2016

Using the community informant based (MADE-IN and MADE-FOR) methodology for estimating maternal mortality ratio (MMR) in districts Haripur and Nowshera, Khyber Pakhtunkhwa

Population Council

Using the Community Informant Based (Made-in and Made-for) Methodology for Estimating Maternal Mortality Ratio (MMR) in Districts Haripur & Nowshera, Khyber Pakhtunkhwa

February 2016

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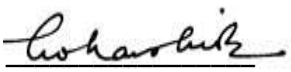
Declaration:

"I have read the report titled "Using the Community Informant Based (Made-in and Made-for) Methodology for Estimating MMR in districts Haripur and Nowshera, KP", and acknowledge and agree with the information, data and findings contained".

Principal Investigator

Dr Ali Mohammad Mir: 

Acknowledgment:

"Using the Community Informant Based (Made-In and Made-For) Methodology for Estimating MMR in districts Haripur and Nowshera, Khyber Pakhtunkhwa" is a project funded by GIZ and implemented by the Population Council, Pakistan.

Disclaimer:

The ***Reproductive, Maternal and Newborn Health Project*** (RMNHP) implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Development and Cooperation (BMZ) aims to strengthen the health system and to improve the quality of healthcare for mothers and children. At the dissemination seminar for the Punjab Maternal Mortality study in February 2015 GIZ committed to support replication of the community-based methodology for estimating maternal mortality (MADE-IN MADE-FOR) in Khyber Pakhtunkhwa province as this initiative is supposed to contribute to the overall RMNHP objective. While funding this particular initiative, the GIZ hereby declares that the responsibility and mandate for the study design, data collection, data analysis, and interpretation of results lies solely with the principle investigator and the Population Council and will not be influenced at any stage by the GIZ. The content of any publication arising from the research does not necessarily reflect the official views of GIZ. We declare no conflict of interest.

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The study of "Using the Community Informant Based (Made-In/Made-For) Methodology for Estimating MMR in Khyber Pakhtunkhwa" was funded by Deutsche Gesellschaft für Internationale—GIZ, to obtain a maternal mortality estimate for the Haripur and Nowshera districts of Khyber Pakhtunkhwa province.

We would like to express our gratitude to Dr. Zeba A. Sathar (*T.I.*), Country Director of Population Council Pakistan, who provided invaluable guidance and support from the inception of the project to its completion.

We would like to offer our appreciation and gratitude to the Directors General for Health, managers of provincial Lady Health Worker and maternal, newborn and child health programs, the administration departments, and health officers of the study districts for their full support and help in facilitating this study's implementation.

We acknowledge the important role of the project's Technical Advisory Group for their guidance and constructive recommendations in the development of the study tools and policy recommendations.

Besides the authors and contributors at the Population Council, several experts made valuable contributions to this report. We are grateful to Dr. Nasira Tasneem, Consultant Gynaecologist, Pakistan Institute of Medical Sciences, and Dr. Sadiqua N. Jafarey, President, NCMNH, for their valuable suggestions and recommendations. Mr. Maqsood Sadiq, Senior Program Officer, was actively involved in data analysis.

We sincerely thank each member of the field research teams who made outstanding efforts to collect the data upon which this study is based. Waqas Abrar, Project Coordinator, worked tirelessly in providing logistics support during field activities, helping with the preparation of the list of references and compilation of this report. We are also thankful to the Population Council's administration, finance, and information technology departments for their valuable support during this study's implementation. Yasir Ali worked hard, and often late hours, to complete the data entry. Ali Ammad formatted and finalized this report.

We would like to express our gratitude to GIZ for their financial support, and we particularly acknowledge the important advice of Ms. Jasmin Dirinpur and Dr. Patrick Tabatabai of GIZ.

Finally, we owe a debt of gratitude to the community informants and family members of the deceased women who willingly gave their time to participate and share their insights on the deaths of those close to them.

Abbreviations and Acronyms

ADC	Assistant District Coordinator
ANC	Antenatal Care
APH	Antepartum Haemorrhage
BEmOC	Basic Emergency Obstetric Care
BHU	Basic Health Unit
CEmOC	Comprehensive Emergency Obstetric Care
CSPro	Census and Survey Processing System
DCO	District Coordination Officer
DFID	UK Department for International Development
DHQ	District headquarters hospital
DHS	Demographic and Health Survey
DOCO	District Officer Community Organization
DOH	District Officer Health
EDO (H)	Executive District Officer Health
Immpact	Initiative for Maternal Mortality Programme Assessment
KP	Khyber Pakhtunkhwa
LHV `	Lady Health Visitor
LHW	Lady Health Worker
LHWP	Lady Health Workers Program
MADE-FOR	Maternal Death Follow On Review
MADE-IN	Maternal Death from Informants
MDG	Millennium Development Goal
MICS	Multiple Indicator Cluster Survey
MIMF	Made-In/Made-For
MIMS	Maternal and Infant Mortality Survey
MMR	Maternal Mortality Rate
MNCH	Maternal, Newborn and Child Health
NR	*Nikah* Registrar
PDHS	Pakistan Demographic and Health Survey
PMDF	Proportion of Maternal Deaths of Females of Reproductive Age
PPH	Postpartum Haemorrhage
PRD	Pregnancy-related death
PRMR	Pregnancy-related Mortality Ratio
RAF	Research and Advocacy Fund
RAMOS	Reproductive Age mortality studies

RHC	Rural Health Centre
RL	Religious Leaders
RMNCH	Reproductive Maternal and Neonatal Child Health
SBA	Skilled Birth Attendant
SDG	Sustainable Development Goal
SRS	Sample Registration System
SVR	Sample Vital Registration
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
THQ	Tehsil Headquarters Hospital
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VA	Verbal Autopsy
WHO	World Health Organization
WMO	Women Medical Officer
WRA	Women of Reproductive Age

Executive Summary

According to Population Council estimates, each year nearly 8.6 million women become pregnant in Pakistan. Of these, 15 percent, or 1.2 million women, likely face obstetric complications (Sathar et al. 2013). Each year in Pakistan involves nearly 14,000 pregnancy-related deaths (PRDs)—one maternal death every 40 minutes. Maternal mortality is estimated to have fallen from 533 per 100,000 live births in 1990-1991 (NIPS) to 276 in 2006-2007 (PDHS), the last maternal mortality ratio (MMR) estimate based on a national survey; since 2007, the only estimates have been based on projections with very wide levels of uncertainty. The Global Burden of Diseases (GBD) estimates MMR for Pakistan at 401 per 100,000 live births, with uncertainty between 233 and 560.

Pakistan's 18th Constitutional Amendment shifted the responsibility for identifying health priorities and policies from the federal to provincial governments. Districts are also empowered to develop their own health plans and guarantee required resource allocations. The availability of reliable MMR estimates at both provincial and district levels, at regular intervals, is essential for planning, monitoring, and evaluating maternal health care interventions.

Measuring MMR can be complex and costly, especially in countries like Pakistan where the vital registration system is not optimally functional. Population Council has successfully implemented an innovative approach, referred to as "MADE-IN/MADE-FOR" (**Ma**ternal **De**ath, from **In**formants/**Ma**ternal **De**ath, **F**ollow **O**n **R**eview), a cost-effective alternative for generating reliable estimates of maternal mortality through community-based informant networks. This methodology, developed by the University of Aberdeen, was used by the Council to estimate Punjab's MMR in 2015.

Through its Reproductive Maternal and Neonatal Child Health (RMNCH) project, GIZ Pakistan is assisting the Government of Pakistan in strengthening its health system's capacities for ensuring effective, efficient, client-oriented, and affordable reproductive, maternal, newborn and adolescent health care.

GIZ engaged with senior national and provincial government officials who indicated their interest to the Population Council in applying the Made-In/Made-For methodology in two Khyber Pakhtunkhwa districts—Haripur and Nowshera—to assess the feasibility of estimating their MMRs with community-based informant networks.

The primary objectives of this study were:

- To assess the feasibility of applying the Made-In/Made-For methodology in two districts of Khyber Pakhtunkhwa (KP);
- To obtain baseline data on maternal deaths in the two project districts, Haripur and Nowshera;
- To build capacity in KP for obtaining maternal mortality estimates through community-based systems involving communities, local governments, and the Health Department, sustainably.

Secondary objectives were:

- To identify the sustainable networks available in rural and urban communities that can act as key informants for information on maternal deaths;
- To determine differential characteristics of the maternal deaths (economic status, residence);
- To assess the mechanisms that can be employed within communities to determine the causes and circumstances of maternal deaths.

The Made-In/Made-For technique comprises two steps. In the first step, Made-In, community informants identify the deaths of women of reproductive age (WRA), 15 to 49 years of age, in their communities. The second, Made-For, consists of follow up interviews with the deceased women's family members to assess whether their deaths were of maternal or non-maternal causes, and further explore their causes of death.

In this study data about WRA deaths were collected for a full census of deaths among WRA in Haripur and Nowshera districts for a two year period, from January 2013 to December 2014.

Based on discussions with district officials, the study team used the following networks: Lady Health Workers (LHWs), religious leaders including village mosque *imam*s, male and female councilors, and *Nikah* registrars—functionaries who perform and solemnize marriages. The District Coordination Officer (DCO) and Tehsil Municipal Officers (TMOs) in all districts helped identify potential informants and develop lists of these networks. In each district, two informant networks were used to obtain reliable information about WRA deaths by using the capture and re-capture technique.

Five four-member teams were constituted for each district. Field activities were supervised by field coordinators, the study manager, and the principal investigator. To calculate the number of live births, an estimate of the female population ages 15 to 49 was derived from the Pakistan Social and Living Standards Measurement Survey (PSLMS) 2011 and the Development Statistics of Khyber Pakhtunkhwa 2013, with age-specific fertility rates from the Pakistan Demographic and Health Survey (PDHS) 2012-2013.

Collectively, in the two pilot districts 2,792 WRA deaths were identified for 2013 and 2014. Of these, 418 were identified as PRDs based on the listing data. It was then determined that 119 cases had not occurred during these two years and were excluded. In addition, nine respondents refused to participate, and the addresses for eight cases were not found. After the excluding these cases, 281 PRDs remained for final analysis. The capture and re-capture technique then adjusted the number of PRDs that may have been missed by the networks.

Key Findings

- The **unadjusted MMR** (before applying capture and re-capture) is 198 (95% CI:170-240) per 100,000 live births for Haripur and 195 (95% CI:170-230) per 100,000 for Nowshera. After applying the capture and re-capture technique, the **adjusted MMR** is 271 (95%CI 230-310) per 100,000 live births for Haripur and 279 (240-320) per 100,000 for Nowshera.
- Direct causes account for 79 percent of PRDs, indirect causes 16 percent, and incidental causes account for five percent.
- In disaggregating the maternal deaths, obstetric hemorrhage was identified as the leading cause. Upon further disaggregating obstetric hemorrhage, five percent of deaths were due to antepartum hemorrhage, with 20 percent due to postpartum hemorrhage (PPH). One fifth of the deaths occurred due to pregnancy-induced hypertension (eclampsia), while puerperal sepsis was found in one fifth of cases.
- The higher proportion of deaths due to direct causes was in Haripur—83 percent—and the higher proportion by indirect causes was in Nowshera (19%).
- Nearly two thirds of pregnancies ended in live birth, with stillbirths occurring in nearly one quarter of cases. One tenth of pregnancies were undelivered, and three percent ended in induced abortions.

- Overall, slightly more than a quarter of PRDs were among women of lower socio-economic status, and one half were among women of medium socio-economic status, while 22 percent were among women of higher socio-economic status
- A higher proportion of primiparous (women with one child or none) developed eclampsia than multiparous women (those who have borne 2 to 5 children), but the difference is not statistically significant. Obstetric hypertension was higher among multiparous and grand multipara (more than five children).
- Age-specific MMR reflects the predicted pattern: Higher among the youngest age group (under age 19), with mortality declining in the 20 to 24 age group, but rising steadily and uniformly in the highest age group of 35 and older. Pregnancy in the two age groups—below 19 years of age and over 35—has a significantly higher risk of ending in complications. In the younger age group, risk is related to underdevelopment of the osseous tissues, especially the pelvic bones.
- Nearly one fifth of all PRDs occurred before childbirth (antepartum), with nearly one tenth during delivery (intrapartum), and nearly one half in the first 24 hours after delivery (immediate postpartum), with 73 percent of PRDs by the end of the first postpartum day, while the remaining quarter of deaths were between the second and forty-second days postpartum.
- Of the total 281 pregnancy-related deaths in the two districts, one quarter of women (25%) died at home. Among those 39 women, 55 percent died without any medical attention, while 26 percent were assisted by a traditional birth attendant, community midwife, or *Hakeem* (traditional medicine practitioner).
- Sixty-two percent of the women (210) died at a health care facility; of these, more than two fifths were at a public facility.
- One fifth of all maternal deaths were at a private facility, while one tenth died *en route* to a health facility.
- Twenty-seven percent of respondents in Nowshera and 22 percent in Haripur felt that the costs of treatment were high and difficult to manage. Despite the fact that services at public facilities are free, families still incur costs of transportation, blood transfusion, and medicines, among others, which are obstacles for poorer families.
- Among women who did reach health facilities, quarter of deaths took place at the first contact facility, More than one third 34 percent died upon reaching a second contact facility, and an additional 23 percent had been moved from the second contact facility to the third contact facility when they died while one fifth died *en route* to a health facility

The main strength of this study was the participation and support offered by the entire district administration and health officials, who have now become more cognizant of the maternal health problems that rural women face, and are now considering measures to avert such deaths. The district officers for community development, additional district officers (coordination), secretaries of the union councils, and their *naib qasids* have become fully familiar with the process of collecting data and will use it in the future. In the long run, the community-based networks could be used to report additional events, e.g. case detection and the incidence of communicable diseases.

The study highlights the conspicuously more acute suffering of poor rural women, reaffirming that economic barriers persist that affect poor women's ability to access appropriate care. Most PRDs—more than two thirds—occurred among women of low and medium low socio-economic status, and respondents admitted that the cost of treatment for the deceased had been prohibitive and beyond their means.

A large proportion of women, realizing the importance of antenatal care, were more frequently getting antenatal check ups. Husbands were seen to be more supportive and were the main decision-makers as to when and where to seek care. The ability of this study to identify cause of death through verbal autopsies and their subsequent disaggregation into direct and indirect causes is important from a policy and programmatic perspective.

Conclusions and Recommendations

This study has identified specific areas that need strong policy and programmatic interventions to improve maternal health outcomes. While the findings from the two districts cannot be generalized to the rest of the province, they confirm that maternal mortality persistently remains a major public health issue in Pakistan and this problem may be much larger than we assumed. At the same time, the study reveals many similarities between the situation in KP and the findings of our earlier study in Punjab, implying that, despite geographical and cultural differences, the basic needs and problems faced by rural communities in the northern half of the country remain similar.

- The study has successfully identified different networks that can be used at the community level to capture data on deaths in Pakistan. For instance, we have established that the LHW network is a reliable source of mortality information. However, LHWs' ability to capture women's deaths could be improved through proper training and by expanding the age band for capturing women's deaths from the current range of 15 to 45 years to 12 to 50 years. The information obtained by the LHWs can be further supplemented by the various community networks, especially in areas that are not covered by them. In the long run, these networks could be used to report additional events, e.g. case detection and the incidence of communicable diseases and this was established as another major strength of the study. They could also play a role in controlling epidemics (by identifying the source of outbreaks). Information collected at the union council level could be collated at the district level and communicated to all relevant departments as well as the provincial headquarters.
- The two major causes of deaths identified among PRDs were obstetric hemorrhage and pregnancy-induced hypertension. The results are similar to those from the Punjab study and the PDHS 2006-2007. These conditions should be kept in mind when designing any future RMNCH interventions as there are now simple strategies available to prevent the occurrence of both these conditions.
- Our findings show that women's lives cannot be saved unless SBAs are integrated with a good referral system that is able to transport women in acute emergencies to facilities that can provide comprehensive obstetric care in a timely manner.
- While no single approach can adequately meet all the requirements for estimating maternal mortality efficiently and with reliable precision, complementary measurement options and opportunities, such as the household census and periodic demographic and health surveys, must also be considered in order to validate results.
- Finally, we would like to stress that this study very clearly highlights the tragic plight of women who overcome enormous odds of poverty, a stringent caste system, and restrictive socio-cultural norms to reach health facilities, only to die due to inadequacies in care caused by a poorly functioning health system. If progress is to be made and health outcomes for women improved, the health system needs to be further strengthened.

Introduction

Pakistan is one of the six countries that account for more than 50 percent of the world's maternal deaths (Hogan et al. 2010). According to Population Council estimates, each year, nearly 8.6 million women become pregnant in the country. Of these, 15 percent, or 1.2 million women, are likely to face obstetric complications (Sathar et al. 2013). Each year, there are nearly 14,000 pregnancy-related deaths (PRDs), which means on average one maternal death occurs every 40 minutes. Pakistan has also one of the highest neonatal mortality rates in the world, at 55 per 100,000 live births. In Khyber Pakhtunkhwa, the NMR is 41 per 1,000 live births.[1]

The last MMR estimate for the country was based on the Pakistan Demographic and Health Survey 2006-2007 (NIPS 2008) that has not been since updated. The survey was able to provide provincially representative estimates of maternal mortality. The current estimates available are based on projections with very wide levels of uncertainty. For instance, the Global Burden of Diseases (GBD) estimates the 2014 MMR for Pakistan at 401 per 100,000 live births with uncertainty between 233 and 560.[2]

The Government of Pakistan has, in recent years, initiated a number of major projects to improve maternal health outcomes in the country. Several important initiatives have also been launched to address the lack of maternal healthcare. However, updated maternal mortality estimates, especially at the provincial and district levels, are required to monitor and evaluate existing maternal, neonatal and child health (MNCH) programs; to introduce greater accountability; and to plan new initiatives. Apart from updating numbers, it is also important from a programmatic perspective that the underlying causes of maternal mortality be well understood. This information will also help in advocacy efforts to increase awareness about maternal health issues among the public, and increase the focus of policymakers on this neglected area, thereby maintaining pressure towards achieving the new Sustainable Development Goals (SDGs) by 2030.

While MMR is accepted as an important development indicator at the international and national levels, the range of simple, reliable, and feasible methods for measuring maternal mortality is still limited, especially in developing countries. Maternal mortality is difficult to measure for a number of reasons. First, maternal death is a rare event and difficult to capture, so large sample sizes are required for estimates to be reliable. For the same reason, its measurement is expensive. Secondly, at present there is no standard method that can be universally applied for measuring mortality; while various techniques have already been proposed or used to estimate maternal mortality in Pakistan, each has its limitations.

Ideally a vital registration system is the most accurate way of estimating maternal mortality, provided the system includes questions on cause of death and deaths are fully recorded. In Pakistan the vital registration system is still in the process of development and there is no provision for mandatory registration of deaths. Including mortality questions in the census questionnaire is a potentially comprehensive alternative method for measuring maternal deaths. However, this question has yet not been included in Pakistan, and would require considerable training of enumerators/interviewers to ensure a full count.

Many countries with deficient vital registration, including Pakistan, have used indirect techniques to generate maternal mortality estimates, such as conducting household surveys—the next best option to

[1] National Institute of Population Studies. 2013. *Pakistan Demographic and Health Survey 2012-2013*. https://dhsprogram.com/pubs/pdf/FR290/FR290.pdf

[2] Kassebaum NJ et al. 2014. Global, regional and national levels and causes of maternal mortality during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 384(9947): 980-1004.

vital registration. However, to measure maternal mortality, household surveys must have a large sample size and they are therefore expensive undertakings, not easy to repeat regularly.

The indirect Sisterhood Method, which can be included in surveys with relatively smaller samples, uses reports by adults about aggregate numbers of surviving and deceased sisters, with additional questions related to the timing of death. This method identifies PRDs but tends to underestimate overall mortality because of inherent biases in data collection. More recently, direct sibling methods have been introduced that provide all information required to estimate pregnancy-related mortality, including fertility, and provide estimates of all female and male causes of mortality between the ages of 15 and 50. At best they are able to produce national level estimates, however, since they generate large sampling errors.

Reproductive age mortality studies (RAMOS) were considered in the past as the gold standard for measuring maternal mortality. They involve systematic efforts to combine data on maternal deaths from multiple sources including vital registration, medical records, traditional birth attendants (TBAs), graveyard records, and verbal autopsies. RAMOS allow for important data collection on avoidable causes of deaths both at home and at the facility. However, these studies are complex, expensive, labor-intensive and largely applicable in settings with at least 60 percent completeness of reporting of adult female deaths in vital registration. Moreover, they do not provide a number of births for estimating the MMR and have rarely been carried out at a national level except in Egypt, Honduras, and Guatemala[3,4]

In recent years, the need for more precise sub-national estimates has increased. Post devolution after the 18th Constitutional Amendment, the provincial health departments are responsible for identifying priorities and developing provincial policies. Districts have also been empowered to develop their own health plans and seek the required allocation of resources from the district administration. The availability of reliable MMR estimates at both provincial and district level is essential for planning, monitoring, and evaluating maternal healthcare interventions.

Planners in Pakistan require a method that can provide reliable sub-national estimates easily, cost-effectively and with more regularity. In this regard, the Research and Advocacy Fund (RAF) offered support to the Government of Pakistan to assess the feasibility of testing a new community informant-based approach, "Made-In Made-For" (MIMF), developed by University of Aberdeen for estimating MMR at the community level. A pilot study by Population Council tested the approach in Chakwal, a district of Punjab, with promising results. Subsequently the approach was scaled up for provincial estimates for Punjab[5].

Currently GIZ Pakistan is assisting the Government of Pakistan in strengthening the capacities of the health system to ensure effective, efficient, client-oriented, and affordable reproductive, maternal, newborn and adolescent health care provision. The project activities are being implemented in Haripur and Nowshera. In these two districts, the WHO Safe Childbirth Checklist is being administered in the health facilities to improve RMNH outcomes. The Government of KP aims to address deficiencies in the healthcare system, and improve management at facility and supervisory levels through a multi-dimensional and integrated approach. Key elements of the government's health care strategy include a focus on maternal and child healthcare and coverage of critical illnesses.[6]

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[3] World Bank. 2003. Reducing Maternal Mortality. Learning from Bolivia, China, Egypt, Honduras, Indonesia, Jamaica, and Zimbabwe. Koblinsky M., ed. Human Development Network, Health, Nutrition, and Population Series. Washington, DC.

[4] Abouzahr C. 1999. Critical issues in safe motherhood. Geneva: WHO. 110-134.

[5] Such a study was recommended to RAF, in particular by Chief of Health, Planning Commission of Pakistan; DG of Health, Ministry of National Health Services, Regulations and Coordination; Provincial Coordinator, MNCH Program, Punjab; and President, National Committee on Maternal and Neonatal Healthcare

[6] Integrated Development Strategy 2014-2018. Government of Khyber Pakhtunkhwa. 2014. http://lgkp.gov.pk/wp-content/uploads/2014/08/Integrated-Development-Strategy.pdf

GIZ approached Population Council about the possibility of applying the Made-In/Made-For methodology in two districts of KP, Nowshera and Haripur, where GIZ is making investments in RH. This report documents the GIZ-supported study by Population Council applying the Made-In/Made-For approach for estimating MMR in these two districts.

Maternal Health in Khyber Pakhtunkhwa

The province of Khyber Pakhtunkhwa (KP) comprises 14 percent of Pakistan's population. Maternal mortality is a leading cause of death among women of reproductive age (WRA) in the province: The Pakistan Demographic and Health Survey (PDHS) 2006-2007 found about 16 percent of deaths in this category to be pregnancy-related. The MMR estimate for KP, according to PDHS 2006-2007, was 275 per 100,000 live births.

Since 1991, some maternal health indicators have improved. More than half of women in KP received antenatal care (ANC) in 2012—a 43 percent rise since 1991. Overall, the proportion of women assisted by a skilled birth attendant (SBA) has also risen more than threefold, from 12 percent in 1991 to 48 percent in 2012, although wide disparities exist between urban areas (85%) and rural areas (56%) of the province (PDHS 2012-2013). Approximately 1,700 women die each year in KP due to pregnancy-related factors. Risk of maternal death is higher in pregnancies that occur too early, too late, or too frequently (Population Council, KP Briefing Paper 2014).

A number of projects have been initiated in KP for improving its maternal and child health situation.

The Provincial Health and Nutrition Programme (PHNP) was established in March 2013 to support delivery of an 'Essential Health Services Package' (EHSP) by the governments of KP and Punjab, through dedicated, non-budgetary financial aid (£130 million). The program aims to improve health outcomes in reproductive, maternal, newborn and child health (RMNCH), as well as nutrition.

The KP government has initiated a major mother and child health care project in 12 relatively underserved districts. This project will integrate the Expanded Program on Immunization, the Lady Health Workers Program (LHWP), Nutrition Program, and National MNCH Program, and use incentives to encourage facility-based deliveries.

A social health protection program, "Sehat Sahulat," was launched by the government of KP in 2015. Through the financial support of the German government (KfW Development Bank), the five year program aims to improve the health of the targeted population by increasing its access to quality health services. Under the program, the premium for a family is Rs. 1,700 per year paid to the insurance corporation. Each registered individual initially is covered to Rs. 25,000 annually, to be increased to Rs. 50,000 in 2016. KP government contributed five percent of the total premium in 2015.

Within the reforms initiatives in KP, a special program, "Chief Minister's Special Initiative for Mother and Child Health," was launched in June 2014, implemented by the Reforms Implementation Cell. The program aims to increase the proportion of SBAs to improve maternal and child health. Through this program, financial support of Rs. 2,700 is provided to every pregnant woman who seeks health care from government health facilities and community midwives, and includes free medicines. This incentive covers four ANC check ups, delivery and one PNC check up, paid to beneficiaries in six instalments (Reforms Implementation Cell 2014). The incentive has benefited around 103,323 mothers in 10 focus districts, now to be scaled up in all KP districts.

During the fiscal year 2015-2016, budgetary allocations were specially made to financially support mother and child health care services to provide 24/7 mother and child health care services in more than 45 basic health units (BHUs), 40,000 mothers will receive Rs. 1,000 for completing the immunization course for a child, an additional 900 nurses and 500 paramedics will be hired, along with

mobile health services in 17 districts with women medical officers providing ANC and PNC services to communities, and hardship allowances for Lady Health Supervisors (LHSs) in seven districts of KP (KP Finance Department 2015).

Approaches to Measuring Maternal Mortality

Although the Maternal Mortality Ratio (MMR) is accepted as an important development indicator at international and national levels, the range of simple, reliable, and feasible methods for measuring maternal mortality is still limited, especially in developing countries. Maternal mortality is difficult to measure, for a number of reasons. Maternal death is a rare event and difficult to capture; large samples are needed for it to be reliable. For the same reason, it is also expensive to gauge. Second, at present there is no standard method that can be universally applied for measuring mortality. According to WHO, three elements need to be identified: 1) all deaths of women of reproductive age (WRA), 2) their pregnancy statuses, and 3) causes of death. Without complete vital registration systems and certification of cause of death, all three components are difficult to measure accurately (WHO 2004, Hill et al. 2006).

This section presents a brief overview of the different approaches used to measure MMR, including their strengths and disadvantages. Some of these approaches have been tried in Pakistan.

