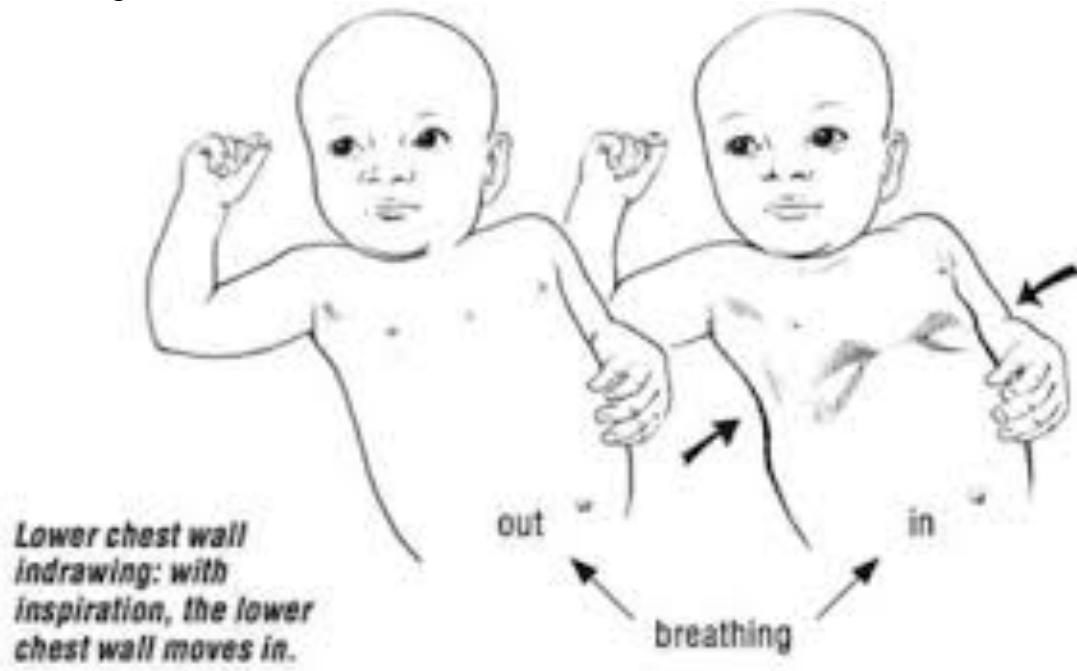

Photo Credit: IndiaMart

Indrawing of the chest

Lower chest wall
indrawing: with
inspiration, the lower
chest wall moves in.

out

in

breathing

Photo Credit: IHRC

Neonatal tetanus

Photo Credit: Wikipedia

Skin ulcers

NG tube:

Photo Credit: Shutterstock