Vital Registration

A vital registration system can most accurately estimate maternal mortality if the system includes questions on pregnancy-related status and cause of death. In developed countries, information on maternal mortality is derived from the vital registrations of deaths by cause. Even when coverage is complete and all deaths are medically certified, maternal deaths are frequently missed or misclassified in the absence of active case funding (Hill et al. 2001).

In middle- or low income countries, female deaths from all causes are frequently under-recorded (Hill et al. 2001). In many countries, periodic confidential enquiries or surveillance are used to assess the extent of misclassification and underreporting. Few developing countries have a vital registration system that ensures sufficient coverage and quality to enable it to serve as the basis for assessing levels and trends in cause-specific mortality, including maternal mortality (AbouZahr and Wardlaw 2003).

Sample Vital Registration

Sample vital registration (SVR) is a variant of the complete vital registration system, and is defined as "longitudinal registration of demographic events, including cause of death by verbal autopsy, in a nationally representative sample of clusters" (Setel et al. 2007).

The system's objective is to provide reliable estimates of birth and death rates and other measures of fertility and mortality, including total fertility, infant mortality at the national and provincial levels, and separately by urban and rural place of residence. The Sample Registration System (SRS) being applied in India is one of the world's largest continuous demographic household sample enquiries.

The Indian SRS is a dual-record system that employs a resident part-time enumerator who continuously records births and deaths in each household within the sample unit every month, and a full time supervisor who, thereafter, independently records vital events and other related details for each of the preceding two six-month periods during the calendar year. The two sets of figures are then matched. Partially matched and unmatched events are verified in the field to remove any duplication of events (Registrar General India 2006).

In 2005, the SRS covered 1.3 million households and 6.8 million people. However, some authors have questioned the reliability of its estimates, suggesting that it covers only half a million of an estimated annual 9.5 million deaths (Bhutta 2006). Other published sources question the representativeness of the SRS, claiming it overlooks urban and peri-urban slums, where health care and health outcome indicators are often worse than for rural populations (Sclar et al. 2005).

Census Studies

A national census that covers the entire population can produce PRD estimates with the addition of a limited number of questions. This approach eliminates sampling errors (because the entire population is covered), allowing a more detailed breakdown of results, including time trends, geographic subdivisions, and social strata. In addition, it enables the identification of household deaths over a relatively short reference period (1 to 2 years), thereby providing recent maternal mortality estimates (Hill et al. 2007).

The approach has two disadvantages: It is conducted at 10 year intervals, which limits the monitoring of maternal mortality (Hill et al. 2001). Secondly, the technique for demographic adjustment compares fertility and mortality data distorts the final adjusted values, because any adjustment relates to a period midway between the two censuses.

Reproductive Age Mortality Studies

Reproductive age mortality studies (RAMOS) involve systematic efforts to combine data on maternal deaths from multiple sources. The starting point is usually listing all WRA deaths, which are then investigated through verbal autopsies (VAs) and medical records (when available) to identify maternal deaths (WHO 1987). The sources of information on WRA deaths vary. Where feasible, the initial list is drawn from civil or sample registration records, but when the registration of deaths is incomplete, other methods have to be used. These include reviewing hospital records, discussions with traditional birth attendants (TBAs), funeral records, interviewing religious and community leaders, and even visiting schools (Smith and Burnham 2005).

Such mortality studies are necessarily complex, and in developing countries are mostly in small areas (often at the district level). If properly conducted, RAMOS can generate reliable estimates of maternal mortality, however, they are complicated, time-consuming, and expensive, particularly when at a large scale (Atrash et al. 1995, Hill et al. 2006). Additionally, RAMOS do not generate complete data on live births (AbouZahr 1998)—which is needed to calculate the MMR—especially in settings where most women deliver at home. This is a major weakness. Therefore, the proportion of maternal deaths of females of reproductive age (PMDF) from such studies is often applied to an independent external source of data on live births (e.g. by calculating expected births using birth data extrapolated from the most recent census).

Household Surveys

Population-based household surveys are widely used to generate data on maternal mortality in many developing countries. In addition to providing data on child and maternal mortality, these surveys produce information on fertility, contraception, maternal health, nutrition, use of services, and knowledge and practices related to maternity care.

Maternal deaths are identified using either direct or indirect methods. The direct method involves asking respondents about recent deaths in the household and, when any WRA deaths are identified, asking additional questions about the timing of the death in relation to pregnancy (Graham et al. 2008). These methods can generate estimates with a reference period of about two to three years before the survey, which is acceptable for monitoring purposes (Graham et al. 2008). However, large samples are

needed to produce reliable estimates and the MMR estimates obtained have very wide confidence intervals, which makes it difficult to monitor changes over time (WHO 2004).

Sisterhood Method

The sisterhood method is an indirect technique for population-based estimates of maternal mortality, often recommended by WHO and UNICEF, especially for countries with inadequate registration systems and low incomes. The method was developed for its relative ease of data collection and smaller sample required (Stanton et al. 1997, Hill et al. 2006). It has been widely adopted and has become an important tool in developing countries.

In the Sisterhood Method, a representative sample of respondents is interviewed about the survival of their adult sisters to determine the number of ever-married sisters, how many are alive, how many are dead, and how many died during pregnancy, delivery, or within six weeks of pregnancy. The method has two variants. First is the original indirect method, which has been used in multiple indicator cluster surveys, but it is not appropriate where fertility levels are low, where the total fertility rate (TFR) is less than four (<4), or where substantial migration or other social dislocation has occurred. The second method is the direct sisterhood method, which has been extensively used in the demographic and health surveys (DHS) supported by USAID. The direct method collects more information than the indirect method, but it requires larger sample sizes, more questions, and more complex analysis (WHO 1997).

On the other hand, the direct sibling history-based variant, used in large demographic and health surveys (DHS), collects more information than the indirect method by identifying all female deaths in the household for a particular reference period. It provides estimates of male and female mortality (from all causes) among 15 to 50 year olds, and can estimate pregnancy-related mortality, including fertility, age of all siblings, age at death, and year of death. The limitation of this technique is that it requires a larger sample (WHO 1997).

The sisterhood method is relatively cost-effective because it needs smaller samples than surveys that use direct methods, but the wide confidence intervals that arise make trend analysis difficult. The sibling survival method produces retrospective rather than current estimates of maternal mortality—around five to seven years prior to the survey with the direct method, and 10 to 12 years prior with the indirect method. The sibling survival method may also underestimate overall mortality because of inherent biases in the survey data, such as survival and recall bias (Obermeyer et al. 2010).

Key Informant Surveillance Systems

Barnett et al. (2008) have piloted a prospective key informant-based system for identifying births and deaths that was designed to be cheaper and simpler than conventional surveillance systems, for measuring crude birth rates and maternal mortality in a remote, predominantly indigenous population in eastern India. It also aimed to identify pregnancy-related and late maternal deaths to ascertain maternal death causes and determine their timings and locations.

Most key informants were TBAs, each covering approximately 250 households, paid a specific amount as an incentive for every accurate birth or death identified; interviewers would visit the relevant households to verify the births and deaths before paying the identifier. This low cost surveillance system produced high but plausible birth and death rates for the population. Its authors caution, however, that the system could not capture a sufficient number of births to yield precise maternal mortality estimates.

Another study in a rural service unit in Vellore, India showed that regular death surveillance systems could be augmented by a community-based death surveillance system. The community system, relying on information from community leaders, identified twice as many maternal deaths than previously recorded, and can be applied in other settings (Kim et al. 2004).

Tanzania's Ministry of Health established a national sentinel system based on demographic surveillance to monitor cause-specific mortality in several districts (Mswia et al. 2003). The mortality surveillance used an active reporting system based on a network of respected individuals within each community. The cause of death was determined through a VA interview with family members of the deceased.

To investigate the level and causes of maternal deaths in Andhra Pradesh, India, maternal health enquiries were made at the local level (Bhatia 1988). Informants included opinion leaders, schoolteachers, revenue officials, TBAs, and village children. The system also examined health facility records and compared the cases recorded by informants with those recorded in official documents. The informants were able to record a higher number of deaths than the hospital records.

In Honduras, a population-based health information system was designed and implemented by the Catholic Relief Service to estimate the magnitude of maternal and early neonatal health problems; document its distribution and spread at a population level; and evaluate the impact on maternal and neonatal mortality of an intervention using TBAs. The starting point of the system was TBAs, who identified pregnant women and reported this information to a health educator every month. The information was subsequently communicated to a field supervisor. The study showed that maternal information used to prioritize, plan, implement, and sustain effective intervention strategies could be produced and sustained by community structures at a low cost. The information produced also complied with WHO standards (Rosales et al. 2004).

Health Facility Reporting

In most developing countries, only a limited proportion of births occur in health care facilities. Unless nearly all women deliver in health care institutions, facility data (or data derived from systems for the management of routine health information) are rarely sufficient for population-based estimates of maternal mortality. Additional limitations include the poor quality and unavailability of medical records and poor death certification by physicians and private facilities' records. Facility data may also overlook maternal deaths in non-obstetric wards. However, health service data may provide useful information on trends over time and, in particular, on geographic regions, the relative importance of various diseases, and causes of death (Graham et al. 2008).

Community-based Informants

A number of studies report using community-based informants to capture maternal deaths. These informants either provide information on deaths or are responsible for the recording or reporting process. Most such studies have been conducted in Asia and Africa, with just two in Latin America. A study by Maskey et al. (2011) uses a community-based method (i.e. the "motherhood method") to measure maternal and child mortality in a developing country. The method was field tested at district and sub-regional levels in Bara District, Nepal. Information on births, deaths, and risk factors was collected within a defined geographic area, but without visiting every household. The main informants were groups of women who shared social bonds formed by motherhood. The groups included all women who had given birth, including those whose babies had died during the survey period.

Sampling at Service Sites

This method is based on interviews with women that are held at busy centers of activity, such as markets or health facilities. Respondents are asked about any maternal deaths among their sisters. Allowing the respondent to come to the interviewer rather than sending the interviewer to the respondent (as in traditional household surveys) reduces both the cost and time required to collect data. Maternal mortality estimates obtained using this approach in Ghana were consistent with those

from the 1999-2000 Ghana World Health Survey (Immpact 2007) but the potential biases of this method have not been quantified for other contexts.

The Community-based Informant Network Technique (Made-In/Made-For)

The maternal death from informants approach, Made-In/Made-For, was developed by the Initiative for Maternal Mortality Programme Assessment (Immpact project) at the University of Aberdeen, to enable measurement of maternal mortality to the community level, together with analysis of the causes of maternal deaths. It is less costly than household surveys, especially in lower fertility, lower mortality contexts. Made-In/Made-For goes beyond simply counting deaths; it also develops an understanding of why they happened and how they could have been averted. It can also be used for collecting data prospectively. Made-In/Made-For has, so far, been successfully applied by Immpact in two districts of Indonesia (Qomariyah et al. 2010), the Somaliland, and as a pilot in Chakwal district and, subsequently, provincial estimates, involving six districts, in Punjab province of Pakistan. Unlike some alternative methods, such as the Sisterhood Method, Made-In/Made-For allows surveyors to record all maternal deaths in a defined area, enabling more precise estimates of maternal mortality in relatively small populations. It also raises community awareness of maternal health issues and acts as an advocacy tool. Its limitations include possible under-reporting of sensitive deaths, such as those related to abortion, and early pregnancy deaths. The approach relies on the availability of existing networks of persons who can report on PRDs within a community.

Methods previously used to measure maternal mortality, along with their merits and shortcomings, and their feasibility of application in Pakistan, are summarized in Table 1.1.

Table 0.1: Various options for measuring maternal mortality in Pakistan

Methods	Measures	Precision	Option for Pakistan
Civil registration with medical certification of cause of death	Maternal mortality	• Entails total count • Misclassification of deaths is possible • 50% under-reporting possible • Provides estimate of specified year	• Information could be collected at union council level (TMO-DCO) • National Database and Registration Authority (NADRA) can collect these data (if birth and death recording mandatory)
SVR with VA	Maternal mortality	• Entails representative count based upon random selection of district • Deaths may be misclassified • Has been tried in India and China • Specified year	• Feasible for Pakistan if registration system improved and VA included
Household survey with indirect sisterhood method	Pregnancy-related mortality	• Large sampling error depending upon sample size (20–30%) • Potential misreporting of sensitive deaths among unmarried or abortion-related deaths • Non-sampling error underestimation possible • Difficult to apply in low-literacy settings • Definition of “sister” not clear; cultural issues may lead to underreporting • Cause-of-death misreporting possible • Difficult to measure in low fertility areas	• Tried in Pakistan as part of PRHFPS 2000-2001 (period 1990–1999)
Household survey with	Pregnancy-related	• Depends on large sample, generally leading to wide confidence intervals (CIs) (inverse	• PDHS used this methodology

Methods	Measures	Precision	Option for Pakistan
direct estimation (sibling method)	mortality Can be used to calculate maternal mortality if combined with VA	relationship between sample size and CIs) • No trends ascertained due to wide CIs • Usually information for 1 to 2 years prior • Analysis is complicated • Misreporting in later years • Early deaths, stillbirths, ectopic pregnancies, and abortions not reported	• Covered a period of three years • Provincial estimates not reliable • All adult mortality (male and female) estimated
Census	Pregnancy-related mortality	• Entails total count • Potential misreporting of age and pregnancy status of deceased women • 1 to 2 years prior to census, depends on recall, so estimates are recent • Enumerators need additional specialized training on collecting mortality data, so cost increases • Eliminates sampling error, covers entire country • Estimation requires demographic techniques • Results must be adjusted to completeness of birth and deaths declared	• Could be included in next census as a nested survey. However, censuses have not been held regularly. Last census was 1998 • Time lag long decennial
Health facility reporting	Maternal mortality	• Overlooks maternal deaths outside health care facility • Overlooks deaths in emergency room and other non-obstetric units	• Few facility deaths recorded • Deliveries still occur at home • DHIS covers public sector
RAMOS	Combination of maternal and pregnancy-related mortality	• Depends on triangulation, multiple sources, etc.; quality of records and VA covers multiple years • Household- and facility-based data • Birth data difficult to obtain • Complex and labor-intensive	• Tried in Afghan refugee camps in Pakistan
MADE-IN/ MADE-FOR	Maternal mortality at community level	• Does not require large sample • Depends on community reporting of deaths • Requires two networks • Software classifies deaths • Low cost • Good advocacy tool • Provides sub-national estimates • Recall-bias misreporting is possible • Denominator requires live births survey or data from existing source	• Could be tried as household survey alternative, and for facilities with good networks, e.g. LHWs and their support groups, religious leaders and local community councilors. Piloted in Chakwal district and later scaled up to 6 more districts to estimate Punjab's MMR

Measurement of Maternal Mortality in Pakistan

In Pakistan, the vital registration system is still being developed, and there is no provision for mandatory death registration. Inclusion of mortality-related questions in the census questionnaire is an alternative method that has not yet been applied in the country. Many countries with poor vital registration systems, including Pakistan, use indirect techniques, such as household surveys, to generate mortality estimates. Although they are the next best option to vital registration, most household survey methods are only able to capture pregnancy-related mortality unless accompanied by detailed verbal autopsies. Moreover, household surveys are costly, require large samples, and are time-consuming. Additionally, the estimates have very wide confidence intervals, making it difficult to monitor changes over time. Several of the approaches in Table 1.1 have been applied in Pakistan to produce estimates of maternal mortality. These efforts and their findings are summarized Table 1.2.

Table 0.2: Previous sources of data used to estimate MMR in Pakistan

Reference Period	Study/Source	Estimation Method	Geographic Coverage	MMR Estimate (per 100,000 live births)
1990–91	National Reproductive Health and Family Planning Survey 2001 (National Institute of Population Studies 2002)	Indirect sisterhood method	Pakistan	533
1988–93	Maternal and Infant Mortality Survey (Midhet et al. 1998)	VA	Selected rural districts of Balochistan and KP	392
2000–01	Maternal and Infant Mortality Survey (Midhet 2001)	Statistical modeling using district characteristics as independent variables and projected into the future	Pakistan	279
2000	Estimates developed by WHO, UNICEF, and UNFPA (Abou Zahr and Wardlaw 2004)	Statistical modeling using country characteristics as independent variables	Pakistan	500
2005	Estimates developed by WHO, UNICEF, UNFPA, and the World Bank (WHO 2005)	Statistical modeling using country characteristics as independent variables	Pakistan	320
2006-07	Pakistan Demographic and Health Survey	Direct sibling method through household survey	Pakistan	276
2014	The Feasibility of Using Community Informant Networks to Estimate Maternal Mortality in Pakistan	Made-In and Made-For	District Chakwal	309 (95% CI 266–358)
2014	Global Burden of Diseases	Statistical Modeling	Pakistan	401 (233-560)
2015	Using the Community Informant Based (Made-in and Made-for) Methodology for Estimating Maternal Mortality Ratio (MMR) in Punjab	Made-In Made-For	Punjab	302 (95% CI 258–346)

Source: PDHS 2006–2007

As Table 1.2 shows, the 1998 Maternal and Infant Mortality Survey (MIMS) conducted verbal autopsies in selected rural districts of Balochistan and KP and obtained an MMR of 392. The 2001 MIMS employed statistical modeling using district characteristics as independent variables and projected into the future to yield an MMR of 279. For 1995 to 2005, maternal mortality was calculated using indirect measures or statistical modeling that employed country characteristics as independent variables developed by WHO, UNICEF, and UNFPA. These estimates vary considerably, between 140 and 490 (WHO 2012).

The National Institute of Population Studies (NIPS) used the indirect Sisterhood Method in Pakistan's RH and FP Survey 2000-2001, estimating MMR of 553 per 100,000 for 1990-1991.

Hospital-based studies in Pakistan include a civil hospital (Karachi) study from 1979 to 1983 (Ahmed 1985) that reported an MMR of 2,736 per 100,000 live births, and an Aga Khan University Hospital (Karachi) study (Qureshi et al. 2001) that reported an MMR of 20 per 100,000 live births among booked clients from 1988 to 1999. Even among hospitals, the figures vary greatly according to whether a hospital is public or private, or in a particular city. A private tertiary hospital in Karachi reported MMR of 28 per 100,000 live births, whereas public hospitals report estimates from 225 in Lahore to 1,442 in Peshawar, and 2,608 in Hyderabad (Jafarey 2002).

The Pakistan Demographic and Health Survey (PDHS) 2006-2007 provides information on all deaths and live births, and female deaths in the age group 12 to 49 were identified and investigated using a VA questionnaire administered by trained interviewers. PDHS 2006-2007 estimated MMR at 276 per 100,000 live births for the 10 years preceding the survey. PDHS 2006-2007 also provides valuable data on the causes and risk factors of maternal mortality as well as on a number of process indicators.

Since the survey, there has been considerable investment in maternal health and the need for updated estimates has become an important priority. Specifically, there is a need to start planning for national and sub-national estimates of maternal mortality to compare subsequent changes with acceptable statistical precision while adhering to the sampling procedures employed by the 2006-2007 PDHS.

In the absence of a vital registration system, accurate estimates are difficult. Large surveys are required for even moderately precise estimates[7], but such surveys are too expensive for frequent undertaking in Pakistan. The latest PDHS, for 2012-2013, did not estimate maternal mortality due to cost. Made-In/Made-For, tested and applied in one district as a pilot, successfully demonstrated the feasibility of using community networks to identify deaths among WRA.

To motivate policymakers and program managers to prioritize maternal health and evaluate interventions, national and sub-national estimates of recent maternal death rates need to be obtained using a relatively cheap and reliable method.

Feasibility of the Made-In/Made-For Method in Pakistan

Several of these approaches have been applied in Pakistan to produce maternal mortality estimates. The Maternal and Infant Mortality Surveys (MIMS) in 1998 used verbal autopsies in selected rural districts of Balochistan and KP and reported an MMR of 392 for the reference period 1998 to 1993[8]. MIMS applied statistical modeling using district characteristics as independent variables and projected a national MMR of 279 for the reference period 2000-2001[9]. The Council was consulted by UNICEF and

[7] Hill K, SE Arifeen, M Koenig et al. 2006. How should we measure maternal mortality in the developing words? A comparison of household deaths and sibling history approaches. *Bulletin WHO* 84(3)

[8] Midhet F, S Becker, HW Berendes. 1998. Contextual determinants of maternal mortality in rural Pakistan. *Social Science Medicine* 46(12): 1587-1598.

[9] Midhet F. 2001. Estimating national MMR from Maternal and Infant Mortality Survey (MIMS). Karachi: Aga Khan University.

Aga Khan University colleagues in an advisory capacity, and in several dissemination meetings in the 1990s.

In the absence of direct measure, maternal mortality was estimated through indirect measures or statistical modeling, using country characteristics as independent variables, developed by WHO, UNICEF and UNFPA from 1995 to 2005. Considerable variation was found in these estimates for Pakistan—varying between 140 and 490[10]. The indirect Sisterhood Method was included by the National Institute of Population Studies as part of the Pakistan RH and FP Survey 2000-2001, and a national estimate of MMR of 533 per 100,000 live births was reported.[11]

Other alternatives of measuring MMR include facility surveys. There is wider availability of such estimates, mostly collected in large public teaching hospitals, with typically reported MMRs significantly higher than those from community-based studies. Hospital-based studies overestimate or underestimate MMR depending on the populations they serve and cannot be generalizable to a national MMR estimate unless all deliveries are facility-based. Even among hospitals figures vary according to whether a hospital is in the public or private sector[12].

In Pakistan two studies reflect these two extremes: a study carried out in large public sector Civil Hospital in Karachi in 1979 to 1983 reported an MMR of 2,736 per 100,000 live births and a study carried out at the private sector in Karachi reported a MMR of 20 per 100,000 live births. While it is useful to measure the risk of complicated deliveries facility data, their main shortcoming is that they do not reflect community-based maternal mortality risks.

A Reproductive Health Research Working Group (RHRWG) convened by Population Council between 2001 and 2006 comprised of prominent RH experts identified the need for a national survey estimating maternal mortality, with provincial estimates as a priority. Consistent lobbying led to the inclusion of a full national maternal mortality survey with verbal autopsies in the 2006-2007 PDHS, which reported a national MMR of 276 per 100,000 live births. This became widely accepted as a national estimate, but is now extremely outdated.

Updated maternal mortality estimates are especially becoming a strong need for provincial and district managers' planning and setting benchmarks for new initiatives, as well as for monitoring and evaluating ongoing MNCH programs. Maternal mortality and related measures are required for introducing greater provincial and district accountability for focus on this important area. Information on maternal deaths can help advocacy efforts for increasing awareness of maternal health issues in the general public, media, and civil society organizations, and maintain pressure for achievement of Pakistan's SDGs.

Testing the Feasibility of the Made-In and Made-For Method

Due to the limitations in various estimation methods, a new community-based technique using informant networks, MADE-IN/MADE-FOR, was developed by Immpact (Initiative for Maternal Mortality Programme Assessment) at the University of Aberdeen. This technique was tested in in two provinces in Indonesia[13], the Somaliland, and as a pilot, Pakistan's Chakwal district, from January to April 2014, followed by six districts in Punjab province, for a Punjab provincial estimate, from 2014 to 2015.

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[10] WHO. 2012. Trends in maternal mortality: 1990 to 2010. WHO, UNICEF, UNFPA and The World Bank estimates. www.unfpa.org/webdav/site/global/shared/documents/publications/2012/Trends_in_maternal_mortality_A4-1.pdf

[11] National Reproductive Health and Family Planning Survey 2001. National Institute of Population Studies (NIPS). Islamabad.

[12] Jafarey SN. 2002. Maternal mortality in Pakistan: Compilation of available data. *J Pak Med Assoc* 52 (12): 539–544.

[13] Qomariyah SNQ, D Braunholtz, EL Achadi et al. 2010. An option for measuring maternal mortality in developing countries: A survey using community informants. *BMC Pregnancy and Childbirth*

The Population Council, in the pilot study in Chakwal district and provincial MMR estimation in Punjab, assessed the feasibility of applying the technique with community informant networks to identify WRA deaths confirmed through home visits and causes ascertained through verbal autopsies.

This research proved that the community-based informant technique—Made-In/Made-For—is feasible and can be introduced in Pakistan. Its main advantages are:

- For the first time, to our knowledge, both district and provincial MMR estimates have been generated, along with direct and indirect causes of maternal deaths.
- The research successfully identified different networks that can be used in communities to capture data on deaths in Pakistan. The LHW network has been established as a reliable source for mortality information, although their capacities for capturing women's deaths can be improved, through proper training as well as expanding the age range for women's deaths, from 15 to 45 years of age to 12 to 50. The information obtained by LHWs can be further supplemented by various community networks, especially in areas not served by LHWs. These networks can be used for additional reporting, such as case detection and incidence of communicable diseases, established as another major strength in this study; these networks can play a role in controlling epidemics by identifying sources of outbreaks. Information collected at the union council level can be collated at the district level and communicated to all relevant departments as well as provincial headquarters.
- Cost of applying the technique for maternal mortality estimates at the district level came to Rs. 12 (12¢) per WRA, while the cost of a survey would have been several times higher. Due to its low cost, this methodology could be applied bi-annually.
- The methodology is based on a census of maternal deaths and therefore does not require calculating confidence intervals, with concerns about sampling errors obviated. The technique can also be applied to measure maternal deaths prospectively, providing an ongoing regular way of measuring maternal deaths over longer time periods.
- Capacity within the district has been developed, at various levels, by using local networks, with the added benefit of sensitizing communities on important health issues.
- The method is also useful as a tool for community advocacy and accountability. The orientation for religious leaders has helped develop their better understanding of women's health issues, and they can now influence public opinion through their sermons and discussions with men. Each district's administration and health officials have also become more cognizant of the maternal health problems faced by rural women and are now considering measures by which such deaths can be averted. District officers for community development and additional district officers (for coordination), and secretaries of union councils and their *naib qasid*s have become fully familiarized with this process of collecting data and can continue using it in the future. In addition, health planners can utilize this information to monitor Sustainable Development Goals for maternal health and utilize the data from the verbal autopsies to prevent further maternal deaths in their areas.

Study Objectives

Primary

- To assess the feasibility of applying the Made-In/Made-For methodology in two districts of KP;
- To obtain baseline data on maternal deaths in the two project districts;

- To build capacity in KP province to obtain maternal mortality estimates through community-based systems involving communities, local government, and Health Department in a sustainable manner.

Secondary Objectives

- To identify the sustainable networks available within rural and urban communities that can act as key informants to provide information on maternal deaths in the province of KP;
- To determine differential characteristics of the maternal deaths (economic status, urban and rural);
- To assess the mechanisms that can be employed at the community level to determine the causes and circumstances of deaths.

Study Design

This study scaled up and further piloted the Made-In/Made-For approach in two districts in Khyber Pakhtunkhwa. In the Made-In/Made-For method, collection of data on maternal mortality consists, essentially, of two main steps:

Listing deaths by informants (Made-In): Village informant networks identify WRA deaths in their communities. Specific listing forms developed for this purpose are used to collect data.

Follow up with verbal autopsies (Made-For): Follow up interviews with family members of WRA confirm whether their deaths were of maternal or non-maternal causes and further explore their causes and circumstances.

Apart from estimating MMR in two districts and demonstrating the applicability of the Made-In/Made-For approach, the study explored ways of continuing such estimation efforts on a sustainable basis. It established suitable modes of operation for 'enrolling' community-based informant networks, efficiently arranging meetings, and determining, in detail, the steps required for such studies. We were then able to recommend the most suitable networks for each district, separately.

The study was conducted in Haripur and Nowshera districts, and sought to present a full census of deaths among WRA for the two year period January 2013 through December 2014.

This section describes how key stages of the study were conducted, from sampling to data analysis.

Site and Coverage

This pilot study was conducted in Haripur and Nowshera districts, covering 658 villages in all five *tehsil*s of both districts, seeking to capture all WRA deaths for the period January 2013 through December 2014.

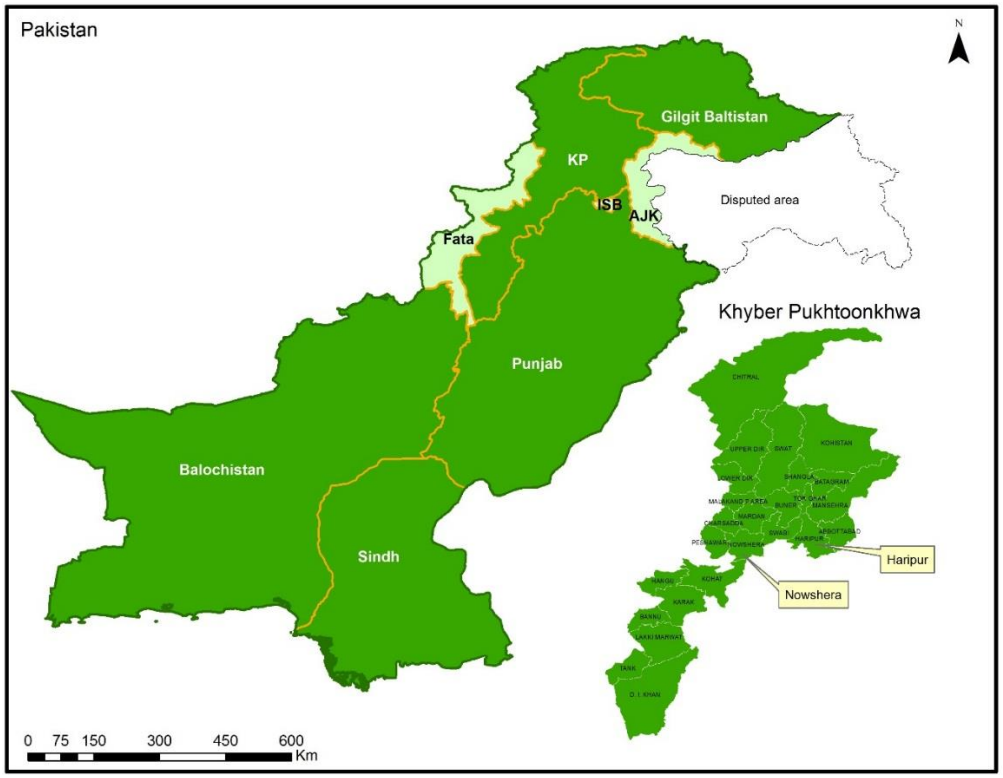
The location of the study districts is shown in Figure 2.1 (page 20), and key RH indicators of both districts are presented in Table 2.2.

Table 2.1: Key reproductive health indicators for the two study districts and KP province

	Total Fertility Rate (TFR)	Contraceptive Prevalence Rate (CPR)	Unmet Need for Family Planning	Percent distribution of delivery by SBA	Infant Mortality Rate (IMR)
KP	3.9	28.1	25.5	48.3	58
District					
Haripur	—	40.1	26.7	48.6	—
Nowshera	—	46.8	18.9	55.5	—

Source: PDHS 2012-13, Multiple Indicator Cluster Survey (MICS), KP 2008

Figure 2.1: Map of KP with locations of study districts



Identification of Informant Networks

In selecting the key informants, the first step, briefings on the study were provided to provincial and district health and administration officials. Their assistance and cooperation was sought for the study, and these discussions helped identify and finalize the choice of informant networks to be enlisted.

After extensive discussion with officials of the district administrative and health departments, a number of potential networks were identified, including community midwives, schoolteachers, traditional birth attendants (TBAs), vaccinators, religious leaders, *Nikah* (marriage) registrars, male and female councilors, and Lady Health Workers (LHWs). For its key informants, the study team opted to use the existing networks of LHWs, religious leaders including village mosque *imam*s, male and female lady councilors, *Nikah* registrars—functionaries who perform and solemnize marriages—and community midwives, recently trained and deployed by the MNCH Program.

The LHW network was selected for each district since it covers the entire country (albeit with variation in specific local coverage). Each LHW provides services to a well-defined catchment population of 1,000. The quality of care provided by LHWs in communities is maintained by a well-established supportive supervisory network, from the community to provincial levels. The monitoring and supervisory cadres include Lady Health Supervisors (each supervises 20 to 25 LHWs), Field Program Officers (FPOs), and well-integrated district and provincial management.

An independent network of religious leaders was selected due to the universal availability of religious leaders and their standing in communities. Since they lead funeral prayers, it was assumed they would be fairly knowledgeable about recent deaths in their areas. Similarly, *Nikah* registrars, and male and female councilors were proposed, as they hold influential positions in their communities, are well–respected, and as locals, are knowledgeable about major community events.

TBAs were not considered as informants since they tend to be illiterate and are unable to develop lists of deaths. Moreover, a conflict of interest could arise in cases where a TBA is responsible for woman's death and is, therefore, reluctant to report it. Other networks such as vaccinators and teachers were not considered as they are often not local residents and cannot provide reliable information.

Two informant networks were used in all five *tehsil*s of both districts. In LHW areas, their network and an additional 'independent' network—religious leaders, *Nikah* registrars, or male and female councilors—was used. In communities and areas not served by LHWs, the pair of networks was employed that included religious leaders, *Nikah* registrars, and male and female councilors.

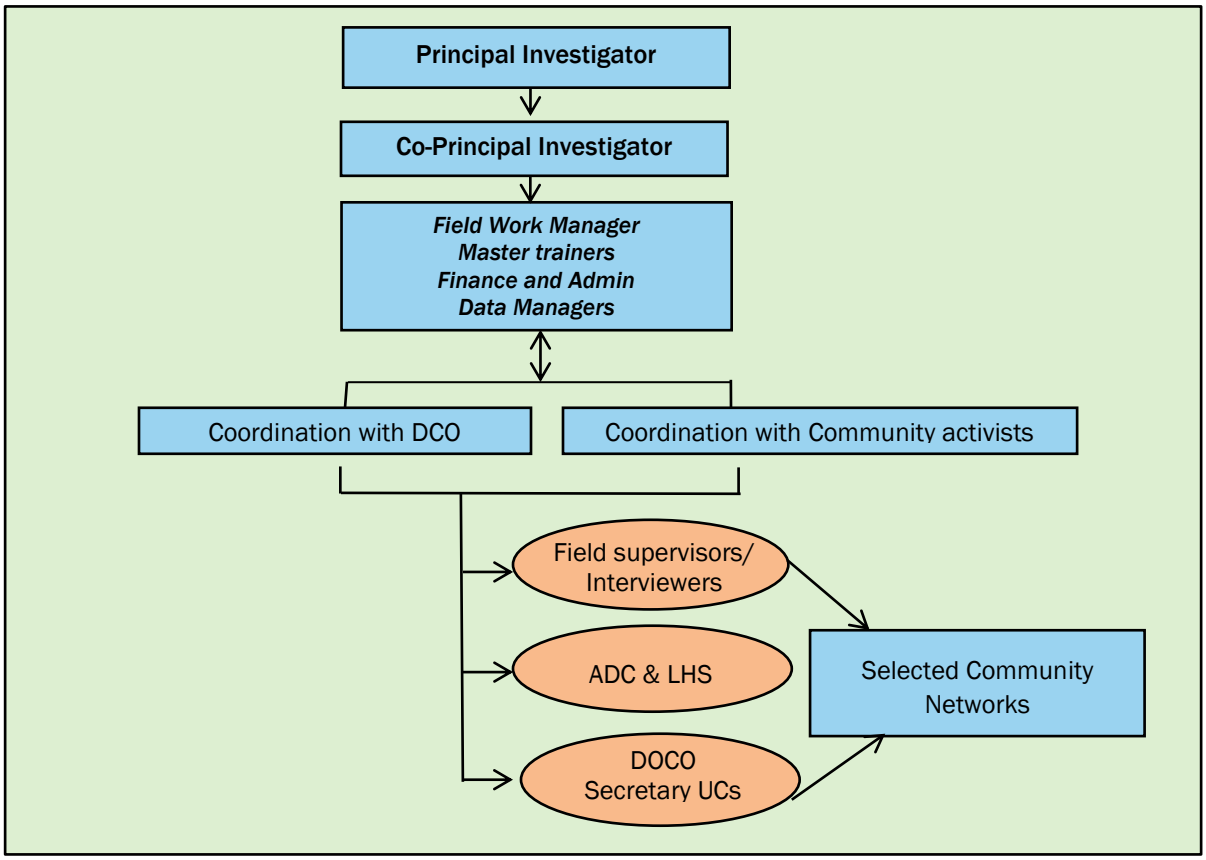
Study Team and Organization of Field Work

Six four-member teams were constituted for each district. Three teams carried out the Made-In part of the technique, including assembling, briefing, and obtaining data from key informants, and two teams of female interviewers executed the Made-For part, visiting the homes of deceased women and conducting verbal autopsies to identify probable causes of death. Data collectors with master's or bachelor's degrees in sociology or anthropology, and prior research experience, were recruited to work on the study full time.

Field activities were supervised by field coordinators, the study manager, and principal investigator. Every day, after field work, each team held a debriefing session to discuss that day's data collection and solve any problems encountered. The supervisory framework for field work is shown in Figure 2.2.

District administration and health staff were fully involved in each stage of implementation, to facilitate the process's institutionalization and sustainability. Mechanisms that could be used for institutionalizing the approach in other districts were also identified.

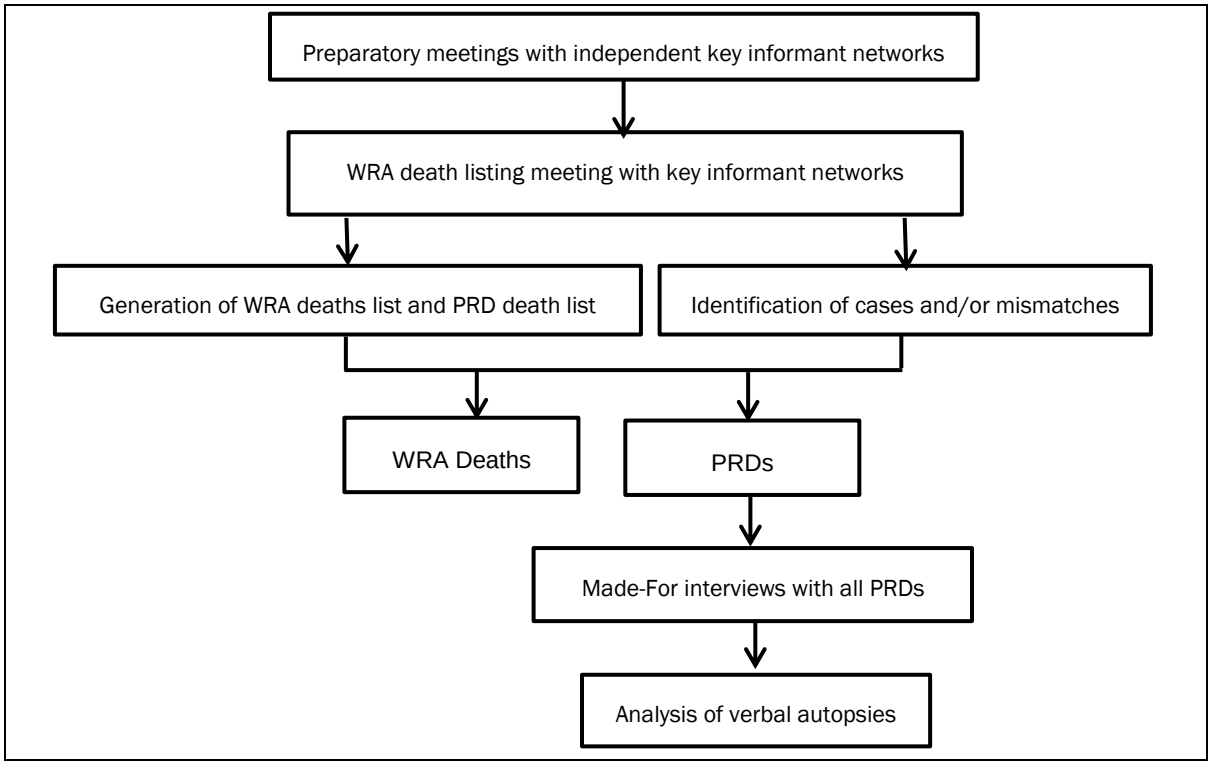
Figure 2.2: Field work organization



Data Collection

Data collection activities for this study comprised both the Made-In and Made-For components.

Figure 2.3: Sequence of data collection activities, October through December 2015



Made-In: Listing of Deaths by Community Informants

Data were gathered in meetings of the informant networks in each union council, the smallest local governmental administrative unit. Local researchers trained the selected informants in collecting data and listing possible WRA deaths and pregnancy-related deaths.

The Made-In component of the data collection process involves four main steps:

1. Preparatory Meeting with Identified Informants: A series of preparatory meetings were held with the identified key informants in *tehsil*s and union councills at the offices of the union council secretaries. LHWs were assembled at a basic health unit (BHU), rural health center (RHC), or other health facility in the catchment area. These meetings:

- Introduced the networks to the study's objectives and methodology;
- Sought their cooperation in all data collection activities, including the types of information to be gathered;
- Explained the ethical considerations that applied when collecting information, especially how to seek informed consent and provide assurance of confidentiality; and
- Decided on a time and venue for reconvening for the WRA death listing meeting.

During the meetings, each informant was given a WRA Death Listing Form, for documenting information on the deaths of women 12 to 50 years old who lived in the same union council as the informant.

Informants also collected information on whether a women had died during pregnancy, delivery, or within six weeks postpartum, date and place of death, her age, name of husband, and residential address (Annex 9.1). Informants were provided with a comprehensive briefing on all aspects of the study, especially on the importance of safe motherhood, the status of women in religion and society, and the poor maternal health situation in Pakistan.

2. Data Collection by Informants: After the preparatory meetings, informants were asked to collect the data and return with their completed listing forms within three days. Informants worked individually.

3. WRA Death Listing Meeting: The area's field coordinator arranged a separate listing meeting with each network at the union council office and health facility. On average, 25 to 30 informants were invited to a WRA death listing meeting. These meetings were mostly about two or three days after the first meeting.

During the death listing meeting, participants discussed all the deaths they had listed, collectively agreed on a 'consolidated' list of WRA deaths, and identified likely pregnancy-related deaths (PRDs). The address of each deceased woman's household was also verified, to ensure no information was missing. To ensure the coverage of deaths, the Made-In process also included a visit to village informants who had not attended the meeting.

Following the WRA death listing meetings, the field supervisors compiled and completed summary forms and suspicious death case forms. These forms registered:

- Deaths reported by one informant but not others;
- Cases with disagreement of whether the death was pregnancy-related;
- Other cases considered suspicious by the research team.

Table 2.2: Participation of key informants in listing meetings–Made-In

District		LHWs	Religious Leaders	Male and Female Councilors	Nikah Registrar	Total
Haripur	Number of Informants	616	614	341	143	1918
	No. of Listing Meetings	32	30	20	05	87
	Response Rate (%)	100	93.7	100	100	98.2
Nowshera	Number of Informants	751	676	860	80	2367
	No. of Listing Meetings	14	37	31	28	129
	Response Rate (%)	100	100	100	100	100

Table 2.2 shows the number of meetings with identified key informants and response rate for the listing meeting and verbal autopsies. There were no refusals for attending the listing meetings by LHWs, *Nikah* registrars, and male and female councilors. For the verbal autopsies, the refusal rate was two percent. For the listing meetings, the refusal rate for most networks was zero; except for religious leaders (0.8%).

4. Made-For: Follow Up with Verbal Autopsies: To obtain information on the circumstances and causes of women's deaths, home visits elicited detailed information on each death, using the revised WHO VA 2012 questionnaire (Annex 9.2), with additional questions on the family's socio-economic characteristics, health seeking behaviors, and quality of health care. The verbal autopsies were conducted with the deceased's next of kin. Overall, nine verbal autopsy respondents refused to participate in the study.

Subsequently, estimates of cause of death were obtained using a computerized algorithm compatible with the WHO questionnaire, InterVA-M (Fottrell et al. 2007). Together, these two steps—Made-In and

Made-For—provided village estimates of WRA deaths and, in particular, PRDs and maternal deaths in a defined period. The InterVA-M data were independently verified by a medical practitioner in each district. Final verification was by a consultant at the Department of Gynaecology and Obstetrics, Pakistan Institute of Medical Sciences, Islamabad.

Qualitative Component

A qualitative component was added to the study by using in-depth interviews (IDIs) with relatives of deceased women for information on women's and their families' care-seeking behaviors during the pregnancy, delivery, and postpartum period, to examine socio-cultural practices, barriers and obstacles in assessing care, and perceptions about their care in health facilities. IDIs occurred after reviewing the verbatim accounts of deaths in the verbal autopsy questionnaire and identifying the causes, to better help understanding the roles of socio-cultural determinants and health system weaknesses.

Data Management and Analysis

All verbal autopsy questionnaires and listing forms were cross-checked by the data collectors before additional review by the field supervisor. The team leader then further reviewed the data, followed by a final check by the study manager. A data entry template using an Excel program was developed for entering the listing data; CsPro (version 5.1) was used to enter the VA data. The InterVA-M software (version 4.0) was used to determine causes of death.

Quality Assurance

A number of measures ensured this study maintained the highest standards, both for data collection and analysis.

A technical advisory group was formed, and the Director General of Health Services for KP was informed. The group provided technical support and guidance during the conceptualization and implementation of the pilot study. Meetings occurred both before and after data collection.

Quality assurance was ensured through:

- **Standard operating procedures:** Population Council developed a field manual and standard operating procedures for all activities.
- **Determination of roles and responsibilities:** Team members' and field coordinators' roles and responsibilities were clearly identified, and each team member provided written instructions that s/he was required to follow.
- **Training:** This component included training field staff in conducting preparatory and listing meetings and obtaining data from network participants, pre-testing for data collection, and reviewing the pre-test and adapting the methods and tools accordingly. Field interviewers received eight days' training in the use of listing forms and Vas, which included sessions on the research protocol, ethics, informed consent, maintaining privacy during interviews, and interviewing techniques. The training focused on adherence to the standard operating procedures and study objectives.
- **Monitoring:** The field manager remained in the field throughout the study. Each field team's supervisor ensured that data quality standards were met. The principal investigator, project manager, and field coordinators visited randomly selected villages in each *tehsil* regularly to ensure all protocols were followed. They randomly selected and scrutinized the completed

questionnaires during monitoring visits for completeness, data accuracy, and to determine any re-interviewing requirements.

Ethical Considerations

Ethical approval was obtained from the National Bioethics Committee of Pakistan and the Institutional Review Board of the Population Council (Annex 9.3). Permission was also obtained from the Director General for Health, Director General of Local Government and district Health offices (Annex 9.4).

Informed consent was obtained from all study participants after describing in detail the issues related to the study. Interviewers described the scope and purpose of the questionnaire and its approximate duration, and stressed that participation was entirely voluntary. The interviews were conducted in private and out of the hearing of other people. When these conditions could not be met, social science interviewers offered participants an alternative venue or time to complete the questionnaire. All individual data were treated in strict confidentiality.

Maternal and Pregnancy Related Deaths: Socio-Demographic Features and Causes

Basic Definitions

Pregnancy-related Death

A 'Pregnancy-related Death' (PRD) is defined as "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death" (WHO ICD-10, 2012). This definition is sometimes referred to as the time of death definition of maternal death and does not need to differentiate accidental or incidental causes from obstetric causes.

Maternal Death

In its *International Statistical Classification of Diseases and Related Health Problems* (1992, ICD-10), WHO defines Maternal Death (MD) as: "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes." The definition implies the inclusion of maternal deaths from direct and indirect obstetric causes (WHO 2012).

Late Maternal Death

'Late maternal deaths' are defined as "the death of a woman from direct or indirect obstetric causes more than 42 days but less than one year after termination of pregnancy" (WHO ICD-10, 2012).

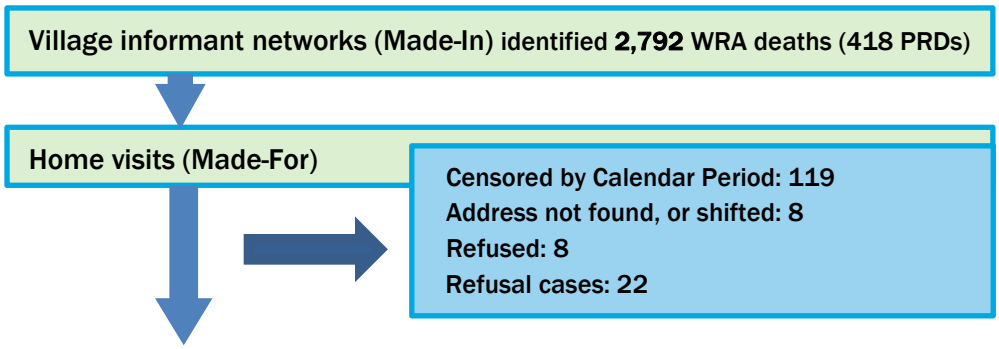
Identification of Pregnancy-related Deaths

Collectively, in the two sampled districts, 2,792 WRA deaths were identified for 2013 and 2014. Of these, 418 were identified as PRDs based on the listing data (Figure 3.1).

The next step comprised follow up of the PRDs in the verbal autopsy interviews with the deceased women's relatives—in most cases, siblings, in-laws, parents, other relatives, or spouses—to ascertain cause of death.

After the verbal autopsies, it was found that 119 cases had not taken place within the previous two years and were excluded from the study. Nine respondents, additionally, refused to participate, and eight households could not be located. After excluding all of these cases, 281 PRDs remained for final analysis.

Figure 0.1: Number of cases or deaths found in women of reproductive age



Final list of cases, with 218 total WRA deaths followed up

As ing maternal deaths as part of their routine work). In this study, LHWs were provided with refresher training on identifying maternal deaths, and LHWs improved their performance by identifying more PRDs than previously reported. There was further improvement in death identification and reporting after the inclusion of additional informant networks.

Figure 3.2: Improvement in reporting of deaths through the study

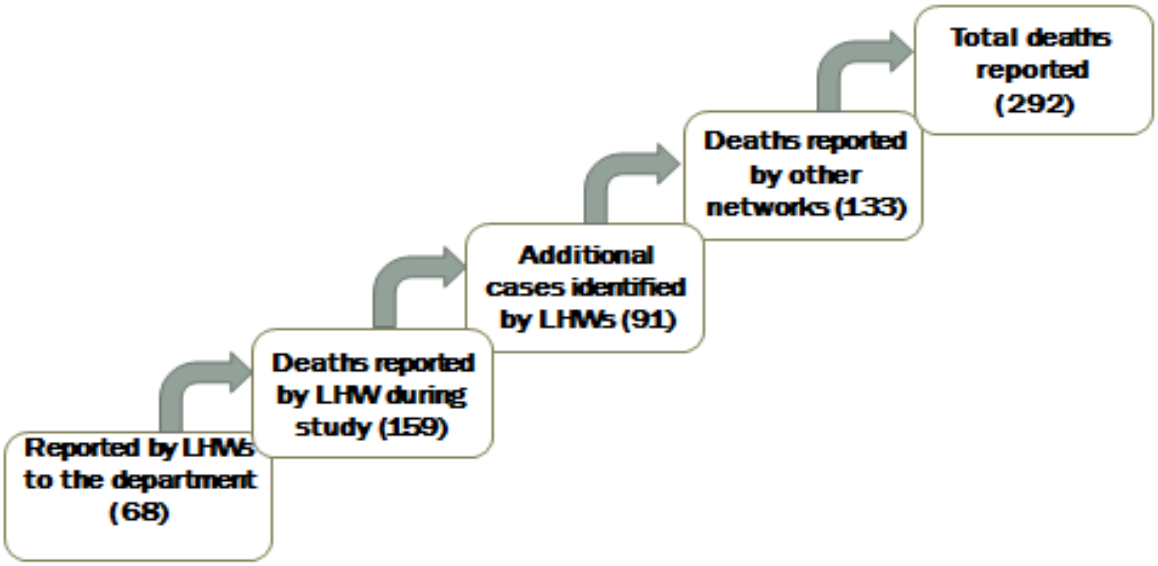
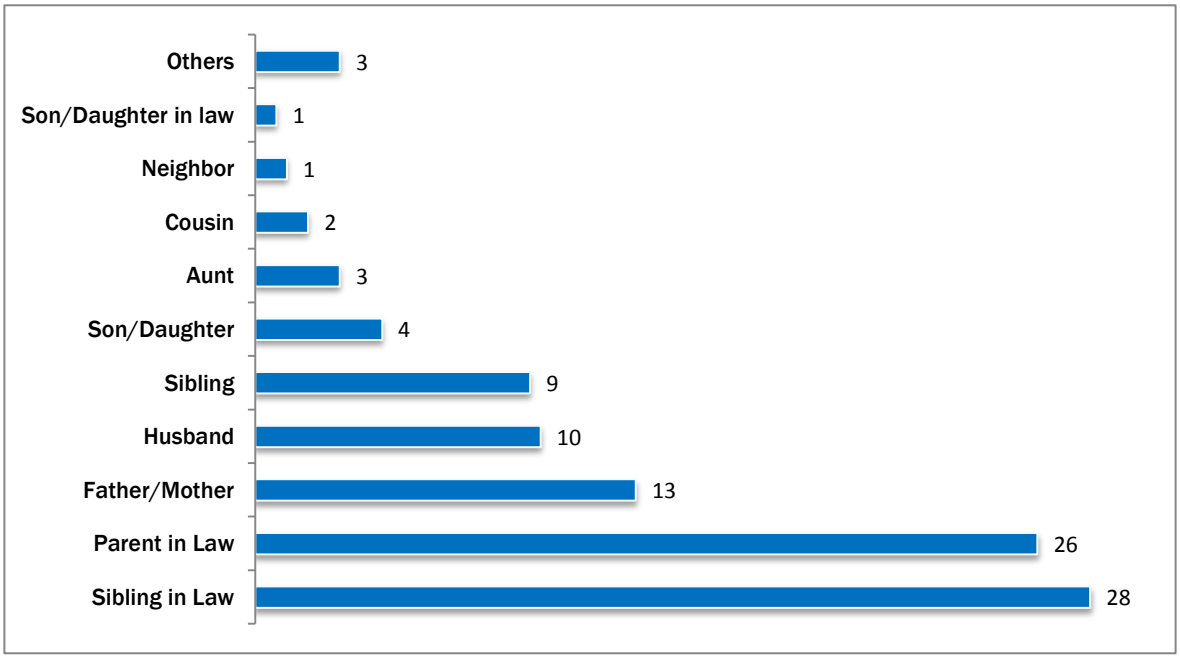


Figure 3.3 shows the distribution of the verbal autopsies according to the types of respondents. Most (nearly half) verbal autopsy respondents were in-laws of the deceased, followed by her parents, then spouses. In selecting verbal autopsy respondents, emphasis was on seeking respondents who were present during the last illness of the deceased women.

Figure 0.3: Distribution of verbal autopsies, by type of respondent



Socio-demographic Characteristics of Deceased Women

The age distributions of the 281 women whose PRDs were covered by the study are presented in Table 3.1.

Table 3.1: Ages of deceased women, by district

Age (years)	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Less than 20	6	7	9	14	7	21
20-24	25	32	12	18	18	50
25-29	29	36	29	45	29	81
30-34	17	22	23	36	21	58
35/35+	23	29	27	42	25	71
Total	**100**	**126**	**100**	**155**	**100**	**281**

The mean and median age of the deceased women was 29, SD of 7. The largest group (29%) of women was in the 25 to 29 year old age bracket, and the smallest group (7%) was in the under 20 years of age bracket.

All (100%) of the deceased women were married, with mean and median age of marriage 20, with SD of 5.

Table 3.2 shows that nearly a quarter had completed primary schooling, and only six percent of all women in the two districts had higher than secondary education. In Nowshera, two thirds of the women were illiterate, while in Haripur, nearly more than one third were illiterate.

Figure 3.4: Literacy of deceased women

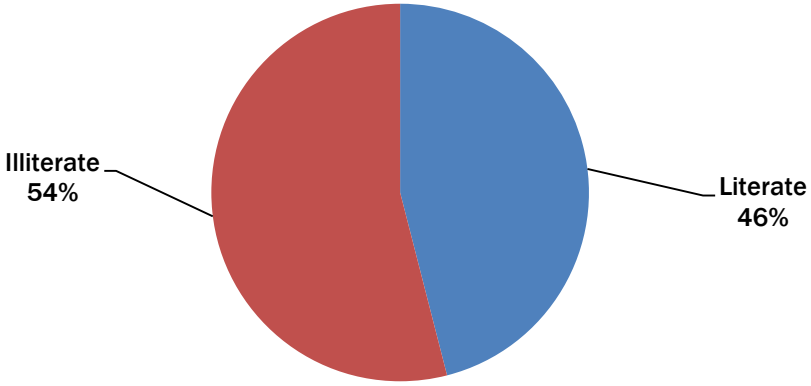
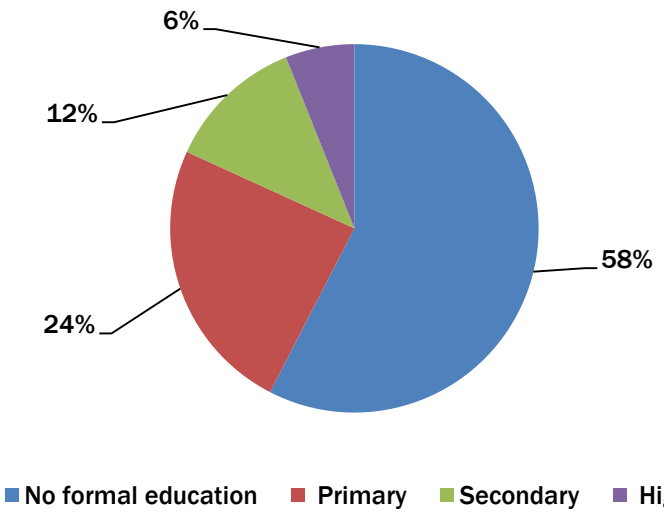


Table 3.2: Education of deceased women, by district

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
No formal education	41	52	70	109	58	161
Primary	28	35	21	33	24	68
Secondary	21	26	5	8	12	34
Higher	10	13	3	5	6	18
Total	**100**	**126**	**100**	**155**	**100**	**281**

Figure 3.5: Education of deceased women



Forty percent of husbands of the deceased women were illiterate. Overall, in both districts, nearly one quarter had secondary educations, while only 12 percent had higher than secondary educations. Two-thirds of the women had education in Haripur, while half were educated in Nowshera.

Table 3.3: Education of deceased women's husbands (%)

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
No formal education	29	36	48	75	40	111
Primary	29	36	23	36	26	72
Secondary	30	38	17	27	23	65
Higher	12	15	10	16	11	31
Don't know	1	1	1	1	1	2
Total	**100**	**126**	**100**	**155**	**100**	**281**

The wealth index was calculated for each household by running a factor analysis for eight household amenities and consumer durable goods, energy sources, and sources of drinking water. This procedure is similar to that used by Filmer and Pritchett (1999). As shown in Figure 3.6, slightly higher than one quarter of deceased women belonged to households of low socio-economic status (28%). Half were in the medium (50%), and 22 percent of the cases, were of higher socio-economic statuses. A higher proportion (32%) of deceased who were well off lived in Haripur, followed by Nowshera.

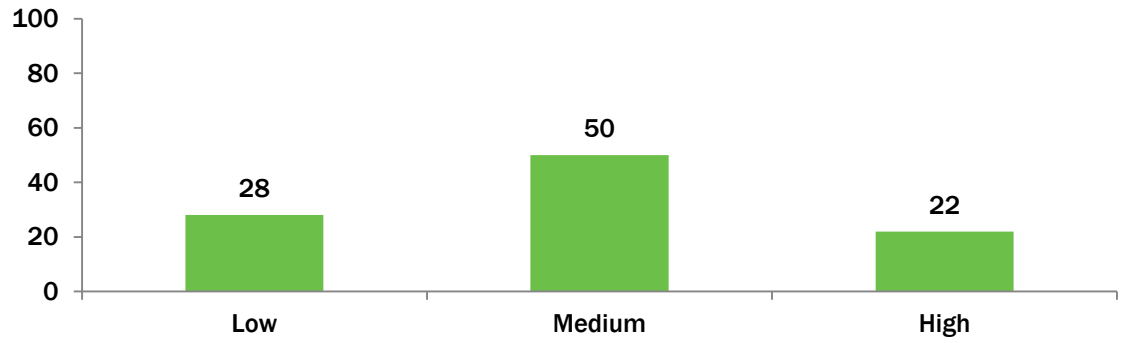
Table 3.4: Socio-economic status of households, by district (%)

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Low	29	36	28	44	28	80
Medium	40	50	58	90	50	140

High	32	40	14	21	22	61
Total	**100**	**126**	**100**	**155**	**100**	**281**

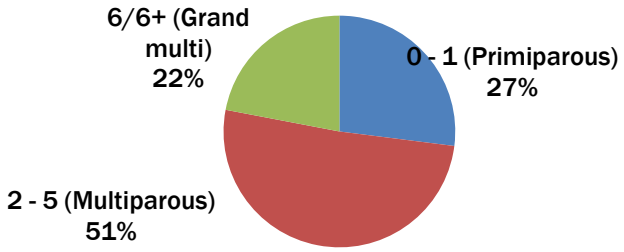
Overall, slightly more than a quarter of PRDs had taken place among women of a lower socio-economic status, and one half had occurred among women of medium socio-economic status, while 22 percent were among women from a higher socio-economic status (Figure 3.4).

Figure 3.6: Socio-economic status of deceased women (%)



As shown in Figure 3.7, half of PRDs occurred among women who were multiparous, having borne two to five children. Nearly 22 percent of deaths were among women who had more than five pregnancies, while 27 percent of deaths occurred in women with one child or none.

Figure 3.7: Number of children borne by deceased women



Maternal Mortality

This study identified 2,792 deaths of WRA in a total population of 600,000 WRA, yielding a total death rate of 459 per 100,000 WRA. As Table 3.5 shows, the death rate among WRA varied by district, with the lower in Haripur—347—and the higher one in Nowshera (425). The overall non-pregnancy death rate was 372 per 100,000 WRA. For Haripur and Nowshera districts, it was 347 and 425, respectively.

The proportion of PRDs among deaths of WRA was 15 percent. This agrees with the "Trends in Maternal Mortality Estimates" report of WHO, UNICEF, UNFPA, and the World Bank, which estimates the proportion of PRDs in WRA deaths at 11.4 percent for Pakistan (WHO 2012).

Table 3.5: Death rates of women of reproductive age, per 100,000 (excluding women <15 or >49)

District	Population of WRA	Number of WRA deaths	Number of non-PRDs	Number of PRDs	WRA death rate per 100,000	Non-PRD rate of WRA per 100,000
Haripur	271,008	925	126	126	341	347
Nowshera	337,273	1586	1539	155	470	425
Total	**6,082,81**	**2,792**	**9,904**	**281**	**412**	**372**

Estimating the Probability of Capturing PRDs: The Capture and Re-Capture Technique

The Made-In/Made-For technique acknowledges that the networks tasked with identifying WRA deaths will miss some deaths, and to identify them the capture and re-capture (CRC) technique is used, which provides the number of deaths that have to be adjusted to compensate for deaths potentially missed.

The term 'capture and re-capture' derives from wildlife applications, wherein a sample of animals from a target population is captured, marked, and released. A second sample is captured later. The number of animals captured each time is noted. In public health applications, individuals are 'captured' on different databases and a key stage is matching, or identifying, individuals who appear on more than one database (Laska and Eugene 2002) which helps in estimating the "true" number of cases.

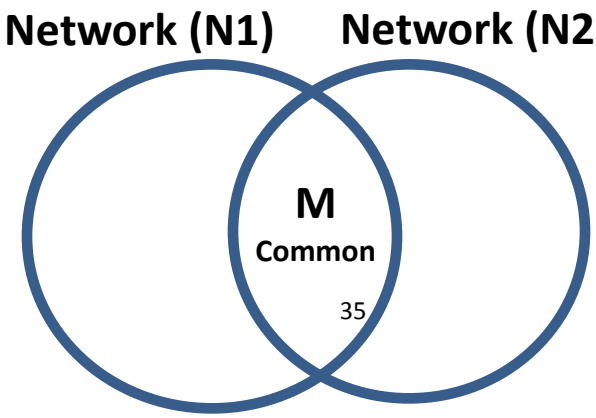
Four critical assumptions are made in this simple capture and re-capture analysis:

- The set of 'individuals' or 'events' to be estimated is fixed, that the number of events cannot increase or decrease.
- Individuals captured by both databases—or in more than one informant network—can be matched through follow up visits, and duplicate cases can be resolved.
- Capture in the second sample is independent of capture in the first. Separate meetings for the networks and allowing limited time for data collection helped avoid the possibility of contamination and information copying between networks.
- Within each database, the probability of capture does not differ between individuals. This is a limitation of the methodology: Some sensitive deaths, such as abortion-related deaths or early pregnancy deaths, may have been missed.

Using the capture and re-capture technique, the study team was able to estimate both the total PRDs in the six study districts and coverage of each network (proportion of total PRDs identified by each network). A simple formula estimated the total number of cases:

—N is the number of cases captured by one or the other networks and M is the number of cases captured by both networks, in Figure 3.8—

Figure 3.8: Formula to estimate total cases through capture and re-capture technique



$$T = \frac{N_1 \times N_2}{M}$$

$$T = \frac{N_1 X N_2}{M}$$

Based on the results of the capture and re-capture analysis, estimates of PRDs and MMR were revised. These results are presented in tables 3.7 and 3.8 (page 34).

Maternal Mortality Ratio Estimates

In areas where most deaths occur at home and vital registration systems cannot attribute an appropriate cause of death, determining the cause of obstetric deaths is not always possible. Differentiating the extent to which they are due to indirect or direct obstetric causes or accidental or incidental events is often problematic. For such circumstances, WHO (in the ICD 10) introduced the concept of pregnancy-related deaths, or PRDs.

In almost all settings, the proportion of maternal deaths that are incidental or accidental is small (Geubbels 2006), so the distinction between PRD and maternal death does not make a significant difference in measuring progress, or program planning. In this study, both terms are used when referring to PRDs: Incidental and accidental causes are included, but excluded when referring to maternal deaths.

The denominator population of total live births was based on the size of the estimated WRA population and the total fertility rate. To calculate the number of live births, an estimate of the female population aged 15 to 49 and the age-specific fertility rate were required. These were obtained by:

- In the absence of a recent census, current estimates for the population by age and sex at the provincial and district level are not available. To overcome this constraint, we used the 1998 census data for cohort component population projections and calculating the population for each year for the province of KP based on age and sex distribution from 1998 to 2013.
- To attain estimates at the district level, we used district representative data from the Pakistan Social and Living Standards Measurement Survey for 2010-2011, one of the largest household surveys in Pakistan, along with the Development Statistics of KP 2013.
- Age-specific fertility rates for both districts were obtained from the PDHS 2012-2013. WRA (ages 15 to 49) and age-specific fertility rates were used to estimate the number of live births.

Table 3.6: Adjusted estimation of PRDs after capture and re-capture analysis

District	Recorded PRDs	Unadjusted PRMR	95% CI	Adjusted PRDs after CRC	Adjusted PRMR	95% CI
Haripur	126	198	170-240	172	271	230-310
Nowshera	155	195	170-230	221	279	240-320
Total	**418**	-	-	**393**	-	-

Table 3.7: MMR estimation, by district

District	Recorded PRDs	Unadjusted PRMR	95% CI	Adjusted PRDs after CRC	Adjusted PRMR	95% CI
Haripur	126	198	170-240	172	271	230-310
Nowshera	155	195	170-230	221	279	240-320
Total	**418**	-	-	**393**	-	-

The unadjusted MMR for Haripur and Nowshera districts, as shown in Table 3.8, before applying the capture and re-capture technique, is 198 per 100,000 live births (95% CI170-240) for Haripur district and 195 per 100,000 for Nowshera. After capture and re-capture, however, the adjusted MMR for Haripur is 271 and for Nowshera it is 279, per 100,000 live births.

Age-specific MMRs (Table 3.8) reflect the predicted pattern of elevation in the youngest age group (under the age of 19). Mortality is seen to decline in the 20 to 24 year old age group, but rises steadily and uniformly in the higher age group of 35 years and older. Pregnancy in these two age groups—below 19 and above 35 years—has a significantly higher risk of ending in complications. In the younger age group, the risk is related to the underdevelopment of the osseous tissues, especially the pelvic bones. Older women above 35 are more likely to have conditions such as high blood pressure, diabetes, or cardiovascular disease that could complicate pregnancy outcomes (Stickler 2012).

Table 3.8: Age-specific unadjusted maternal mortality ratio, by district

Age in years	Haripur	Nowshera
Less than 20	134	196
20-24	171	71
25-29	211	230
30-34	172	240
35/35+	290	344
Total (n)	**126**	**155**

Direct and Indirect Causes of Pregnancy-related Deaths

Direct obstetric deaths are those resulting from obstetric complications during pregnancy, delivery, or the postpartum period caused by interventions, omissions, incorrect treatment, or a chain of events resulting from any of these factors. Indirect obstetric deaths are deaths that occur due to pre-existing diseases or diseases that develop during pregnancy not due to direct obstetric causes but aggravated by the physiological effects of pregnancy (WHO 2012).

In disaggregating the causes of PRD (Table 3.11) in this study, 17 percent of deaths were due to indirect causes and 79 percent due to direct causes, while five percent of deaths were due to incidental causes. The higher proportion of deaths from direct causes was in Haripur (83%), while the higher proportion of death by indirect causes was in Nowshera, at 19 percent.

Table 3.11: Comparison of direct and indirect causes of maternal deaths, by district

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Direct causes	83	104	76	118	79	222
Indirect causes	13	17	19	29	16	46
Incidental deaths	4	5	5	8	5	13
Total	**100**	**126**	**100**	**155**	**100**	**281**

Postpartum hemorrhage was identified as the leading cause of death. One fifth of the deaths had occurred due to pregnancy-induced hypertension (eclampsia), and another fifth had been caused by puerperal sepsis. The highest proportion of deaths due to PPH was reported in Haripur (21%).

The following case study presents the plight of a woman who died due to lack of proper attention to manage her postpartum hemorrhage.

Poor management of postpartum hemorrhage

The deceased was 36 years old and a housewife. Her husband was a matriculate and a mosque leader. She became pregnant three times in her life. She was not educated, but she would go for regular antenatal care to a doctor.

After her last pregnancy, she gave birth to a baby girl through a normal delivery. But following the delivery she started bleeding heavily. The doctor tried to control the bleeding but failed. She referred the deceased to another facility. She was shifted to a private hospital, but there was no staff available. She was then shifted to a third facility, but the doctor refused to attend to her. Ultimately she was taken to CMH (Combined Military Hospital) Nowshera, but she died immediately after reaching the facility.

Husband of Deceased, District Nowshera

The following case study highlights how proper ANC could have diagnosed her high blood pressure and its proper management could have saved her life.

Delivery at home despite early signs of eclampsia

The deceased and her husband were both uneducated. The husband was a laborer by profession whilst the wife was housewife. She got pregnant eight times in her life and gave birth to five living children. She was 39 when she died.

Due to financial constraints, her mother-in-law decided to have her seek antenatal care from a traditional birth attendant (TBA) rather than a doctor. The local TBA, after carrying out pelvic examinations, concluded that the position of the fetus was not normal. The deceased was hypertensive and used to experience seizures with foaming at the mouth. Her family initially treated her with home remedies and sought the help of spiritual healers.

The deceased's mother-in-law sought the assistance of the TBA for delivery due to financial constraints and also to conform to the local customs. At the time of the delivery, the deceased started experiencing convulsions and lost consciousness. The baby was stillborn. There was no health facility nearby and they could not afford to take her to a district hospital either. As a result of post-natal complications that remained untreated, she eventually died at home few days after the delivery.

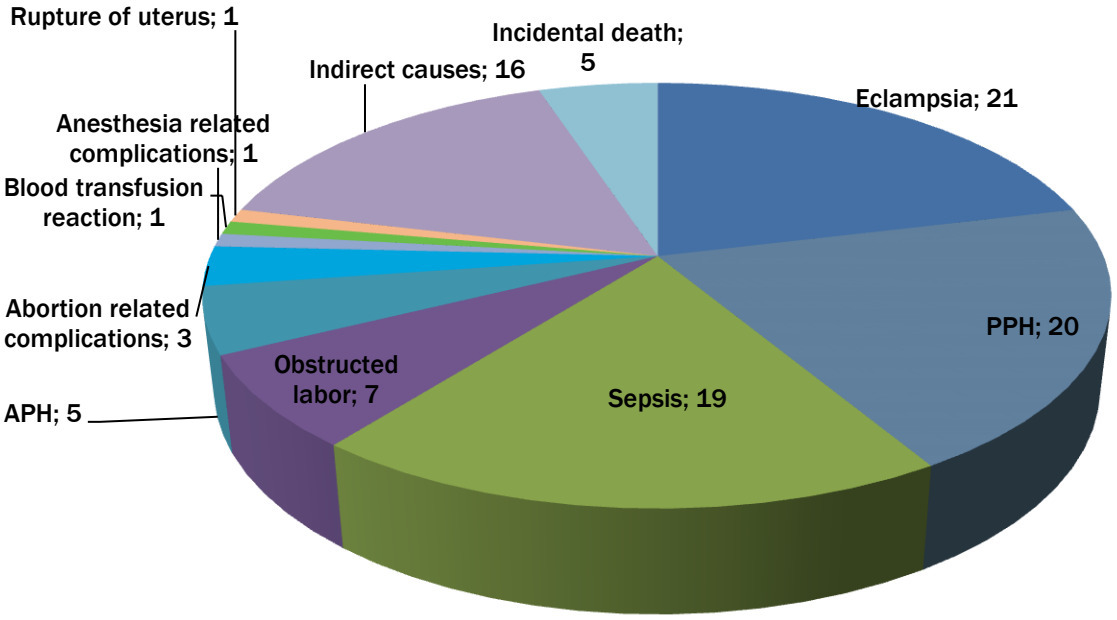
Sibling-In Law of Deceased, Tehsil Ghazi, Haripur

The specific direct causes of maternal death are listed in Table 3.12 and the proportion of each cause in overall maternal death is presented in Figure 3.9. This study's findings are consistent with WHO's finding, that major direct causes of maternal death in developing countries continue to be severe bleeding, infection, and hypertension (WHO/UNICEF/UNFPA/World Bank 2010).

Table 3.12: Causes of maternal deaths, by district

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Abortion-related complications	3	4	3	5	3	9
Anaesthesia complications	2	3	0	0	1	3
APH	5	6	5	8	5	14
Blood transfusion reaction	2	3	0	0	1	3
Eclampsia	22	28	20	31	21	59
HELLP syndrome	0	0	1	1	0	1
Obstructed labor	8	10	6	9	7	19
PPH	20	25	21	32	20	57
Rupture of uterus	3	4	0	0	1	4
Sepsis	17	21	20	31	19	52
Surgical complications	0	0	1	1	0	1
Indirect causes	13	17	19	29	16	46
Incidental death	4	5	5	8	5	13
Total	**100**	**126**	**100**	**155**	**100**	**281**

Figure 3.9: Causes of death, overall



The link between obstetric hemorrhage and eclampsia, by parity, was also examined. It was found that a higher proportion of primiparous (those who had one or no child) developed eclampsia compared to multiparous women (those who had borne 2 to 5 children) however, the difference was not statistically significant. Obstetric hypertension was higher among multiparous and grand multipara (where a woman has more than five).

The following case study underscores how repeated pregnancies take a toll on the mother's health.

Preventing repeated pregnancies could have saved her life

The deceased was 45 years old and had married at the age of 13. She underwent 10 pregnancies in her life and gave birth to five living children. She was a housewife and uneducated; her husband had studied till eighth grade and was a farmer.

During her last pregnancy, she had only one antenatal checkup performed in the third month of pregnancy. In the sixth month, she felt weakness and pain and was taken to a Basic Health Unit (BHU) where she was given some medication intravenously (IV) and referred to the DHQ Hospital in Haripur. However, her relatives took her to a private hospital in Haripur. There, she underwent an ECG examination, administered another IV drip, and again referred to DHQ Haripur.

This time her relatives took her to the DHQ. The doctors there kept her under observation for two hours and then sent her home with some necessary medicines. However, her relatives were not satisfied and took her to another private clinic where doctors admitted her. She was given blood and IV drips and referred to the Pakistan Institute of Medical Sciences (PIMS), Islamabad where she was treated and had a stillbirth. She became unconscious after her delivery and expired at the hospital within two hours.

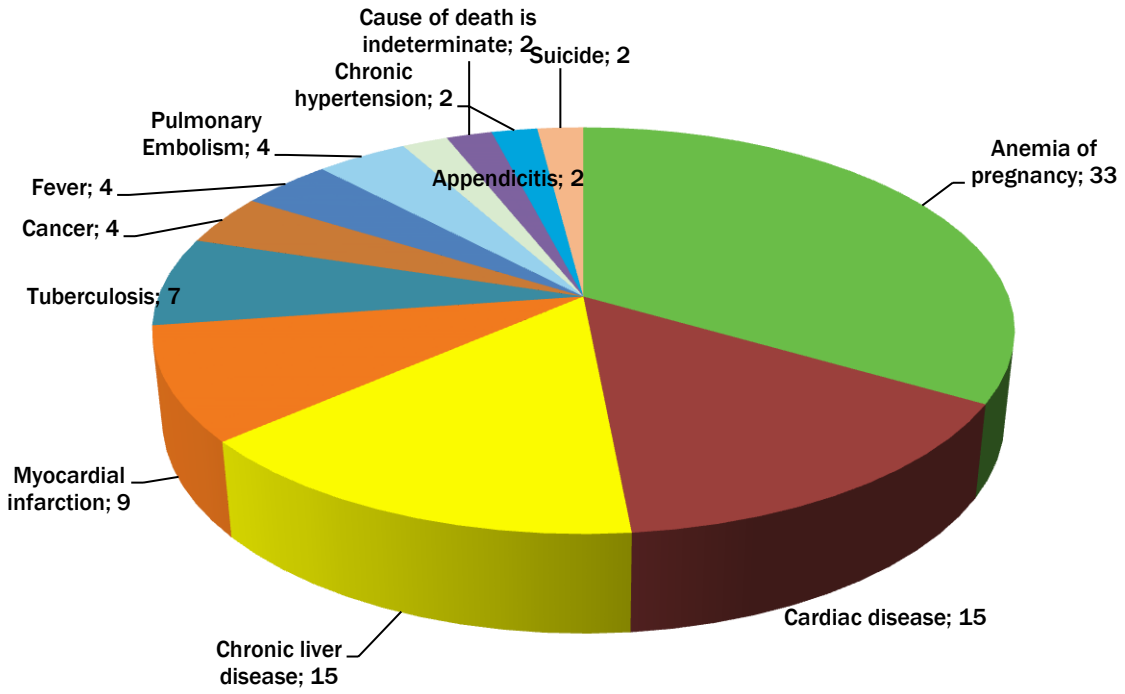
Sibling-In Law of Deceased, Tehsil Haripur, Haripur

The indirect causes of maternal mortality identified are listed in Table 3.13. Among these, major causes were anemia of pregnancy followed by chronic liver disease. The proportion of individual causes in overall maternal deaths by indirect causes is shown in Figure 3.10.

Table 3.13: Indirect causes of maternal deaths (n=47)

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Anaemia of pregnancy	53	9	21	6	33	15
Appendicitis	0	0	3	1	2	1
Cancer	12	2	0	0	4	2
Cardiac disease	6	1	21	6	15	7
Cause of death is indeterminate	0	0	3	1	2	1
Chronic hypertension	0	0	3	1	2	1
Chronic liver disease	6	1	21	6	15	7
Fever	6	1	3	1	4	2
Myocardial infarction	0	0	14	4	9	4
Pulmonary Embolism	6	1	3	1	4	2
Suicide	0	0	3	1	2	1
Tuberculosis	12	2	3	1	7	3
Total	**100**	**17**	**100**	**29**	**100**	**46**

Figure 3.10: Proportion of indirect maternal deaths



In estimating the MMR, deaths by accidental and homicidal causes were not included. It is debatable whether these deaths should be included as maternal deaths, although there is growing evidence that being pregnant can place women at greater risk of dying from homicide (Ronsmans et al. 2003, Graham and Hussein 2006).

Eight deaths due to incidental causes were reported in Nowshera district, with five in Haripur.

Maternity Care

Reproductive health (RH) care includes antenatal (ANC), delivery (or natal), and postnatal (PNC) care, including FP services. The aim of RH care is to reduce maternal morbidity and mortality. The adequacy of women's maternity care was an important subject of the study's verbal autopsies of maternal deaths.

Antenatal Care

Pre-natal care, or antenatal care (ANC), refers to pregnancy-related health check ups at a health facility, or at home by a health care provider prior to delivery. According to WHO, a pregnant woman should have at least four antenatal visits to monitor her pregnancy for early detection and management of pregnancy-related complications. The quality of ANC is assessed by the type of provider conducting the check up, number of visits, investigations, and management prescribed.

Table 4.1 shows that slightly more than half of the pregnant women documented had had more than three antenatal check ups. Among women with more than three ANC visits, the higher proportion (nearly two thirds of women) was reported in Haripur. In Haripur, only 16 percent women received no ANC. Overall, nearly 79 percent women had received ANC care, ranging from one to three visits, or more. Our findings are close to those reported by PSLMS 2012-2013, according to which 82 percent women received ANC in Haripur, and 78 percent in Nowshera.

Table 0.1: Antenatal care visits, by district and percentage

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
None	16	20	18	28	17	48
One	6	8	9	14	8	22
Two	11	14	6	9	8	23
Three	15	19	10	16	12	35
More than three	49	62	53	82	51	144
Don't know	2	3	4	6	3	9
Total	**100**	**126**	**100**	**155**	**100**	**281**

Table 4.2 indicates that more than four fifths of women received care from a doctor, followed by care from a nurse. ANC from an LHW was reported as infrequent, at four percent. One sixth of women had sought no ANC at all.

Table 0.2: Antenatal care services, by type of provider and percentage

Type of Provider	Haripur	Nowshera	Total
Doctor/Obstetrician/Gynecologist	90	79	84
Nurse/LHV	8	21	15
LHW	3	4	4
TBA	6	2	4
Others	0	1	0
Don't know	2	0	1
Total (n)	**103**	**121**	**224**

Private facilities are preferred for ANC services. Table 4.3 details the facilities where ANC services were obtained. Only two out of five women obtained services from a public facility.

Table 0.3: ANC services, by type of health facility

	Haripur	Nowshera	Total
Private clinic or hospital	53	69	62
Government hospital	54	24	38
LHW's house	0	2	1
Community health center	4	3	4
TBA	4	1	2
Others	1	9	5
Don't know	1	0	0
Total (n)	**103**	**121**	**224**

Among ANC services provided, more than half of deceased women were provided with iron folate tablets, received tetanus toxoid (TT) vaccination, and had urine and hemoglobin tests (Table 4.4).

Table 0.4: ANC services

	Haripur	Nowshera	Total
Used Iron or folic tablets	50	64	58
Received TT vaccination	56	55	56
Urine test conducted	55	61	58
Hemoglobin test conducted	48	59	54
Total (n)	**126**	**155**	**281**

Note: The type of ANC service was a multiple response variable

Iron folate acid use and urine and hemoglobin testing were more frequent in Nowshera, but only slightly lower in Haripur. According to PDHS 2012-2013, 45 percent of women took iron tablets or syrup during their last pregnancy.

Biomedical risk factors are conditions or behaviors present during pregnancy that might increase the risk of an adverse pregnancy outcome. In its analysis of presence of such factors, this study considered age below 18 or greater than 34, parity greater than four, the presence of diseases including circulatory system, metabolic diseases (diabetes), and hypertension. It was found that, in total, 68 percent women had at least one identified biomedical risk factor (Table 4.5).

Table 4.5: Biomedical risk factors *Note:* The type of risk factor was a multiple response variable

	Haripur (%)	Nowshera (%)	Total
At least one risk factor	67	68	68
Less than 18 years	1	4	2
More than 35 years	17	17	17
Parity above 4	19	34	27
35+ years old and parity above 4	10	12	11
High Blood Pressure	39	38	38
Heart Disease	14	7	10
Diabetes	3	1	2
Previous C-section	13	10	12
Total (n)	**126**	**155**	**281**

Importantly, proper ANC screening can identify the various biomedical risk factors that can complicate pregnancy outcomes. Identification of such risk factors and their proper management can significantly lower adverse outcomes. Two of the highly prevalent risk factors present in mothers who died were the presence of previously diagnosed hypertension and having four or more children.

During their ANC visits, nearly a half of the women were identified as high risk by their provider, on the basis of an examination or test results (Table 4.6). A high risk pregnancy is determined by certain markers, including a woman's height, pallor, protein in urine, low hemoglobin, among others. In some women, symptoms can include convulsions and pedal edema. Nearly 14 percent of the women had been identified as high risk based on complications during their last pregnancy, while a tenth had been identified as high risk on the basis of illness identified during their final pregnancy. Complications in previous deliveries could include prolonged labor, pregnancy-induced diabetes, and eclampsia, among others.

Table 4.6: Reasons identified for referral to hospital during ANC visits

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Complication in previous delivery	19	10	9	5	14	15
Symptoms during current pregnancy	15	8	7	4	11	12
High-risk pregnancy	51	27	48	26	50	53
Others	9	5	26	14	18	19
Don't know	6	3	9	5	7	8
Total	**100**	**53**	**100**	**54**	**100**	**107**

Antenatal care was influenced by literacy and socio-economic levels: 33 percent of women of low socio-economic status had no ANC visits. Literate and middle or upper socio-economic class women were more likely (63%) to have had three or more ANC visits than illiterate women (10%).

Among the reasons for not seeking ANC care, most, or two thirds, of cases reported lack of awareness, half lacked of funds. One third of cases cited poor access to health facilities.

From the preceding findings, we can conclude that while most women were aware of the importance of ANC, only nearly half received proper attention, in terms of tests and supplements, and a high proportion were identified as high risk and, accordingly, given correct advice on institutional delivery.

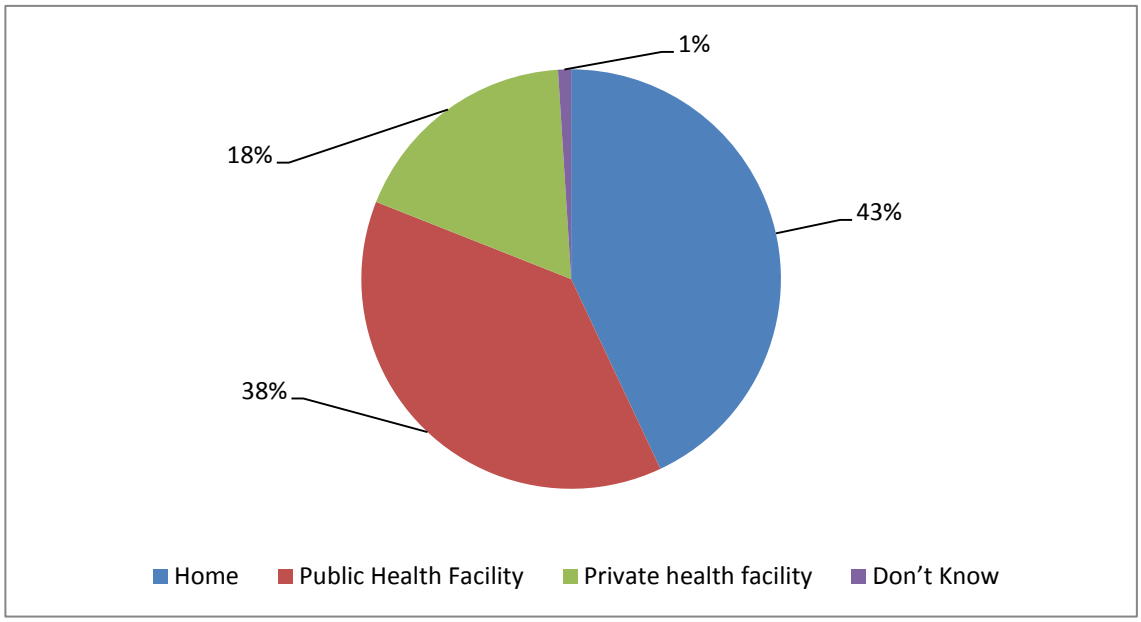
Delivery Care

One of the key interventions to reduce maternal and neonatal mortality is encouraging women to deliver in an environment that is clean, with technically competent skilled staff, and equipped with life-saving supplies. Whether deliveries occur at home or are facility-based, the presence of a SBA linked to an easily approachable and fully functional health system can avert many deaths. According to PDHS 2012-2013, 48 percent of births in Pakistan are in a health facility; this study found that slightly more than half of deliveries were at a health facility, while two fifths were at home, almost equally in Haripur and Nowshera. Most facility-based deliveries were in a public facility, while 18 percent preferred to seek delivery care at private facilities (Table 4.7 and Figure 4.1).

Table 4.7: Place of delivery, by type

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Home	42	41	44	45	43	86
DHQ/Teaching hospital	30	29	38	39	34	68
THQ/RHC/BHU	2	2	6	6	4	8
Private clinic	25	25	13	13	18	38
Don't know	1	1	0	0	0	1
Total	**100**	**98**	**100**	**103**	**100**	**201**

Figure 4.1: Place of delivery, by type



Caesarean Sections for Maternal Complications

Caesarean sections (C-sections) are performed when there is a risk to the life of the mother or fetus or when vaginal delivery is either not possible or not recommended. This study found that 12 percent of the women had a C-section. The higher proportion of women who had a C-section was in Haripur, at 13 percent.

A mismanaged Caesarean section operation

The deceased was 29 years old and a secondary school graduate. Her first pregnancy resulted in a spontaneous abortion at the third month. Late in her second pregnancy, she visited the doctor in a private hospital for a normal check up. She was informed that she needed immediate surgery; otherwise, both her life and the life of the child would be in danger. She was transferred to the

operation theater, but the anesthetist was not available at the time, and she was given anesthesia by a non-qualified doctor. A normal baby was delivered by C-section, but when the mother was moved from the operation theater, she was on a ventilator. Doctors referred her to Benazir Bhutto Hospital in Rawalpindi, without any explanation. She died soon after reaching the hospital.

The doctors at Benazir Bhutto told the family that she had died due to an excessive dose of anesthetic. The distraught mother of the deceased accused doctors of the private hospital of killing her daughter through medical negligence, and the family sought legal action. Doctors at the private hospital offered monetary compensation. While the family members rejected this offer, they later forgave the doctors.

In-Laws of Deceased, District Haripur

Pregnancy Outcomes

The study found that 62 percent of the pregnancies ended with a live birth (Table 4.8), while stillbirths occurred in nearly one quarter of cases. One tenth of pregnancies were undelivered, while three percent ended in induced abortions.

Nearly three quarters of the infants born alive survived and were alive at the time of the verbal autopsy. The highest proportion of surviving infants was in Nowshera, at 77 percent (data not shown).

Table 4.8: Delivery outcomes for pregnancy-related deaths

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Live birth	66	70	58	76	62	146
Stillbirth	21	22	27	35	24	57
Miscarriage	0	0	1	1	0	1
Induced abortion	2	2	3	4	3	6
Undelivered	10	11	11	14	11	25
Don't know	1	1	1	1	1	2
Total	**100**	**106**	**100**	**131**	**100**	**237**

Postnatal Care

The postpartum period, which comprises the 42 days after delivery, is important for a variety of reasons. During this period, women can develop severe complications, even after a safe delivery, unless issues are diagnosed and managed at an early stage. Globally, the majority of maternal deaths occur in the postpartum period (Abou Zahr 1998). Postnatal care is, therefore, particularly important for identifying and treating maternal and neonatal complications. At least one postnatal visit is recommended within 24 hours after delivery and at least three additional visits are recommended.

This study found that slightly more than two thirds of the deceased women experienced postnatal complications. The most common problem faced in the postnatal period was severe bleeding, in two fifths of the cases, followed by high blood pressure and sepsis (Table 4.9).

Table 4.9: Proportions of problems of deceased women during postpartum period

Problem	Haripur (%)	Nowshera (%)	Total
No problem	24	17	20
Severe bleeding	36	44	40
Fever	15	18	16
Foul smelling discharge	2	2	2
Unconsciousness	35	8	20
Visual disturbance	4	6	5
Fits	5	8	6
High BP	22	22	22
Bleeding from multiple sites	1	3	2
Abnormal behavior	3	1	2
Abdominal Pain	7	21	15
Vomiting	7	8	8
Severe anemia	17	11	14
High BP	4	4	4
Non-healing of perineal and abdominal stiches	1	2	1
Others	2	0	1
Don't know	5	9	7
Total (n)	**106**	**131**	**237**

** Multiple response variable*

Nearly one third of the deceased women did not have a PNC check up, while one fifth had only one. Slightly more than one third (37%) had two, three, or more PNC visits (Table 4.10).

Table 4.10: Number of postnatal check ups of deceased women

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
No postnatal check up	25	23	32	37	29	60
One check up	25	23	20	23	22	46
2 to 3 check ups	26	24	25	29	25	53
>3 check ups	17	16	9	10	12	26
Don't know	8	7	15	17	11	24
Total	**100**	**93**	**100**	**116**	**100**	**209**

A complete and thorough postnatal check up and timely treatment could have saved her life

The deceased, 40, was the wife of a poor farmer whose monthly income is 6,000 rupees. Both were uneducated. They had married when she was 30. She conceived five times over the next 10 years, giving birth to a living child each time.

During her last pregnancy, she did not receive any antenatal care nor vaccination. She delivered at home, but soon after developed a fever and started to bleed heavily. Although both the fever and bleeding went on for three days, she remained at home and was not taken to any health facility. Finally, the fever and bleeding took her life.

According to local respondents, this lack of care-seeking is not unusual. Most women in the area give birth at home, without any treatment from a formal health facility, mainly because they are too poor to afford care. This is why, even when they are extremely sick, they remain at home, devoid of medical help.

Sibling-In Law of Deceased, Ghazi Tehsil, District Haripur

Circumstances of Death: Time and Place, and Care-Seeking Behaviors

This study investigated the specific circumstances of deceased women, the day of their demise in particular, their pregnancy stage, where they were at their times of death, and their care seeking behaviors, as well as those of their families, in the days and hours leading up to their deaths, with a focus on the sources of any delays in obtaining care.

Time of Death

Figure 5.1 presents the study's findings on the stages of pregnancy at which PRDs occurred. Nearly one fifth of all PRDs occurred before childbirth (antepartum), nearly one tenth during delivery (intrapartum), and nearly half in the first 24 hours after delivery (immediate postpartum). Seventy-three percent of PRDs occurred by the end of the first postpartum day, while the remaining quarter of deaths occurred between the second and forty-second postpartum days.

Figure 5.1: Timing of pregnancy-related deaths

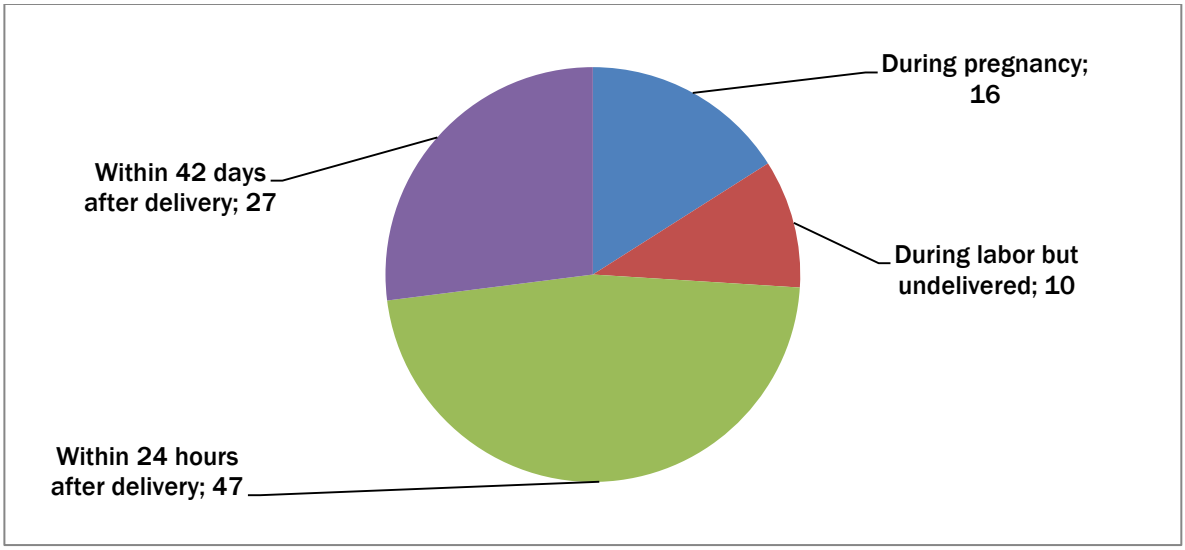


Table 5.1: Time of pregnancy-related deaths, by district

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
During pregnancy	16	20	15	24	16	44
During labor but undelivered	10	13	10	15	10	28
Within 24 hours after delivery	45	57	48	75	47	132
Within 42 days after delivery	29	36	26	41	27	77
Total	**100**	**126**	**100**	**155**	**100**	**281**

Place of Death

Of the total 281 PRDs in the two districts, one quarter of the women (25%) died at home. Among those 39 women, 55 percent died without any medical attention, while 26 percent were assisted by a TBA, community midwife, or *Hakeem* (traditional medicine practitioner).

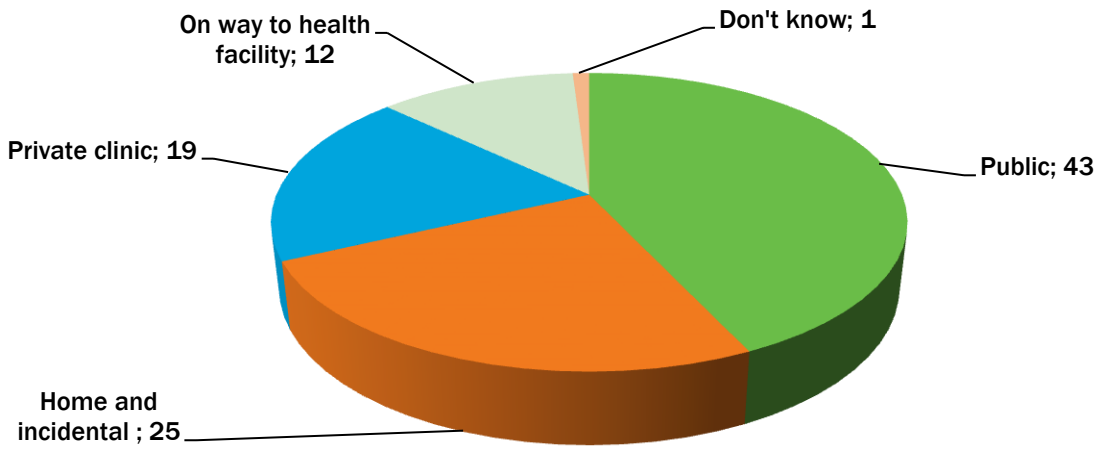
Among the rest (210 women), 62 percent died at a facility. Of these, more than two fifths were at a public facility (Table 5.2 and Figure 5.2). One fifth of deaths were at a private facility. One tenth of the women died on their way to a health facility.

Table 5.2: Places of pregnancy-related death, by district

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Home	26	33	25	38	25	71
DHQ/Teaching hospital	41	52	38	59	40	111
THQ	0	0	2	3	1	3
RHC/BHU	2	2	3	4	2	6
Private clinic	21	27	17	26	19	53

On way to health facility	8	10	15	24	12	34
Don't know	2	2	1	1	1	3
Total	**100**	**126**	**100**	**155**	**100**	**281**

Figure 5.2: Places of pregnancy-related death, by type of facility



The Continuum of Care

The deceased was a 27 year old housewife who had been pregnant four times. Her second pregnancy ended in a miscarriage during the third month, and while the third pregnancy resulted in a live birth, the baby died 15 days later. During the seventh month of her last pregnancy, she started spotting and sought treatment from many health facilities.

For her last delivery, she was taken to the nearest health center and then to the BHU near her home. BHU service providers referred her to a private facility in Haripur, Yahya Hospital, where they were then told the facility was not equipped for surgery. She was then taken to POF hospital of Wah Ordinance Factory on a Suzuki van, where her baby was delivered by Caesarean section; she was given eight units of blood. Doctors informed her family that her bleeding was not controled and they needed to perform another surgery. She died during the second surgery; her baby also died, two hours later.

Her relatives believe they followed her providers' advice and spent a considerable amount on her care: Doctors' negligence led to her death, specifically, private providers delayed treatment to enhance their earnings, and had she been referred to a proper facility in time, her life may have been saved.

Sibling-In Law of Deceased, District Haripur

Care Seeking Behaviors: The Delays Model

According to the model suggested by Thaddeus and Maine (1994), three delays can lead to adverse maternal outcomes. The first, at the household, relates to the time to reach a decision about whether a woman needs help, from whom, and where. The second delay is associated with transporting the woman to a facility. The third delay is associated with the time spent at a facility before she is provided care.

This study found such delays, with fatal consequences, in the PRDs identified.

The First Delay: Deciding to seek care

As Table 5.3 shows, where to seek care is a joint decision; in an overwhelming majority of cases, it was the woman's husband (83%) who decided whether she should seek care at a health facility, while in half of the cases women were also a part of the decision making process.

Table 5.3: Decision to seek care at time of delivery

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Patient herself	26	24	75	88	53	112
Husband	68	63	87	102	79	165
Father	10	9	5	6	7	15
Mother	26	24	28	33	27	57
Father in law	14	13	9	11	11	24
Mother in law	37	34	44	52	41	86
Brother	6	6	18	21	13	27
Sister	11	10	19	22	15	32
Brother in law	9	8	15	17	12	25
Sister in law	6	6	33	39	21	45
Others	2	2	0	0	1	2
Don't know	5	5	3	4	4	9
Total (n)		**93**		**117**		**210**

Multiple response variable

The crucial time period within which a woman needs to reach a health facility, especially in case of an obstetric hemorrhage, is within one to two hours. According to respondents, in most cases the decision to seek care at a health facility was within an hour, which is quite swift. As Table 5.4 shows, in most cases (86%), the decision to seek care at a health facility was immediate, and only in five percent of cases was the decision delayed. The decision was swifter in Nowshera than in Haripur.

Table 5.4: Time to reach a decision

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Less than 1 hour	81	75	91	106	86	181
4+ hours	10	9	2	2	5	11
Don't know	10	9	8	9	9	18
Total	**100**	**93**	**100**	**117**	**100**	**210**

In cases with delays, the primary reason was unavailable transportation, followed by lack of readily available funds, and time required to arrange them (Table 5.5). The third most significant reason was the husband's absence.

Table 5.5: Reasons for delays in decision-making

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
Health facility was too far	6	1	0	0	3	1
No transport was available	39	7	9	1	28	8
No money was available	11	2	18	2	14	4
Husband was away	17	3	0	0	10	3
Husband didn't agree	17	3	0	0	10	3
Others	0	0	9	1	3	1
Don't know	33	6	73	8	48	14
Total (n)		**18**		**11**		**29**

Note: Reason/s for delay was a multiple variable response

Affordability of Services

As shown in Figure 5.3, the families of about one quarter of deceased women reported difficulty in arranging funds for managing delivery-related complications. Twenty-seven percent of respondents in Nowshera and 22 percent in Haripur felt the costs of treatment were high and difficult to manage. Despite the fact that services at public facilities are free, families still incur costs for transportation, blood transfusions, and medicines, among others, which are an obstacle for poorer families.

Figure 5.3: Perception of affordability of care costs

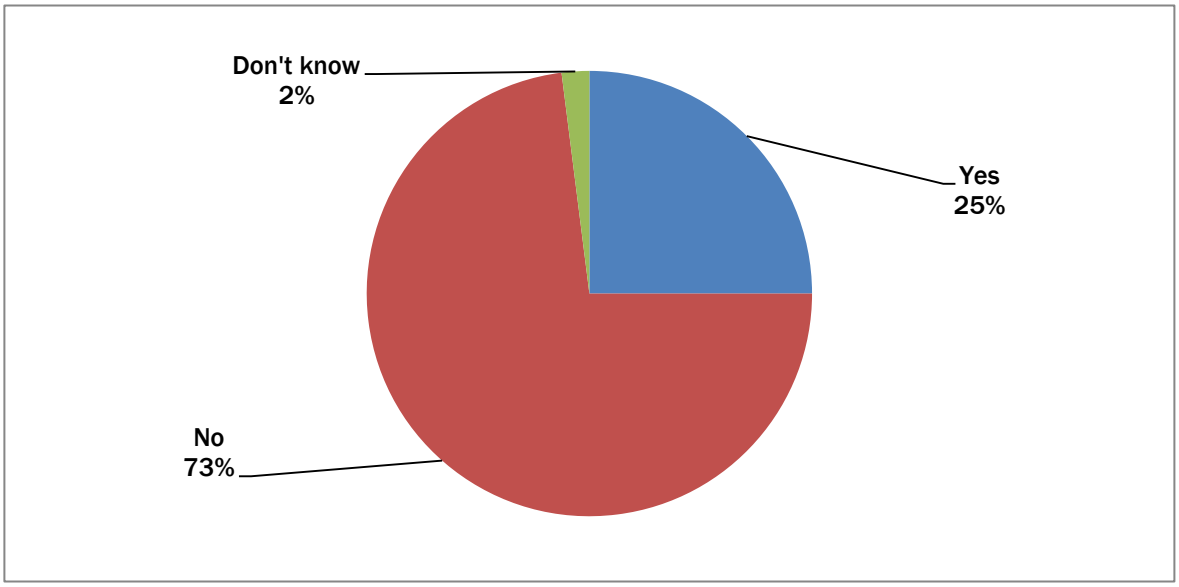


Table 5.6 indicates that more than half of respondents were unaware of any danger signs during pregnancy; family members had minimal unprompted knowledge of other danger signs. Nearly one quarter of respondents knew that obstetric hemorrhage can lead to maternal death, while one fifth knew about the significance of severe headache, and one tenth knew that swelling of hands and feet can be dangerous. Community awareness of these danger signs needs to be enhanced, for better, early recognition of the onset of birth complications. This has always been a primary responsibility of LHWs, and one they should more actively invest in and pursue.

Table 5.6: Proportion of respondents with knowledge of danger signs

Type of Knowledge	Haripur (%)	Nowshera (%)	Total
No knowledge of any danger sign	50	63	57
Bleeding	33	14	23
Edema hand and face	9	13	11
Blurring of vision	3	3	3
Severe headache	16	15	15
Persistent vomiting	10	4	7
Epigastric pain	4	1	2
Tiredness and palpitation	5	8	7
Jaundice during antenatal period	2	1	1
Loss of fetal movements	13	0	6
Fever following abortion/ delivery	3	1	2
Total (n)	**126**	**155**	**281**

The Second Delay: Time to reach a facility

More than half of the women who had died at a facility had reached the first contact facility within half an hour of leaving their homes (Table 5.7). However, for a fifth of women, it took about an hour to reach a facility.

Table 5.7: Time to reach first point of care

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
1-15 min	16	14	27	31	22	45
16-30 min	36	32	39	44	37	76
31-45 min	6	5	12	14	9	19
46-60 min	10	9	8	9	9	18
61+ min	31	28	9	10	19	38
Don't know	2	2	4	5	3	7
Total	**100**	**90**	**100**	**113**	**100**	**203**

The Third and "Fourth" Delays

While relatives did manage to transport most of the women to facilities in time, in many cases, they nevertheless failed to access appropriate timely care due to the third and fourth sources of delay. The third delay is due to lack of services available at the first point of contact, requiring a woman to be referred to another facility. The fourth delay is in being referred from a second point of contact to a higher level facility.

Among women who did reach health facilities, one quarter of deaths were at the first facility. More than one third, 34 percent, died upon reaching a second facility, and an additional 23 percent were moved from a second facility to a third facility of contact when they died, while one fifth died *en route* to a health facility (Table 5.8).

Table 5.8: Pregnancy-related deaths, by number of facilities accessed

	Haripur		Nowshera		Total	
	%	N	%	N	%	N
On way to 1st facility	3	3	3	4	3	7
At 1st facility	30	28	21	24	25	52
On way to 2nd facility	2	2	12	14	8	16
At 2nd facility	32	30	36	42	34	72
On way to 3rd facility	9	8	5	6	7	14
At 3rd facility	24	22	23	27	23	49
Total	**100**	**93**	**100**	**117**	**100**	**210**

In total, 18 percent of PRDs occurred while women were being transported to a facility. Among these, three percent died *en route* to the first contact facility, eight percent died in transit to a second contact facility, and seven percent died in transit to a tertiary care facility (Table 5.8)

Verbal autopsy respondents believed that the major problem at facilities contributing to their relatives' deaths was incorrect treatment, followed by lack of capacity for blood transfusion at the facility and non-availability of appropriate staff (Table 5.9).

Table 5.9: Respondent perceptions of facility problems

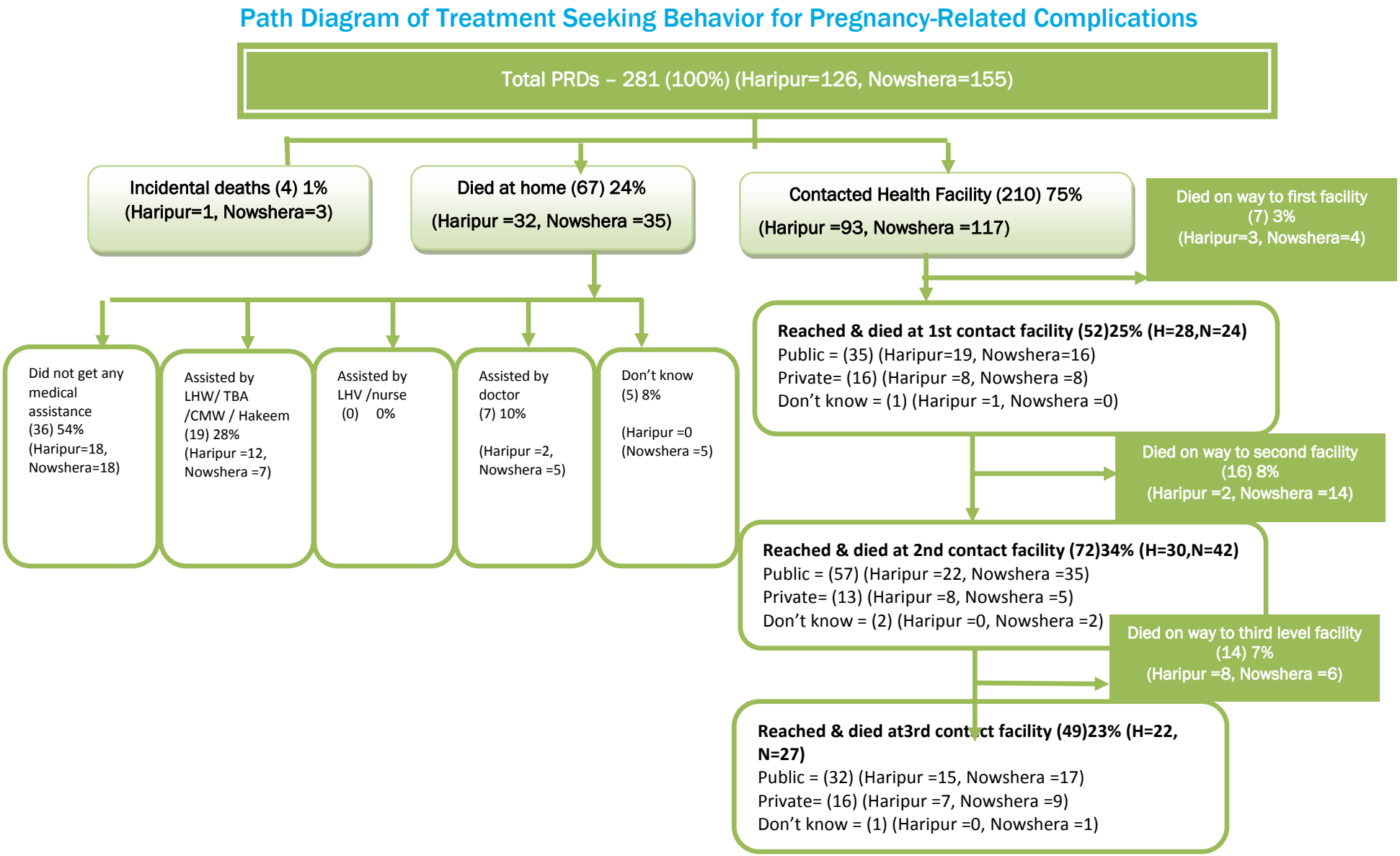
Type of Problem	First facility		Second facility		Third facility	
	%	N	%	N	%	N
None	30	60	44	59	24	12
Admission	1	3	1	2	2	1
Medical treatment	39	80	19	25	24	12
Medication	4	8	7	9	12	6
Diagnostic/ Laboratory Tests	7	15	4	6	10	5
Blood transfusion	11	23	6	8	14	7
Procedures	9	18	5	7	10	5
Provider's attitude	7	14	6	8	10	5
Respect shown to her	1	3	4	6	6	3
Maintenance of dignity		1	2	3	4	2
Staff was not available	8	16	7	9	12	6
Don't know	9	19	16	22	10	5
Total (n)		**203**		**135**		**49**

Three key observations:

- First, had there been widespread awareness among these women about where and how to reach an appropriate, functional facility, a large proportion of deaths could have been averted.
- Second, if the women referred by a first- or second tier facility reached an appropriate care facility in time, their deaths might have been avoided.
- Third, if a functional referral system had been in place, these women could have been directly referred to a higher level facility without stopping at inappropriate facilities along the way, saving precious time. The major cause of death at facilities was obstetric hemorrhage, which can be treated only within a span of one to two hours.

Figure 5.4 (following page) summarizes the key findings of the study of the deceased women's care-seeking behavior and experiences around the time of their deaths.

Figure 5.4: Care-Seeking Behaviors and Experiences of Deceased Women Around Their Times of Death



Study Limitations

The Made-In/Made-For methodology can only be used when suitable informant networks are available. Since data collection relies on families' memory of the circumstances of a death, some events and details may have been overlooked.

In collected data, deaths among women in early pregnancy may have been missed because respondents were unaware that their deceased relations were pregnant. Sensitive deaths, such as among unmarried women or following induced abortion, may also have been missed due to respondents' fear of stigma and reluctance to disclose.

The community-based informant technique's ability to capture deaths is compromised in areas with scattered communities and remote areas of population because matching cases among networks is not possible for those areas.

Discussion

A maternal death is a grave tragedy that affects the lives of women's children and families, their communities, and society at large. In Pakistan, this tragedy is compounded by the fact that such deaths are largely avoidable with timely and appropriate obstetric care. Regrettably, Pakistan was unable to achieve its Millennium Development Goal (MDG) 5, which required a 75 percent reduction in maternal mortality from 1990 and 2015. To achieve Pakistan's new Sustainable Development Goals, it will be important to periodically update estimates of its maternal mortality, especially for provinces and districts, to identify specific areas where interventions are especially required, and assess overall impacts of existing efforts.

This study used the community-based informant technique Made-In/Made-For to capture maternal deaths at the community level in two Khyber Pakhtunkhwa districts. While the study's main aim was to measure maternal mortality in these districts, it also had a broader objective of demonstrating, to provincial and district health officials, the possibility of periodically obtaining maternal death data through community-based networks and local union council officials. If district estimates are made available to provincial program managers and policy makers on a regular basis, that evidence can be utilized to maintain a focus on maternal health improvement, and justify the prioritization and attention it requires. In both study districts, local institutions' capacities were developed, including District Health Development Centres (DHDCs) and district MNCH and LHW program staff, for use of the Made-In/Made-For methodology.

The principal strength of this study was the participation of the entirety of each district's administration and health officials, who are more cognizant of the maternal health problems rural women face, and are now considering measures to avert such deaths. The districts' officers for community development, additional district officers (e.g. coordination), and secretaries of union councils, and their *naib qasids*, have become fully familiar with the process of collecting data and can continue to use it in the future. The community informant network approach could eventually contribute to improving registration of vital events (births and deaths, by cause) at union council and, subsequently, district levels.

In the long run, these networks could report additional events, for case detection and incidence of communicable diseases, and this was established as another major strength of this study's approach. These networks could play a role in controlling epidemics by identifying outbreak sources. Information collected at the union council level can be collated at the district level and communicated to all relevant departments as well as the provincial headquarters. Another major strength of this methodology is that it can be repeated bi-annually and applied to maternal death measurement prospectively.

The adjusted MMR is 271 (95% CI: 230-310) for Haripur district, and 279 (95% CI: 240-320) for Nowshera district. These estimates may be elevated because of necessary adjustments for geographically large areas with small, widely dispersed populations. The unadjusted MMR, based on 281 physically verified deaths, is quite high, regardless. Haripur's results are slightly better, perhaps because of the district's greater public and private health facility availability and higher levels of literacy.

Many of our findings are in congruence with global as well as existing local evidence. There are similarities between our findings for these two KP districts and those reported for Punjab province, implying that pregnant women in Pakistan experience the same issues and problems, across geographic and cultural boundaries. Most of the deaths reported (73%) occurred by the end of the first postpartum day, while one quarter occurred between the second and forty-second postpartum days. Globally, as well, most maternal deaths occur between late pregnancy and about 48 hours after delivery (AbouZahr 1998).

Most deaths were in hospital settings, but a major predisposing factor was the high proportion of deaths in transport between facilities, during which precious time and opportunities for life-saving care were lost. If communities were informed about where to go and how to reach the appropriate facilities, many women's lives could have been saved.

Maternal complications are unpredictable, and it is not possible to prevent, detect, or treat all causes of maternal deaths during antenatal examinations (Rooney 1992, Carroli et al. 2001). Good antenatal care can, however, help detect high risk cases in which biomedical risk factors can be identified. In our study, almost two thirds of deceased women had at least one biomedical risk factor, with the most important high parity: Nearly half of maternal deaths were among women who were multiparous. Lady Health Workers' roles in antenatal care provision is, noticeably, minimal.

This study reveals the conspicuously acute suffering of poor and illiterate women, reaffirming the persistence of economic barriers and their effect on poor women's access appropriate care. In resource-constrained settings, rich and poor people's disparate access to emergency care is a major reason for poor maternal health outcomes (Pathak et al. 2010). Education also influences care-seeking behaviors, reproductive intentions, contraceptive use, and home hygiene practices (Cleland 2001, Bongaarts 1999). Most pregnancy-related deaths occurred among women of lower and medium-low socio-economic statuses, and respondents admitted that the cost of treatment for the deceased was prohibitive and beyond their means. Cost may have compelled families to resort to nearby facilities, regardless of services—or lack thereof—provided. Improving quality of care, at least for comprehensive emergency obstetric care at rural health centers and *tehsil* headquarters hospitals would improve poor families' access to appropriate care, closer to their homes.

Positive changes in peoples' behaviors and attitudes were discerned in both the quantitative and qualitative components of this study, in addition to the earlier study in Punjab. A large proportion of women, realizing the importance of antenatal care, are more frequently having antenatal check ups. As in the case of Punjab husbands are also more supportive, and are the primary decision-makers for when and where to seek care. The high proportion of facility-based deliveries also reflects a change in health behaviors.

This study's ability to identify cause of death in verbal autopsies and their subsequent disaggregation into direct and indirect causes is important, from both policy and program perspectives. Interventions need to focus on both direct and indirect causes of mortality if maternal mortality is to be improved. Postpartum hemorrhage, the major direct cause of death, accounts for 25 percent of pregnancy-related deaths, while anemia in pregnancy was the major indirect cause; postpartum hemorrhage was also identified as the leading direct cause of maternal death by the Pakistan Demographic and Health Survey 2006-2007.

Conclusions and Recommendations

This study has identified specific areas requiring strong policy and program interventions for improving maternal health outcomes. This study confirms that maternal mortality persists as a major public health issue in Pakistan, and the problem may be much larger than assumed.

According to WHO, the major direct causes of maternal deaths in developing countries continues to be severe bleeding, infections, and hypertension (WHO/UNICEF/UNFPA World Bank 2010). The two major causes of death identified in this study are obstetric hemorrhage and pregnancy-induced hypertension. These conditions should be considered when designing any future interventions, as simple strategies are now available to prevent both, for example, community-based use of misoprostol, by delivering women themselves, in addition to pressure vests, and primary care provider training in the prophylactic use of aspirin and loading dose of magnesium sulfate for the prevention and management of pre-

eclampsia and eclampsia (before referring women to a facility for continuing treatment). Anemia is a major indirect cause of death, implying the urgent need for investing in proper health education, especially pregnant women's dietary needs.

To increase deliveries by skilled birth attendants, the government of KP is expanding its deployment of community midwives, but there is sparse global evidence linking this discrete component with lower maternal mortality (Ronsmans et al. 2003, Borghi et al. 2006). Our findings show that women's lives cannot be saved in acute emergencies unless skilled birth attendants are integrated with a good referral system able to transport women to facilities that can provide comprehensive obstetric care. Skilled birth attendants should be an integral part of a continuum of care that begins with interventions targeting women at home, in communities, and includes outpatient services and respectful care in clinical care settings. Empirical evidence shows that reducing maternal and neonatal mortality is tied to encouraging women to deliver in a clean environment, with technically competent, skilled staff, and equipped with life-saving supplies. Whether deliveries occur at home or are in a facility, a skilled birth attendant linked to an easily approachable and fully functional health system can avert many deaths.

The study also raises issues related to the quality of emergency obstetric care at facilities and the lack of a functional referral system in all districts. Lack of functional primary care facilities is a major factor contributing to maternal deaths worldwide (Maine 19919). A global systematic review of the 'third delay' has revealed that, in the developing world, supply side barriers still exist that compromise health systems' abilities to effectively deal with severe obstetric complications (Knight et al. 213).

The role of high parity in maternal mortality must not be ignored, either. Improving access to family planning information and services must be a key intervention for improving maternal and child health outcomes.

This study has successfully identified different networks that can be used in communities for capturing data on deaths in Pakistan. The Lady Health Workers' network is a reliable source of mortality information; their ability to record women's deaths could be improved through proper training, however. Supplementing information through a second network enhances the probability of capturing deaths. In areas not covered by Lady Health Workers, other potential networks are religious leaders, *Nikah* registrars, and women councilors.

No single approach can adequately meet all requirements for estimating maternal mortality efficiently, and with reliable precision, and so complementary measurement options and opportunities such as the household census and periodic demographic and health surveys must also be considered for results validation.

This study has clearly illustrated the plights of women who, despite poverty, a stringent caste system, and restrictive socio-cultural norms, managed to reach a health facility but still died because of a poorly functioning health system. If progress is to be made and women's health outcomes improved, the health system needs to be strengthened.

With a demonstrated means now at our disposal for estimating the real dimensions and scale of maternal mortality, and elucidating its underlying causes, there is an opportunity for making up for lost time and minimizing avoidable deaths among pregnant women in Pakistan.

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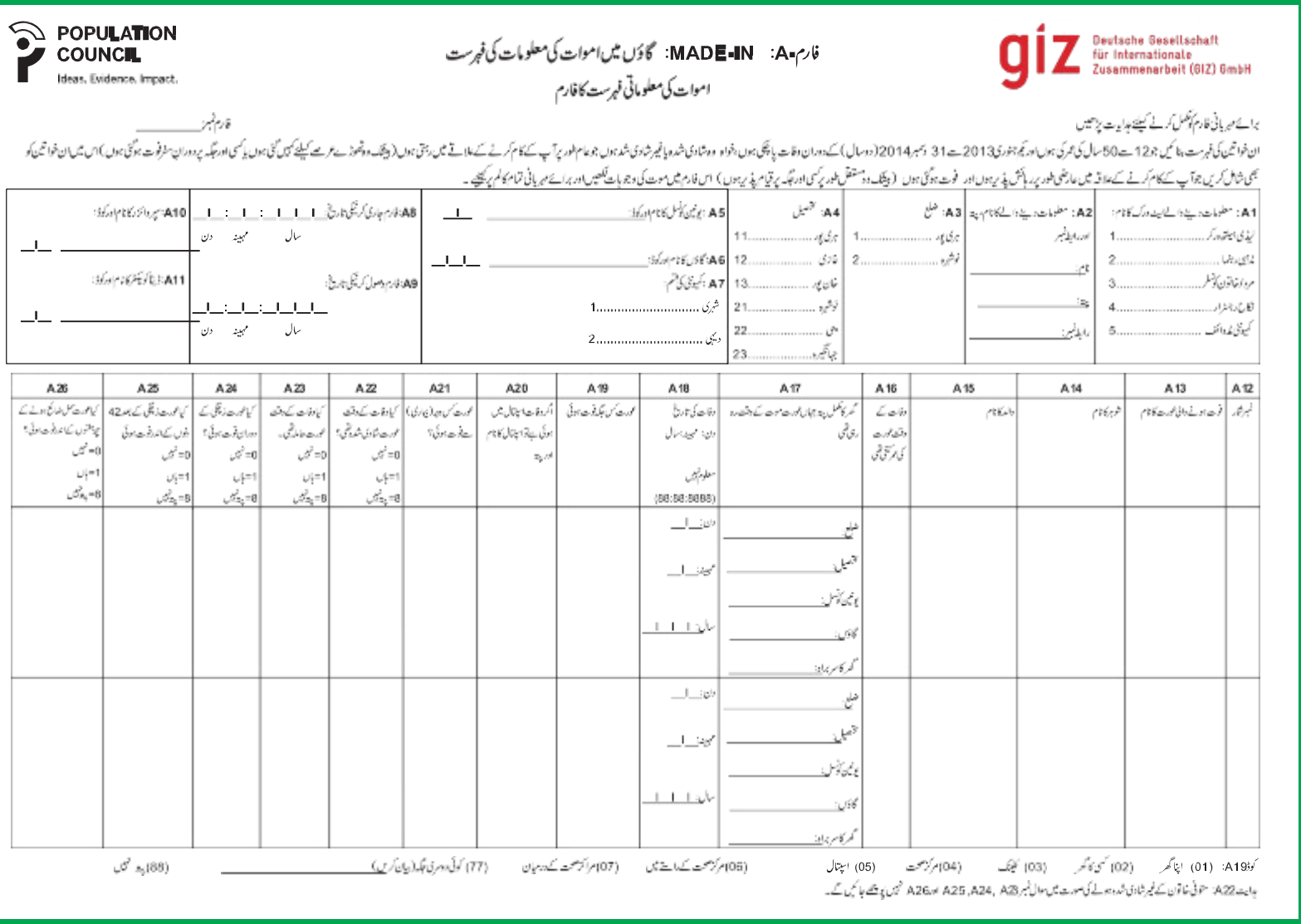
Annexes

Please refer to the PDF document that comprises the annexes referenced in this report.

9. Annexes

9.1 Listing Forms



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فارم-A: MADE-IN: گاؤں میں اموات کی معلومات کی فہرست

اموات کی معلوماتی فہرست کا فارم

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

فارم نمبر: _____

برائے مہربانی فارم مکمل کرنے کیلئے ہدایات پڑھیں

ان خواتین کی فہرست بنائیں جو 12 سے 50 سال کی عمر کی ہوں اور جو جنوری 2013 سے 31 دسمبر 2014 (دو سال) کے دوران وقات پا چکی ہوں خواہ وہ شادی شدہ یا غیر شادی شدہ ہوں، جو عام طور پر آپ کے کام کرنے کے علاقے میں رہتی ہوں (چیک کر لیں) کسی گئی ہوں یا کسی اور جگہ پر دوران سفر فوت ہو گئی ہوں) اس میں ان خواتین کو بھی شامل کریں جو آپ کے کام کرنے کے علاقے میں عارضی طور پر رہائش پذیر ہوں اور فوت ہو گئی ہوں (چیک کر لیں) وہ مستقل طور پر کسی اور جگہ پر قیام پذیر ہوں) اس فارم میں موت کی وجوہات لکھیں اور برائے مہربانی تمام کالم پر کیجئے۔

A1: معلومات دینے والے کا درک کا نام:	A2: معلومات دینے والے کا نام اور پتہ	A3: ضلع	A4: تحصیل	A5: یونین کونسل کا نام اور کوڈ:	A6: گاؤں کا نام اور کوڈ:	A7: کیٹگری کی قسم	A8: فارم جمع کرنے کی تاریخ:	A9: فارم وصول کرنے کی تاریخ:	A10: سپروائزر کا نام اور کوڈ:	A11: ڈیٹا کوڈ کنندہ کا نام اور کوڈ:
1 ..... لیڈی ہیلتھ ورکر	اور رابطہ نمبر	1 ..... ہری پور	11 ..... ہری پور	_ _	_ _ _	شہری 1	_ _ : _ _ : _ _ _ _	_ _ : _ _ : _ _ _ _	_ _	_ _
2 ..... دائی/دایہ	نام:	2 ..... نوشہرہ	12 ..... غازی			دیہی 2	سال مہینہ دن	سال مہینہ دن		
3 ..... مرد/خاتون کونسلر	پتہ:		13 ..... خان پور							
4 ..... کمیونٹی رہنما/دیگر	رابطہ نمبر:		21 ..... نوشہرہ							
5 ..... کمیونٹی عہدیدار/دیگر			22 ..... ہری							
			23 ..... جہانگیرہ							

A12: نمبر شمار	A13: فوت ہونے والی عورت کا نام	A14: شوہر کا نام	A15: والد کا نام	A16: وفات کے وقت عورت کی عمر (سال میں)	A17: گھر کا مکمل پتہ جہاں عورت فوت کے وقت رہ رہی تھی	A18: وفات کی تاریخ دن/مہینہ/سال معلوم نہیں (88:88:8888)	A19: عورت کس جگہ فوت ہوئی	A20: اگر وفات اسپتال میں ہوئی ہے تو اسپتال کا نام اور پتہ	A21: عورت کس وجہ (بیماری) سے فوت ہوئی؟	A22: کیا وفات کے وقت عورت شادی شدہ تھی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	A23: کیا وفات کے وقت عورت حاملہ تھی، دوران زچگی فوت ہوئی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	A24: کیا عورت زچگی کے دوران فوت ہوئی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	A25: کی عورت زچگی کے بعد 42 دنوں کے اندر فوت ہوئی 0=نہیں 1=ہاں 8=پتہ نہیں	A26: کیا عورت حمل ضائع ہونے کے چھ ہفتوں کے اندر فوت ہوئی؟ 0=نہیں 1=ہاں 8=پتہ نہیں
					ضلع: _____ تحصیل: _____ یونین کونسل: _____ گاؤں: _____ گھر کا سربراہ: _____	دن: _ _ مہینہ: _ _ سال: _ _ _ _								
					ضلع: _____ تحصیل: _____ یونین کونسل: _____ گاؤں: _____ گھر کا سربراہ: _____	دن: _ _ مہینہ: _ _ سال: _ _ _ _								

A19 کوڈ: (01) اپنا گھر (02) کسی کا گھر (03) کلینک (04) مرکز صحت (05) اسپتال (05) مرکز صحت کے راستے میں (07) مرکز صحت کے دوران (77) کوئی دوسری جگہ (بیان کریں) _____ (88) پتہ نہیں

ہدایت: A22 غیر شادی شدہ خاتون کے صورت میں سوال نمبر A23, A24, A25, A26 نہیں پوچھے جائیں گے۔

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فارم-B: MADE-IN: گاؤں میں اموات کی معلومات کی فہرست

اموات کی معلوماتی فہرست کا فارم

فارم نمبر: ______

برائے مہربانی فارم کو مکمل کرنے کیلئے ہدایات پڑھیں

جب معلومات دینے والے گاؤں کے گروپس آپس میں بات چیت کر لیں تو ہر گروپ کو چاہیئے کہ وہ ایک حتمی فہرست بنائیں۔ اُن خواتین کی جو 12 سے 50 سال کی عمر میں فوت ہوئیں اور وہ جو ان کے گاؤں میں یکم جنوری 2013 سے 31 دسمبر 2014 (دو سال) کے درمیان فوت ہوئیں۔ ان نئے کیسز کو بھی شامل کریں جو میٹنگ کے دوران علم میں آئے اور ایک جیسے دوہرے کیسز کو ختم کریں۔ میٹنگ کے بعد معاون کار کو چاہیئے کہ وہ ان کیسز کو بھی شامل کرے یا ترمیم کرے جو Mop-up visits سے منتخب ہوئے۔

B7: فارم مکمل کرنے کی تاریخ: __|__:__|__:__|__|__|__ (دن مہینہ سال) B8: سپروائزر کا نام اور کوڈ: ______ __|__ B9: ڈیٹا کولیکٹر کا نام اور کوڈ: ______ __|__	B4: یونین کونسل کا نام اور کوڈ: ______ __|__ B5: گاؤں کا نام اور کوڈ: ______ __|__ B6: کمیونٹی کی قسم: شہری ....1 دیہی 2	B3: تحصیل ہری پور ....11 غازی ....12 خان پور ....13 نوشہرہ ....21 پبی ....22 جہانگیرہ 23	B2: ضلع ہری پور ....1 نوشہرہ 2	B1 معلومات دینے والے کا نام: لیڈی ہیلتھ ورکر ....1 دائی/دایہ ....2 مرد/خاتون کونسلر ....3 نکاح رجسٹرار ....4 کمیونٹی لیڈر/واقف 5

B25	B24	B23	B22	B21	B20	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10
کیا میٹنگ میں موت کی تصدیق ہوئی ہے 0=نہیں 1=ہاں	کیا عورت حمل ضائع ہونے کے چالیس دن کے اندر فوت ہوئی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	کیا عورت زچگی کے بعد 42 دن کے اندر فوت ہوئی 0=نہیں 1=ہاں 8=پتہ نہیں	کیا عورت زچگی کے دوران فوت ہوئی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	کیا وفات کے وقت عورت حاملہ تھی۔ 0=نہیں 1=ہاں 8=پتہ نہیں	کیا وفات کے وقت عورت شادی شدہ تھی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	عورت کس وجہ (بیماری) کے سبب فوت ہوئی؟	اگر وفات ہسپتال میں ہوئی ہے تو ہسپتال کا نام اور پتہ	عورت کس جگہ فوت ہوئی	وفات کی تاریخ دن: مہینہ: سال معلوم نہیں (88:88:8888)	گھر کا مکمل پتہ جہاں عورت موت کے وقت رہ رہی تھی	وفات کے وقت عورت کی عمر کتنی تھی	والد کا نام	شوہر کا نام	فوت ہونے والی عورت کا نام	نمبر شمار
									دن: __|__ مہینہ: __|__ سال: __|__|__|__	ضلع: ______ تحصیل: ______ یونین کونسل: ______ گاؤں: ______ گھر کا سربراہ: ______					
									دن: __|__ مہینہ: __|__ سال: __|__|__|__	ضلع: ______ تحصیل: ______ یونین کونسل: ______ گاؤں: ______ گھر کا سربراہ: ______					

کوڈ B17: (01) اپنا گھر (02) کسی کا گھر (03) پرائیویٹ کلینک (04) پرائیویٹ ہسپتال (05) گورنمنٹ مرکز صحت (06) گورنمنٹ ہسپتال (07) مرکز صحت کے راستے میں (08) مرکز صحت کے درمیان (77) کوئی دوسری جگہ (بیان کریں) ______ (88) پتہ نہیں

M...... __|__

NM... __|__

ہدایت B20: متوفی خاتون کے غیر شادی شدہ ہونے کی صورت میں سوال نمبر B21, B22 اور B23 نہیں پوچھے جائیں گے۔

POPULATION COUNCIL
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فارم-C: MADE-IN: گاؤں میں اموات کی معلومات کی فہرست

اموات کی معلوماتی فہرست کا فارم

برائے مہربانی فارم کو مکمل کرنے کیلئے ہدایات پڑھیں — فارم نمبر: ________

جب معلومات دینے والے گاؤں کے گروپس آپس میں بات چیت کریں تو ہر گروپ کو چاہیئے کہ وہ ایک حتمی فہرست بنائیں ان خواتین کی جو 12 سے 50 سال کی عمر میں فوت ہوئیں اور وہ جو ان کے گاؤں میں یکم جنوری 2013 سے 31 دسمبر 2014 (دو سال) کے درمیان فوت ہوئیں۔ ان نئے کیسز کو بھی شامل کریں جو میٹنگ کے دوران علم میں آئے اور ایک جیسے دوہرے کیسز کو ختم کر دیں۔ میٹنگ کے بعد معاون کار کو چاہیئے کہ وہ ان کیسز کو بھی شامل کرے یا ترمیم کرے جو Mop-up visits سے منتخب ہوئے۔

C1 معلومات دینے والے کا نام:
لیڈی ہیلتھ ورکر 1........
دائی / دائیہ 2........
مرد / خاتون کونسلر 3........
گاؤں کا معزز 4........
کمیونٹی ممبر 5........

C2: ضلع
ہری پور 1........
نوشہرہ 2........

C3: تحصیل
ہری پور 11........
غازی 12........
خانپور 13........
نوشہرہ 21........
پبی 22........
جہانگیرہ 23........

C4: یونین کونسل کا نام اور کوڈ: ________ |__|
C5: گاؤں کا نام اور کوڈ: ________ |__|__|
C6: کمیونٹی کی قسم: شہری 1........ دیہی 2........

C7: فارم مکمل کرنے کی تاریخ: |__|__|__|__| : |__|__| : |__|__| (سال، مہینہ، دن)
C8: سپروائزر کا نام اور کوڈ: ________ |__|
C9: ڈیٹا کلیکٹر کا نام اور کوڈ: ________ |__|

C26 کیا میٹنگ میں موت کی تصدیق ہوئی ہے 0=نہیں 1=ہاں	C25 کیا عورت کسی حادثے کے نتیجے میں فوت ہوئی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	C24 کیا عورت زچگی کے بعد 42 دنوں کے اندر فوت ہوئی 0=نہیں 1=ہاں 8=پتہ نہیں	C23 کیا عورت زچگی کے دوران فوت ہوئی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	C22 کیا وفات کے وقت عورت حاملہ تھی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	C21 کیا وفات کے وقت عورت شادی شدہ تھی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	C20 عورت کس وجہ (بیماری) سے فوت ہوئی؟	C19 اگر ہسپتال میں ہوئی تو ہسپتال کا نام درج	C18 عورت کس جگہ فوت ہوئی	C17 وفات کی تاریخ دن: مہینہ: سال، معلوم نہیں (88:88:8888)	C16 گھر کا مکمل پتہ جہاں عورت موت کے وقت رہ رہی تھی	C15 وفات کے وقت عورت کی عمر کیا تھی	C14 والد کا نام	C13 خاوند کا نام	C12 فوت ہونے والی عورت کا نام	C11 لیڈی ہیلتھ ورکر	C10 نمبر شمار
									دن: __ مہینہ: __ سال: __	ضلع، تحصیل، یونین کونسل، گاؤں، گھر کا سربراہ					لیڈی ہیلتھ ورکر 1، 2، 3، 4، 5	
									دن: __ مہینہ: __ سال: __	ضلع، تحصیل، یونین کونسل، گاؤں، گھر کا سربراہ					لیڈی ہیلتھ ورکر 1، 2، 3، 4، 5	

C18 کا کوڈ: (01) اپنا گھر (02) کسی کا گھر (03) گاؤں کا کلینک (04) مرکز صحت (05) ہسپتال (06) مرکز صحت کے راستے میں (07) مرکز صحت کے درمیان (77) کوئی دوسری جگہ (بیان کریں) ________ (88) پتہ نہیں M...... |__|__| NM... |__|__|

ہدایت C21: غیر شادی شدہ ہونے کی صورت میں سوال نمبر C22, C23, C24 اور C25 نہیں پوچھے جائیں گے صرف C26 پوچھا جائے گا۔

9.2 Verbal Autopsy Questionnaire

PROCESSING CODE

District (Code)	Tehsil (Code)	Union Council (Code)	Village/PSU (Code)	Woman line # (Form-C)

Was the death maternal, non-maternal or late maternal	Maternal ..... 1 Non-maternal ..... 2 Late maternal 3

VERBAL AUTOPSY QUESTIONNAIRE

Informed Consent for the Respondents of Verbal Autopsy

Purpose of the study:
The purpose of this interview is to find out the circumstances of death of your wife/ daughter/ sister/ aunt/ relative. Your answers are very important to us and will help to find better ways to deliver health services to other women in Pakistan to prevent them from dying during pregnancy and in childbirth.

Procedures to be followed:
My name is _____ and I am working with an organization called Population Council, which is a research organization working with the Government of Pakistan to improve the wellbeing of the people. We are conducting a study in two districts of the Khyber Pakhtunkhwa province to estimate the maternal mortality ratio in Khyber Pakhtunkhwa. We would like to seek your cooperation in getting a better idea of the maternal mortality situation in Pakistan, but especially in the Khyber Pakhtunkhwa province.

Discomforts and risks:

If this is not a convenient time for you, we can come later to discuss with you. You may end the interview at any time without penalty or loss. You don't have to answer any questions that you don't want to answer, and you may end this interview at any time you want to. You may feel sad, distressed in recalling the past events. If you do so and want to discontinue the interview you can do so at any time.

Benefits:

There are no direct benefits to you for participating in the study. You may find an indirect benefit in knowing you have participated in an important study that could help others in the future.

Duration of the procedures and study:
We will greatly appreciate if you base your answers on your knowledge regarding the circumstances and cause of death of the deceased woman (to be filled in after exploring relationship). We request you however, to answer as fully as possible because your perceptions and opinions are valuable information.

Your responses to this questionnaire will be completely confidential and will be used for research purposes only. No personal reference will be made to your participation in this survey. We will combine your responses with those of other participants in a report to estimate the maternal mortality and causes of death to get the broader picture regarding maternal health situation in Pakistan.

The interview will take 30-45 minutes to complete. The duration of the entire study is about three months. We may need to contact you again if we need clarification to clear a point, for which you can agree or disagree.

Compensation:
Your participation in this study is purely voluntary and will not be paid any compensation for participation in the study. There is no penalty for refusing to take part. If you agree to participate in this study, you may end your participation at any time without any penalty or loss.

Whom to call in case of an emergency:
If you have a concern about any aspect of the study, you should ask to speak to the researchers who will do their best to answer your questions. Any complaint about the way you have been treated during the study or any possible harm you might suffer will be addressed. You may call Dr Saleem Shaikh at this number 0092-51-8445566 Ext. 195 for any complaints. For information about your rights or in case of violation of rights you may contact Dr Mushtaq Khan Tanoli DHO, Haripur at this number 0995-610997 and Dr Arshad khan DHO Nosehra at this number 0923-580759.

Offer to answer questions and freedom to withdraw from the study:
Your participation in this study is purely voluntary. If you do not agree to participate in the study, you can withdraw from the study at any time without prejudice.

Confidentiality:
Your responses to this questionnaire will be completely confidential and will be used for research purposes only. No personal reference will be made to your participation in this study of measuring maternal mortality. We will combine your responses with those of other participants to describe the general picture in Pakistan. Data will be stored in a locked cabinet dedicated to this study that only the study team can access.

Subject's statement:

"I have been given an opportunity to ask any questions I may have, and all such questions or inquiries have been answered to my satisfaction."

"I further understand that my records will be kept confidential and that I may withdraw from this study at any time.

"My withdrawal from this study or my refusal to participate will in no way affect my medical care from the hospital or clinic.

"I have been informed orally and in writing of whom to contact in case of an emergency. I agree to participate in this study as a volunteer subject."

_____ _____
Date Signature of Volunteer

Investigator's statement:

An example of a suggested statement is as follows:

"I, the undersigned, have explained to the volunteer in a language he/she understands the procedures to be followed in the study and the risks and benefits involved.

_____ _____
Date Signature of Investigator

_____ _____
Date Signature of Witness to the Above Signatures and Explanations

The Informed Consent must include any additional information that applicable Federal, State, or local laws require to be disclosed in order for informed consent to be legally effective.

جواب دہندہ سے انٹرویو کا اجازت نامہ

میرا نام۔۔۔۔۔۔۔۔۔۔۔۔۔۔ ہے اور میرا تعلق پاپولیشن کونسل سے ہے ۔جو تحقیق کا ایک ادارہ ہے اور حکومت پاکستان کے ساتھ مل کر لوگوں کی فلاح و بہبود کے لئے کام کر رہا ہے۔ ہم صوبہ خیبر پختونخواہ میں پیدائش کے عمل کے دوران فوت ہونے والی عورتوں کی شرح کا اندازہ لگانے کے لئے دو اضلاع میں ایک تحقیق کر رہے ہیں ۔ ہمیں اس شرح کا اندازہ لگانے کے لئے آپ کا تعاون درکار ہے۔

تحقیق کا مقصد:۔

اس انٹرویو کا مقصد یہ ہے کہ ان حالات و واقعات کے بارے میں جانا جائے جو خاتون کی موت کی وجہ بنے۔ آپ کی دی گئی معلومات عورتوں کو حمل اور زچگی کے دوران صحت کی بہتر سہولتیں فراہم کرنے اور اموات سے بچانے میں مددگار ہوں گی۔

خدشات:۔

اگر اس وقت آپ مصروف ہیں تو ہم آپ کے ساتھ بات چیت کے لئے بعد میں آجائیں گے۔ آپ جس وقت چاہیں انٹرویو ختم کر سکتی ہیں اور اس کا آپ کو کوئی نقصان نہیں ہوگا۔ آپ کو اس بات کا اختیار ہوگا کہ آپ کو جو سوال اچھا نہ لگے اس کا جواب نہ دیں ۔ ماضی کے واقعات کو یاد کر کے اگر آپ پریشان ہو جائیں اور انٹرویو ختم کر ناچاہیں تو کر سکتی ہیں۔

فائدہ :۔

آپ کو اس تحقیق میں شرکت کرنے کا کوئی براہ راست فائدہ نہیں ہوگا لیکن یہ بات آپ کے لئے سکون کا باعث ہوگی کہ آپ نے ایک ایسی تحقیق میں حصہ لیا ہے جو دوسروں کے لئے فائدہ مند ہے۔

انٹرویو کا دورانیہ:۔

یہ بات ہمارے لئے باعث اطمینان ہوگی کہ آپ کی دی گئی معلومات اُن حالات و واقعات کی بنیاد پر ہوں جو خاتون کی موت کی وجہ بنے۔ہم آپ سے درخواست کریں گے کہ آپ سوالات کا تفصیلی جواب دیں کیونکہ آپ کی آراء اور معلومات قیمتی ہیں ۔آپ کی معلومات مکمل طور پر صیغہ راز میں رکھی جائیں گی اور صرف تحقیق کے لئے استعمال ہوں گی۔ آپ کی کوئی ذاتی معلومات انٹرویو میں شامل نہیں ہو گی۔ ہم آپ کے جوابات کو دوسرے لوگوں کے جوابات کے ساتھ ایک رپورٹ میں جمع کریں گے تاکہ ماوں کی شرح اموات ، اموات کی وجو ہات کا بہتر اندازہ لگایا جا سکے۔ انٹرویو مکمل کرنے میں 45-30 منٹ لگیں گے۔ تحقیق کا مکمل دورانیہ تقریبا تین مہینے ہے۔ ہوسکتا ہے کہ کسی بات کی وضاحت کے لئے آپ سے دوبارہ رابطہ کریں ۔.

ادائیگی:۔

آپ کی اس تحقیق میں شرکت خالصتا رضاکارانہ ہوگی اور آپ کو کوئی مالی ادائیگی نہیں کی جائے گی۔ اگر آپ اس تحقیق میں شرکت نہ کرنا چاہیں تو آپ پر کوئی جرمانہ بھی نہ ہوگا۔اگر آپ رضامند ہیں تو انٹر ویو شر وع کیا جا سکتا ہے آپ جس وقت چاہیں انٹرویو چھوڑ سکتی ہیں ۔

ہنگامی صورتحال میں کسی سے رابطہ کرنا ہے :۔

اگر تحقیق کے کسی پہلو کے بارے میں آپ کو کوئی خدشات ہوں تو آپ محقیقین سے رابطہ کر سکتی/سکتے ہیں وہ آپ کے سوالات کے جوابات دے کر آپ کو مطمئن کرنے کی کوشش کریں گے۔ آپ کسی بھی شکایت کے لئے ڈاکٹر سلیم شیخ سے اس نمبر پر رابطہ کر سکتے/سکتی ہیں ۔ **-051) 8445566)**

آپ اپنے حقوق کے بارےمیں جاننے یا اُن کی خلاف ورزی کی صورت میں ڈاکٹرمشتاق خان تنولی(جوکہ DHO،ہری پور-**0995** , **610997** اور ڈاکٹرارشدخان جوکہ DHO نوشہرہ ہیں 0923-580759 ان سے رابطہ کر سکتے /سکتی ہیں ۔

سوالات کے جوابات دینے اور تحقیق میں حصہ نہ لینے کی پیشکش:۔

آپ کی اس تحقیق میں شرکت مکمل طور پر رضاکارانہ ہے اگر آپ تحقیق میں حصہ نہ لینا چاہیں یا کسی بھی موقع پر تحقیق میں حصہ نہ لینا چاہیں تو آپ بغیر وجہ بتائے چھوڑ سکتے / سکتی ہیں۔

رازداری :۔

آپ کے جوابات مکمل طورپر رازداری میں رکھے جائیں گے اور صرف تحقیقی مقاصد کے لئے استعمال کئے جائیں گے ۔ شرح اموات کا اندازہ لگانے کی اس تحقیق میں آپ کی شرکت کا کوئی ذاتی حوالہ نہیں دیا جائے گا۔

ہم آپ کی رائے کو دوسرے جواب دہندہ لوگوں کی رائے کے ساتھ ملائیں گے ۔ آپ کی دی گئی معلومات کو ایک تالابند الماری میں رکھا جائے گا اور صرف تحقیقی ٹیم کی اس تک رسائی ہوگی۔

اعترافی بیان:۔

مجھے سوالات کرنے کا پورا موقع دیا گیا اور تمام سوالات کے تسلی بخش جوابات دیئے گے ۔ مجھے مزید یہ بھی سمجھایا گیا کہ میرے تمام معلومات راز میں رکھی جائیں گی اور یہ کہ میں کسی بھی وقت اس تحقیق سے الگ ہو سکتا/سکتی ہوں ۔ تحقیق سے علیحدگی صحت کی سہولت سے میرے علاج پر اثر انداز نہیں ہوگی۔ مجھے یہ بھی بتایا گیا کہ ہنگامی صورتحال میں کس سے رابطہ کرنا ہے۔ میں اس تحقیق میں رضاکارانہ طور پر شرکت کر رہا/رہی ہوں

جواب دہندہ کے دستخط:---------- تاریخ:----------

انٹرویو کرنے والے /والی کا بیان :۔

میں نے جواب دہندہ کو اس کی زبان میں تحقیق کے سارے مقاصد اور مراحل سے آگاہ کر دیا ہے اور ممکنہ خدشات اور فوائد کے بارے میں بھی بتا دیا ہے۔

انٹرویو کرنے والے /والی کے دستخط:---------- تاریخ:----------

SECTION-A: IDENTIFICATION

A1- Name of District	
1 – Haripur	2 – Nowshera
A2- Name of Tehsil	
11 - Haripur 12 - Ghazi	21 - Nowshera 22 – Pabbi 23 – Jahangira

A3- Name and code of Union Council __|__|__

A4- Name and code of village/PSU __|__|__

A5- Woman line number (From Form-C) __|__

A6-Type of network **(Circle all death reporting networks)**	LHW .....1 Religious Leader .....2 M / F Councilor .....3 Nikah Registrar .....4 CMW.....5

A7-Complete address of household

A8- Number of visits to complete the interview __|__

A9- Duration of interview __|__ (Minutes)

A10-Date of last visit for interview __|__:__|__:__|__|__|__ DD MM YYYY

A11-Name and code of interviewer __|__|__

A12-Result of interview	Complete..... 01	HH not found..... 04	Out of criteria (Age).....07
	Incomplete 02	Shifted 05	Out of criteria (Year).....08
	Refused..... 03	Duplicate 06	Others (Specify) 77

If A12 > 02 then end interview

SECTION-B: INFORMATION ABOUT THE RESPONDENT

Q.NO.	Questions and Filters	Coding Categories
B1 **(2A120)**	Name of verbal autopsy respondent: _____ انٹرویو دینے والی/ والے کا نام Complete address of respondent: انٹرویو دینے والی/ والے کا مکمل ایڈریس _____	
B2 **(2A110)**	What is your relationship to the deceased? آپ کا مرحومہ سے کیا رشتہ ہے؟	Husband ..... 01 Father/Mother ..... 02 Sibling ..... 03 Parent in Law ..... 04 Sibling in Law ..... 05 Neighbor ..... 06 Son/Daughter ..... 07 Son/Daughter in law ..... 08 Uncle ..... 09 Aunt ..... 10 Cousin ..... 11 Nephew ..... 12 Niece ..... 13 Other relative (specify) ..... 77 No relation 97
B3	Gender of the Respondent انٹرویو دینے والی/ والے کی جنس	Male ..... 1 Female 2
B4 **(2A115)**	Did you live with the deceased in the period leading to her death? جس وقت مرحومہ کی موت واقع ہوئی تو کیا آپ اس عرصے میں اس کے ساتھ رہتی/رہتے تھے؟	Yes ..... 1 No..... **(Go to B6)** 2
B5	Since how long you were living with the deceased? آپ کتنے عرصے سے مرحومہ کے ساتھ رہ رہی تھیں/تھے؟	(a) Weeks ..... __|__ (b) Months ..... __|__ (c) Years..... __|__ Don't know..... 88
B6	Were you present with deceased at the time of death کیا مرحومہ کی موت کے وقت آپ اس کے پاس موجود تھیں/ تھے؟	Yes ..... 1 No..... 2

SECTION-C: DECEASED WOMAN'S HOUSEHOLD CHARACTERISTICS

In order to get an idea of the socio-economic conditions of the deceased woman we shall ask a few questions related to her (deceased woman's) living conditions

مرحومہ کی سماجی اور معاشی حالات کا اندازہ لگانے کے لیے ہم اس کے روزمرہ کی زندگی سے متعلق کچھ سوالات کریں گے

Q.NO.	Questions and Filters	Coding Categories	
C1	What is the main source of drinking water of deceased's household. مرحومہ کے گھر میں پینے کے پانی کا اہم ذریعہ کیا ہے؟	Govt. supply (tap water inside)	01
		Govt. supply (communal)	02
		Motorized/Hand pump (inside)	03
		Motorized/Hand pump (outside)	04
		Well (inside)	05
		Well (outside)	06
		Tube-well	07
		River/Canal/Stream	08
		Pooled/Pond water	09
		Others **[Specify]**	77
C2	What kind of toilet facility do deceased's household members usually use? عموماً مرحومہ کے گھر والے بیت الخلاء کے لیے کس طرح کی سہولت استعمال کرتے ہیں؟	Flush to sewerage	01
		Flush connected to septic tank	02
		Flush connected to open drain	03
		Raised latrine	04
		Pit latrine	05
		In fields	06
		Others **[Specify]**	77
C3	What is the main type of fuel used for cooking in the household? گھر میں کھانا پکانے کے لیے ایندھن کے کون سے ذرائع استعمال ہوتے ہیں **(Please observe)**	Fire wood	01
		Kerosene oil	02
		Gas Cylinder	03
		Natural gas (Sui gas)	04
		Dung Dry	05
		Charcoal/Coal	06
		Others **[Specify]**	77
C4	What is the main material of the roof of the house? **(Please observe)** گھر کی چھت کس چیز کی بنی ہوئی ہے؟	Concrete	01
		Iron sheet	02
		Guarder and T-iron	03
		Wood/Bamboo and mud	04
		Other s**[Specify]**	77

Q.NO.	Questions and Filters	Coding Categories
C5	What is the main material of the floor of the house? گھر کا فرش کس چیز کا بنا ہوا ہے؟ **(Please observe)**	Earth/sand/mud ..... 01 Chips ..... 02 Ceramic tiles ..... 03 Marble ..... 04 Cement ..... 05 Bricks ..... 06 Others**[Specify]**..... 77
C6	What is the main material of the walls of the house? گھر کی دیواریں کس چیز کی بنی ہوئی ہیں؟ **(Please observe)**	Burnt bricks/Blocks..... 01 Mud bricks/Mud..... 02 Wood/Bamboo ..... 03 Stones ..... 04 Others **[Specify]**..... 77

1. Does the household of the deceased have the following: کیا مرحومہ کے گھر میں درج ذیل اشیاء موجود ہیں؟

	Household possessions	**Yes**	**No**
a	Wall Clock	1	2
b.	Chairs	1	2
c.	Bed	1	2
d.	Sofa	1	2
e.	Electricity	1	2
f.	Sewing Machine	1	2
g.	Camera	1	2
h.	Radio/tape recorder	1	2
i.	Television	1	2
j.	Refrigerator	1	2
k.	Land line telephone	1	2
l.	Mobile telephone	1	2
m.	Room cooler/ air conditioner	1	2
n.	Washing machine	1	2
o.	Cycle	1	2
p.	Motor cycle	1	2
q.	Jeep/ car	1	2
r.	Tractor	1	2
s.	Personal computer	1	2

SECTION-D: DECEASED WOMAN'S BACKGROUND CHARACTERISTICS

Now I would like to ask you some questions related to deceased woman's background characteristics

اب ہم مرحومہ سے متعلق کچھ ایسے سوالات کریں گے جو ہمیں اس کے پس منظر اور خصوصیات کے بارے میں معلومات فراہم کریں گے۔

Q.NO.	Questions and Filters	Coding Categories
D1 (1A100)	What was the name of the deceased woman? مرحومہ کا نام کیا تھا؟ _____	
D2 (1A200)	Is date of birth / year known? کیا آپ کو مرحومہ کی تاریخ پیدائش معلوم ہے؟	Yes..... 1 No ..... **(Go to D4)** 2
D3 (1A210)	When was the deceased born? مرحومہ کی پیدائش کب ہوئی تھی؟	__|__:__|__:__|__|__|__ DD MM YYYY
D4 (1A220)	Is date of death / year known? کیا اس کی موت کی تاریخ معلوم ہے؟	Yes..... 1 No ..... **(Go to D6)** 2
D5 (1A230)	When did she die? اس کی موت کب واقع ہوئی؟	__|__:__|__:__|__|__|__ DD MM YYYY
D6 (1A240)	How old was the deceased when she died? جب اس کی موت واقع ہوئی تو اس کی عمر کیا تھی؟	Age in years..... __|__
D7 (1A500)	What was her citizenship/nationality? اس کی شہریت/قومیت کیا تھی؟	Pakistani..... 1 Afghani..... 2 Others (Specify) 7
D8 (1A510)	What was her ethnicity? (mother tongue) اس کا تعلق زبان/لسانی لحاظ سے کس طبقے سے تھا؟	Punjabi ..... 01 Sindhi ..... 02 Balochi ..... 03 Pakhtun..... 04 Saraiki ..... 05 Hindko ..... 06 Others (Specify) 77
D9 (1A520)	What was her place of birth? وہ کہاں پیدا ہوئی تھی؟	a) Province ..... b) District ..... c) Tehsil..... d) UC .....
D10	At the time of death was she living in a nuclear or joint family? موت کے وقت وہ کس قسم کے خاندان میں رہتی تھی؟	In nuclear family ..... 1 In joint family..... 2
D11 (1A630)	What is /was the name of her mother? اس کی ماں کا نام کیا ہے/تھا؟	
D12 (1A620)	What is / was the name of her father? اس کے باپ کا کیا نام ہے/تھا؟	
D13	What is/ was the name of her husband? اس کے شوہر کا کیا نام ہے/تھا؟	

D14 **(1A640)**	Was she able to read and write? کیا وہ پڑھنا لکھنا جانتی تھی؟	Only read ..... 1 Both read and write ..... 2 None.....**(Go to D16)** ..... 3 Don't know 8
D15 **(1A650)**	What was her highest level of schooling? اس کی تعلیم کیا تھی؟	No formal education ..... 0 Primary ..... 1 Middle ..... 2 Matriculation ..... 3 Intermediate ..... 4 Higher ..... 5 Don't know 8
D16 **(1A670)**	What was her occupation, that is, what kind of work did she mainly do? اس کا پیشہ کیا تھا؟ یعنی وہ کس طرح کا کام کرتی تھی؟	Employed ..... 01 Unemployed ..... 02 Self-employed ..... 03 Not economically active ..... 04 House wife ..... 05 Student ..... 06 Others (specify) ..... 77 Don't know 88
D17 **(1A680)**	What is/ was the main occupation of her husband? اس کے خاوند کا پیشہ کیا ہے /تھا ؟	Agriculture/Livestock/Poultry ..... 01 Petty trader ..... 02 Labor (Daily wages) ..... 03 Government service ..... 04 Private service ..... 05 Own business ..... 06 Abroad ..... 07 Unemployed ..... 08 Skilled worker ..... 09 Retired ..... 10 Others (Specify) ..... 77 Don't know 88
D18	What is / was the monthly income of her husband? اس کے خاوند کی ماہانہ آمدن کیا ہے/ تھی ؟	Rupees..... __|__|__|__|__|__ Don't know 888888
D19	What is /was the level of schooling of her husband? اس کے خاوند کی تعلیم کتنی ہے / تھی ؟	No formal education ..... 1 Primary ..... 2 Middle ..... 3 Matriculation ..... 4 Higher ..... 5 Don't know 8

SECTION-E: BIRTH AND PREGNANCY INFORMATION

Now I would like to ask you some questions related deceased woman's pregnancies and births.

اب ہم مرحومہ خاتون کے حمل اور پیدائشوں سے متعلق سولات کریں گے

Q.NO.	Questions and Filters	Coding Categories
E1 (1A600)	What was her marital status at the time of death? موت کے وقت اس کی ازدواجی حیثیت کیا تھی؟	Never married…**(Go to section-F)** ..... 1 Married ..... 2 Widow ..... 3 Divorced ..... 4 Separated 5
E2 (1A610)	What was the date of marriage or year? اس کی شادی کی تاریخ کیا تھی؟	__|__:__|__:__|__|__|__ DD MM YYYY Don't know 88:88:8888
E3	How old was the deceased when she got married? جب اس کی شادی ہوئی تو اس وقت اس کی عمر کیا تھی؟	Age in years ..... __|__ Don't know 88
E4	Did she get pregnant in her lifetime? کیا وہ اپنی پوری زندگی میں حاملہ ہوئی تھی؟	Yes ..... 1 No……**(Go to section-F)** 2
E5	How many times did she get pregnant in her lifetime? وہ کتنی بار حاملہ ہوئی تھی؟	Number of pregnancies ..... __|__ First pregnancy 96
E6 (3C230)	How many live births did she have in her lifetime? اس نے کتنے زندہ بچوں کو پیدا کیا؟ **(If no live birth write "00")**	(a) Total ..... __|__ (b) Son(s) ..... __|__ (c) Daughter(s) ..... __|__ Don't know 88
E7	How many of her pregnancies resulted in spontaneous and induced abortion(s)? اس کے کتنے حمل کا نتیجہ ارادی یا غیر ارادی اسقاط حمل کی صورت میں نکلا؟ **(If no abortion write "00")**	(a) Total abortion(s) ..... __|__ (b) Spontaneous abortion(s) ..... __|__ (c) Induced abortion(s) ..... __|__ Don't know 88
E8	How many stillbirths did she have in her lifetime? اس نے کتنے مردہ بچوں کو پیدا کیا؟ **(If no stillbirth write "00")**	(a) Total ..... __|__ (b) Son(s) ..... __|__ (c) Daughter(s) ..... __|__ Don't know 88
E9	How many of her children are living now? اس وقت اس کے کتنے بچے زندہ ہیں؟ **(If no living child write "00")**	(a) Total ..... __|__ (b) Son(s) ..... __|__ (c) Daughter(s) ..... __|__ Don't know 88

Pregnancy History

E10	E11	E12	E13	E14	E15	E16
SNO	List all pregnancies حمل کی فہرست (Start from last pregnancy)	Duration of pregnancy in months حمل کا دورانیہ [مہینوں میں] Less than 1 month = 00 Don't know = 88	Outcome of pregnancy حمل کا نتیجہ 1. Live birth 2. Still birth 3. Spontaneous abortion 4. Induced abortion 5. Multiple births **(Write code below)** (If still birth, spontaneous or induced abortion **GO to next pregnancy**)	Is child still alive کیا بچہ ابھی زندہ ہے؟ 1. Yes 2. No **(Write code below)**	Gender of child بچے کی جنس 1. Boy 2. Girl **(Write code below)**	Age of child in days, or months (If died age at death) بچوں کی عمریں [اگر فوت ہوگئے ہیں تو موت کے وقت عمر] [دن/مہینے] Don't know = 88
1	Last	__|__				D: __|__ M: __|__ Y: ___|___
2	2nd last	__|__				D: __|__ M: __|__ Y: ___|___
3	3rd last	__|__				D: __|__ M: __|__ Y: ___|___
4	4th last	__|__				D: __|__ M: __|__ Y: ___|___
5	5th last	__|__				D: __|__ M: __|__ Y: ___|___
6	6th last	__|__				D: __|__ M: __|__ Y: ___|___
7	7th last	__|__				D: __|__ M: __|__ Y: ___|___
8	8th last	__|__				D: __|__ M: __|__ Y: ___|___
9	9th last	__|__				D: __|__ M: __|__ Y: ___|___
10	10th last	__|__				D: __|__ M: __|__ Y: ___|___
11	11th last	__|__				D: __|__ M: __|__ Y: ___|___
12	12th last	__|__				D: __|__ M: __|__ Y: ___|___
13	13th last	__|__				D: __|__ M: __|__ Y: ___|___
14	14th last	__|__				D: __|__ M: __|__ Y: ___|___
15	15th last	__|__				D: __|__ M: __|__ Y: ___|___
16	16th last	__|__				D: __|__ M: __|__ Y: ___|___

SECTION-F: INFORMATION RELATED TO PLACE OF DEATH

موت کی جگہ سے متعلق معلومات

Q.NO.	Questions and Filters	Coding Categories
F1 (1A550)	Where did death occur (location)? اس کی موت کہاں واقع ہوئی؟ [جگہ]	a) Province ..... __|__ b) District ..... __|__ c) Tehsil ..... __|__ d) UC ..... __|__
F2 (1A560)	What was the place of death? اس کی موت کی جگہ کیا تھی؟	Husband's home .....1 Mother/Father's home .....2 Neighbor/Relative's home .....3 At health facility .....**(Go to F4)** .....4 On way to health facility .....**(Go to F5)**.....5 Others (Specify).....7
F3	If she died at home, who provided the treatment? اگر وہ گھر پر فوت ہوئی تو اس کو علاج کس نے مہیا کیا؟	No one .....00 Doctor .....01 LHV/Nurse.....02 LHW .....03 TBA/Dai .....04 CMW .....05 Hakeem/Homeopath .....06 Relative/Friend .....07 Others (Specify) 77
F4	If she died within a health facility, what was the name and address of the health facility? اگر وہ کسی صحت کی سہولت پر فوت ہوئی تو اس صحت کی سہولت کس سطح کی تھی؟ **Write address of facility here** نام اور ایڈریس یہاں لکھیں _____ _____	DHQ.....01 THQ.....02 RHC .....03 BHU .....04 Teaching Hospital .....05 Private hospital .....06 Private clinic.....07 Others (Specify) 77
F5	What was the state of pregnancy at the time of her death? اس کی موت کن دنوں میں واقع ہوئی؟	During pregnancy..... 1 During delivery..... 2 Within 42 days of delivery ..... 3 After 42 days but less than 1 year 4
F6	In the final days before death, did she travel to a hospital or health facility? موت کے آخری ایام میں، کیا مرحومہ نے کسی ہسپتال یا صحت کے مرکز سے رجوع کیا؟یعنی وہ وہاں گئی تھی؟	Yes..... 1 No..... **(Go to G1)** ..... 2 Don't know..... **(Go to G1)** 8

Q.NO.	Questions and Filters	Coding Categories		
F7	If yes how many facilities did she visit before reaching final faciliy where she died? اگر ہاں تو صحت کی کتنی سہولیات پر مرحومہ کا لیکے جایا گیا؟	Number of facilities .....__|__ Don't know 88		
F8	What was the level of Treatment /Contact facility علاج کے لیے کس سطح کے صحت کے مرکز پر لے جایا گیا؟	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	DHQ	01	01	01
	THQ	02	02	02
	RHC	03	03	03
	BHU	04	04	04
	Teaching Hospital	05	05	05
	Other Govt. Hospital	06	06	06
	Private Hospital	07	07	07
	Private Clinic	08	08	08
	Others (Specify)	77	77	77
	Don't know	88	88	88
F9	Who provided treatment at the contact /referral facility ریفرل والی سہولت پر کس نے علاج فراہم کیا؟	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	Gynecologist	01	01	01
	Doctor	02	02	02
	Nurse	03	03	03
	Lady Health Visitor (LHV)	04	04	04
	Lady Health Worker (LHW)	05	05	05
	Traditional Birth Attendant (TBA)	06	06	06
	Dispenser	07	07	07
	Female Health Technician (FHT)	08	08	08
	Male Health Technician (MHT)	09	09	09
	Others (Specify)	77	77	77
	Don't know	88	88	88
F10	What was the reason for shifting from health facilities? صحت کے مرکز سے رجوع یا ریفرل کی بنیادی وجہ کیا تھی؟	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	Facility was not equipped	01	01	01
	No facility for surgery	02	02	02
	No blood transfusion facility	03	03	03
	Lack of equipment and consumables	04	04	04
	Routine Check-up	05	05	05
	Booked case	06	06	06
	Delivery	07	07	07
	C- Section	08	08	08
	Abnormal lie/ Presentation	09	09	09
	High BP	10	10	10
	Anemia	11	11	11
	Fits	12	12	12
	Unconsciousness	13	13	13
	Others (Specify)	77	77	77
	Don't know	88	88	88

Q.NO.	Questions and Filters	Coding Categories		
F11	What was the time taken to reach the facility (From home to 1st, 1st to 2nd, 2nd to 3rd facility)	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	ہسپتال تک پہنچنے کے لیے کتنا وقت لگا تھا؟ Minutes	__|__	__|__	__|__
	[پہلے ، دوسرے، تیسرے مرکز صحت پر] Hours	__|__	__|__	__|__
	Don't know	88	88	88
F12	What was the duration of stay (At each facility) علاج کی غرض سے ہر صحت کے مرکز میں کتنی دیر رہے [ہر سہولت پر]	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	Minutes	__|__	__|__	__|__
	Hours	__|__	__|__	__|__
	Don't know	88	88	88
F13 **(4A130)**	Were there any problems in the following with the way she was treated in the hospital or health facility? جس ہسپتال یا صحت کی سہولت پر خاتون کا علاج ہوا وہاں پر کون کون سے مسائل پیش آئے؟	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	(1) None	00	00	00
	(2) Admission	01	01	01
	(3) Medical treatment	02	02	02
	(4) Medication **(4A140)**	03	03	03
	(5) Diagnostic/ Laboratory Tests **(4A140)**	04	04	04
	(6) Blood transfusion	05	05	05
	(7) Procedures	06	06	06
	(8) Provider's attitude	07	07	07
	(9) Respect shown to her	08	08	08
	(10) Maintenance of dignity	09	09	09
	(11) Staff was not available	10	10	10
	(12) Others (Specify)	77	77	77
	(13) Don't know	88	88	88
F14	Where did the death occur مرحومہ کی موت کہاں واقع ہوئی؟	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	At referral facility	1	1	1
	On the way to referral facility	2	2	2
	At home	3	3	3
F15	At the time of final illness who was involved in decision making for treatment? موت کے آخری ایام میں علاج معالجے کا فیصلہ کرنے میں کون کون شامل تھا؟ **(Multiple responses are allowed)**	Patient herself.....01 Husband.....02 Father.....03 Mother.....04 Father in law .....05 Mother in law .....06 Brother.....07 Sister .....08 Brother in law 09		

Q.NO.	Questions and Filters	Coding Categories
		Sister in law.....10 Others (specify).....77 Don't know.....88
F16	After acute symptoms developed, Was the decision taken Immediately? کیا فیصلہ فوری کیا گیا؟	Yes.....**(Go to F18)** ..... 1 No..... ..... 2 Don't know 8
F17	How long was the delay in making decision? فیصلہ کرنے میں کتنی دیر لگی تھی؟	(a) Minutes ..... __|_ _ (b) Hours ..... __|_ _ (c) Days ..... __|_ _ Don't know 88
F18	What were the reasons for the delay? فیصلہ میں دیر ہونے کی کیا وجوہات تھیں؟ **(Multiple responses are allowed)**	Deceased woman refused to go to hospital .. 01 Health facility was too far ..... 02 No transport was available ..... 03 No money was available ..... 04 Husband was away ..... 05 Husband didn't agree ..... 06 Elder woman / TBA didn't agree..... 07 Others (Specify) ..... 77 Don't know 88
F19	Was it difficult to find the funds to send the woman for treatment? کیا خاتون کو علاج کے لیے رقم جمع کرنے میں کوئی مسئلہ درپیش تھا؟	Yes..... 1 No ..... 2 Don't know 8
F20	At the time of final illness after leaving home, what type of transport did she use to reach the health facility? گھر سے نکلنے کے بعد صحت کی سہولت تک پہنچنے کے لیے کس قسم کی ٹرانسپورٹ کا استعمال کیا گیا؟	On foot..... 01 Bus/Van..... 02 Ambulance ..... 03 Car/Jeep/Taxi..... 04 Motorcycle..... 05 Cycle..... 06 Tanga ..... 07 Trolley ..... 08 Animal cart..... 09 Rickshaw ..... 10 Others (Specify) 77
F21	Were you satisfied with the way she was treated? مرحومہ کا جس طرح علاج کیا گیا، تو کیا آپ اس سے مطمئن ہیں؟	Yes..... 1 No ..... 2 Don't know 8

Q.NO.	Questions and Filters	Coding Categories
F22 **(4A170)**	In the final illness before death, was traditional medicine used? بیماری کے آخری ایام میں کیا اسے کوئی گھریلو دوا دی گئی؟	Yes..... 1 No ..... 2 Don't know 8
F23 **(4A190)**	Over the course of illness, did the total costs of care and treatment prohibit other household payments? علاج معالجے کے اخراجات کی وجہ سے گھر کا کوئی دوسرا خرچہ متاثر ہوا؟	Yes..... 1 No ..... 2 Don't know 8

SECTION-G: CONTEXT AND HISTORY OF PREVIOUS KNOWN MEDICAL CONDITIONS

I would like to ask you some questions concerning the context and previously known medical conditions the deceased had; prior to death she was diagnosed with name of disease?

اب میں آپ سے مرحومہ کی طبی حالات سے متعلق سوالات کروں گی، ہر بیماری کو پڑھیں ، اس کے بارے میں پوچھیں اور اگر جواب ہاں میں ہو تو اس کے عرصے [ہفتوں، مہینوں] کے بارے میں پوچھیں کہ موت سے کتنا عرصہ پہلے اس بیماری کی تشخیص ہوئی تھی؟

S.No.	Disease	Yes ..... No ..... Don't Know
G1 **(3A100)**	Tuberculosis تپ دق	1 .....2 8
G2 **(3A110)**	HIV/AIDS ایچ آئی وی ایڈز	1 .....2 8
G3 **(3A120)**	Positive test for Malaria ملیریا کا پازیٹیو ٹیسٹ	1 .....2 8
G4 **(3A130)**	Negative test for Malaria ملیریا کا نیگٹیو ٹیسٹ	1 .....2 8
G5 **(3A140)**	Measles خسرہ	1 .....2 8
G6 **(3A150)**	High Blood Pressure بلند فشار خون / ہائی بلڈ پریشر	1 .....2 8
G7 **(3A160)**	Heart Disease دل کی بیماری	1 .....2 8
G8 **(3A170)**	Diabetes شوگر	1 .....2 8
G9 **(3A180)**	Asthma دمہ	1 .....2 8
G10 **(3A190)**	Epilepsy مرگی	1 .....2 8
G11 **(3A200)**	Cancer سرطان/کینسر	1 .....2 8
G12 **(3A210)**	Chronic Obstructive Pulmonary Disease	1 .....2 8

	پھیپڑوں کی پرانی بیماری	
G13 **(3A220)**	Dementia دماغی بیماری	1 .....2 8
G14 **(3A230)**	Depression ذہنی دباو	1 .....2 8
G15 **(3A240)**	Stroke فالج	1 .....2 8
G16 **(3A250)**	Sickle Cell disease خون کے سرخ خلیوں کی بیماری	1 .....2 8
G17 **(3A260)**	Kidney disease گردوں کی بیماری	1 .....2 8
G18 **(3A270)**	Liver disease / Jaundice جگر کی بیماری / یرقان	1 .....2 8

SECTION-H: HISTROY OF DEATH DUE TO INJURY/ACCIDENTS/VIOLENCE

I would like to ask you some questions concerning the context and previously known medical conditions the deceased had; injuries and accidents that the deceased suffered; and signs and symptoms that the deceased had/showed when she was ill. Some of these questions may not appear to be directly related to her death.

اب میں آپ سے مرحومہ کی طبی حالات سے متعلق سوالات کروں گی، جیسا کہ کوئی زخم ، حادثہ وغیرہ ہوا ہو، جس میں مرحومہ کو کوئی نقصان پہنچا ہو؛ اور کوئی علامات ظاہر ہوئی ہو جب وہ بیمار تھی۔ اس میں سے بہت سارے سوالات ایسے ہونگے جن کا تعلق براہ راست مرحومہ کی موت سے نہیں ہوگا۔

Q.NO.	Questions and Filters	Coding Categories
H1 (3A300)	For how long was she ill before she died? مرنے سے پہلے کتنے عرصے سے وہ بیمار تھی؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ (c) Number of months ..... __|__ Don't know 88
H2 (3E100)	Did she suffer from any injury or accident that led to her death? کیا اس کو کوئی ایسا زخم آیا یا ایساحادثہ ہوا، جس کی وجہ سے اس کی موت واقع ہوئی؟	Yes .....1 No.....**(Go to H4)**.....2 Don't know.....**(Go to H4)**.....8
H3	What kind of injury/accident was it? اس زخم یا/ حادثے کی نوعیت کیا تھی؟	Road traffic accident .....01 Fall .....02 Drowning.....03 Poisoning.....04 Burns .....05 Violence/assault/homicide/abuse .....06 Natural calamity.....07 Fire arm .....08 Stab/Cut/ Pierce.....09 Hurt by animal.....10 Other (Specify) .....77 Don't know.....88
H4	Did she suffer from any plant/animal/insect bite or sting that led to her death? کیا اس کی موت کسی پودے/جانور/ کیڑے کے کاٹنے یا ڈنگ مارنے کی وجہ سے ہوئی؟	Yes .....1 No.....**(Go to H6)**.....2 Don't know.....**(Go to H6)**.....8
H5	What type of animal/insect was it? وہ کس قسم کا جانور/کیڑا تھا؟	Dog .....1 Snake.....2 Scorpion .....3 Other (Specify) 7
H6 (3E700)	Do you think that she committed suicide? کیا آپ کے خیال میں اس نے خودکشی کی؟	Yes .....1 No.....**(Go to H7)**.....2 Don't know.....**(Go to H7)**.....8
H7 (3A310)	Did she die suddenly? کیا اس کا اچانک انتقال ہوگیا؟	Yes .....1 No.....**(Go to H8)**.....2 Don't know.....**(Go to H8)**.....8
H8 (Q1305)	Did someone else hurt her? کیا کسی اور نے اسے تکلیف پہنچائی یا مارا؟	Yes .....1 No.....2 Don't know.....8

SECTION-I: SYMPTOMS AND SIGNS ASSOCIATED WITH PREGNANCY

حمل سے متعلق علامات

Q.NO.	Questions and Filters	Coding Categories
I1 **(3C110)**	Was she pregnant at the time of death? کیا وہ موت کے وقت حاملہ تھی؟	Yes ..... 1 No ..... 2 Don't know 8
I2 **(3C130)**	Did she die within 6 weeks of termination of pregnancy? کیاوہ حمل کے ضائع ہونے کے بعد چھ ہفتوں کے اندر فوت ہوگئیں تھیں؟	Yes..... 1 No ..... 2 Don't know 8
I3 **(3C210)**	Did she die during labor, but undelivered? کیا وہ دوران زچگی فوت ہوگئی اور کسی بچے کو پیدا نہیں کیا؟	Yes..... 1 No ..... 2 Don't know. 8
I4 **(3C200)**	Did she die within 24 hours after delivery? کیا وہ بچے کی پیدائش کے چوبیس گھنٹوں کے اندر اندر فوت ہوگئی تھی؟	Yes..... 1 No ..... 2 Don't know 8
I5 **(3C120)**	Did she die after 42 days and within 42 days of giving birth? کیا وہ بچے کی پیدائش کے بیالیس دنوں کے دوران فوت ہوگئی تھی؟	Yes..... 1 No..... 2 Don't know 8
I6	Did She die within one year of giving birth? کیا بچے کی پیدائش کے ایک سال کے اندر اس کی وفات ہوگئی تھی؟	Yes..... 1 No ..... 2 Don't know 8
I7 **(3C250)**	Did she die during or after a multiple pregnancy? کیا وہ دو یا اس سے زیادہ بچوں کی پیدائش کے دوران یا اس کے بعد فوت ہوئی؟	Yes..... 1 No ..... 2 Don't know 8
I8	At the time of death what was the duration of this pregnancy in weeks? ہفتوں کے اعتبار سے اس کی زچگی کی مدت کتنی تھی؟	Weeks ..... __|__ Don't know 88
I9 **(3C240)**	Did she have any previous C-section? کیا اس کا بچے کی پیدائش کے سلسلے میں کبھی پہلے بڑا آپریشن ہوا تھا؟	Yes..... 1 No.....**(Go to I12)**..... 2 Don't know.....**(Go to I12)**..... 8
I10	What was the number of the previous C-Sections? اس کے کتنے بڑے آپریشن ہو چکے تھے؟	# of previous C-Sections..... __|__
I11	What were the reasons for previous C-Section? بڑے آپریشن کی کیا وجہ تھی؟	High blood pressure..... 1 Bleeding ..... 2 Size of baby..... 3 Breach position ..... 4 Others (Specify) 7
I12 **(3C400)**	Did she give birth in a health facility? کیا اس نے بچے کو کسی صحت کی سہولت پر جنم دیا؟	Yes..... 1 No.....**(Go to I14)**..... 2 Don't know.....**(Go to I14)**..... 8

Q.NO.	Questions and Filters	Coding Categories
I13	What was the type of facility? وہ صحت کی سہولت /ہسپتال کس سطح کا تھا ؟	Teaching Hospital..... 01 DHQ..... 02 THQ..... 03 RHC..... 04 BHU..... 05 Private hospital..... 06 Private clinic..... 07 Others (Specify)..... 77
I14 **(3C410)**	Did she give birth at home? کیا اس کے بچے کی پیدائش گھر پر ہوئی؟	Yes..... 1 No.....**(Go to I16)**..... 2 Don't know.....**(Go to I16)**..... 8
I15	What were the reasons for delivering at home? گھر پر زچگی کروانے کی کیا وجوہات تھیں؟ **(Multiple responses allowed)**	No funds..... 1 Tradition/custom..... 2 Elder women didn't agree..... 3 Health facility was far away..... 4 Others (Specify)..... 7
I16 **(3C420)**	Did she give birth elsewhere, e.g. on the way to a facility? کیا اس کے بچے کی پیدائش کہیں اور ہوئی، مثال کے طور پر صحت کی سہولت پر جاتے ہوئے راستے میں ؟	Yes..... 1 No..... 2 Don't know..... 8
I17 **(3C430)**	Did she receive professional assistance for the delivery? کیا بچے کی پیدائش کے دوران اس کو پیشہ وارانہ طبی معاونت فراہم کی گئی؟	Yes..... 1 No.....**(Go to I19)**..... 2 Don't know.....**(Go to I19)**..... 8
I18	If yes, by whom اگر ہاں ، تو کس نے فراہم کی؟ **[After asking this question GO to I20]**	Gynecologist..... 01 Doctor..... 02 LHV..... 03 Nurse..... 04 CMW..... 05 Others (Specify)..... 77
I19	If no, by whom اگر نہیں تو پھر کس نے کی؟	L H W..... 1 TBA/Dai..... 2 Friend/Relative..... 3 Others (Specify)..... 7
I20 **(3C450)**	Did she have a normal vaginal delivery? کیا اس کے ہاں بچے کی نارمل پیدائش ہوئی؟	Yes..... 1 No..... 2 Don't know..... 8
I21 **(3C460)**	Did she have an assisted delivery, with forceps/vacuum? کیا اس کے بچے کی ڈلیوری اوزار [فورسیپس/ویکیوم] کی مدد سے ہوئی؟	Yes..... 1 No..... 2 Don't know..... 8
I22 **(3C470)**	Was it a delivery with caesarean section? کیا اس کے ہاں بچے کی پیدائش بڑے آپریشن کے ذریعے ہوئی؟	Yes..... 1 No..... 2 Don't know..... 8

Q.NO.	Questions and Filters	Coding Categories
I23 (3C440)	Did she have an operation to remove her uterus shortly before death? کیا موت سے پہلے بچہ دانی کو باہر نکالنے کے لیے اس کا کوئی آپریشن ہوا تھا ؟	Yes ..... 1 No ..... 2 Don't know 8
I24	What was the outcome of the Pregnancy? اس حمل کا نتیجہ کیا نکلا تھا؟	Live birth ..... 01 Still birth ..... 02 Miscarriage ..... 03 Induced abortion ..... 04 Undelivered ..... 05 Multiple births ..... 06 Don't know 88
I25	Time interval between onset of pain and delivery (in hours) درد شروع ہوجانے اور ڈلیوری کے درمیان کتنا دورانیہ تھا؟	Hours ..... __|__ Don't know 88
126	What, if anything, was done to help the baby come out? کیا کچھ ایسا کیا گیا کہ بچے کوباہر نکالا جائے؟ **(Multiple responses are allowed)**	Nothing ..... 00 External pressure ..... 01 I/V drip ..... 02 Put hand/fingers ..... 03 Forceps ..... 04 Vacuum ..... 05 Episiotomy ..... 06 Cesarean section ..... 07 Others (Specify) ..... 77 Don't know 88
I27 (3C360)	Was the placenta completely delivered? کیا آنول کو مکمل طور پر باہر نکال لیا گیا تھا؟	Yes ..... 1 No ..... 2 Don't know 8
I28	Did she have difficulty in delivering the placenta? کیا آنول کو باہر نکلنے میں کوئی تکلیف پیش آئی تھی؟	Yes ..... 1 No ..... 2 Don't know 8
I29 (3C365)	Did she deliver or try to deliver an abnormally positioned (e.g breech, arm) baby? کیا اس نے غیر معمولی پوزیشن والے بچے کو پیدا کرنے کی کوشش تھی؟	Yes ..... 1 No ..... 2 Don't know 8
I30 (3C370)	Was she in labor for unusually long (more than 24 hours)? کیا اس کی زچگی کا دورانیہ چوبیس گھنٹے سے زیادہ تھا؟	Yes ..... 1 No ..... 2 Don't know 8
I31	What was the duration of the Labor in Hours? زچگی کے درد کا دورانیہ کتنا تھا؟	Yes ..... 1 No ..... 2 Don't know 8
I32 (3C480)	Was the baby born more than one month early? کیا بچہ ایک ماہ سے زیادہ پہلے پیدا ہوگیا تھا؟	Yes ..... 1 No ..... 2 Don't know 8

Q.NO.	Questions and Filters	Coding Categories
I33 (3C260)	During pregnancy, did she suffer from high blood pressure? دوران حمل کیا خاتون کو ہائی بلڈ پریشر تھا؟	Yes..... 1 No.....**(Go to i35)**..... 2 Don't know.....**(Go to i35)**..... 8
I34	Did she receive treatment for high blood pressure? کیا اس نے بلڈ پریشر کا علاج کروایا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I35 (3C270)	Did she have foul smelling vaginal discharge during pregnancy or after delivery? کیا حمل یا ڈلیوری کے دوران اس کی انہدام نہانی سے بدبو دار مادے کا اخراج ہو تا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I36 (3C290)	During the last 3 months of pregnancy, did she suffer from blurred vision? حمل کے آخری تین ماہ کے دوران کیا اس کو دھندلا نظر آتا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I37 (3C280)	During the last 3 months of pregnancy, did she suffer from convulsions? حمل کے آخری تین ماہ کے دوران کیا اس کو جھٹکے یا پٹھوں میں اکڑاو ہو تا تھا؟	Yes..... 1 No.....**(Go to i44)**..... 2 Don't know.....**(Go to i44)**..... 8
I38	For how many days did she have convulsion? اس کو کتنے دنوں سے جھٹکے لگ رہے تھے؟	Number of days ..... __|__ Don't know 8
I39	What was the number of convulsions she had in a day? وفات سے پہلے اس کو دن میں کتنے جھٹکے لگتے تھے؟	Number of convulsion ..... __|__ Don't know 88
I40	During convulsions did her entire body or only part of the body convulse? جھٹکوں کے دوران اس کا پورا جسم متاثر ہو تا تھا یا جسم کے کچھ حصے؟	Part ..... 1 Entire Body ..... 2 Don't know 8
I41	After convulsion did she become unconscious? جھٹکوں کے بعد کیا وہ بے ہوش ہو جاتی تھی؟	Yes..... 1 No ..... 2 Don't know 8
I42	Did she have fever during the convulsions? کیا اسے جھٹکوں کے دوران بخار ہو تا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I43	During convulsion did she have difficulty opening her mouth? کیا جھٹکوں کے دوران اس کو اپنا منہ کھولنے میں دشواری محسوس ہوتی تھی؟	Yes..... 1 No ..... 2 Don't know 8
I44	Did she have swollen hands or face anytime during her pregnancy? کیا حمل کے دوارن اس کے ہاتھوں یا منہ پر سوجن ہوئی تھی؟	Yes..... 1 No ..... 2 Don't know 8
I45 (3C310)	Was there any excessive vaginal bleeding during pregnancy? کیا حمل کے دوران اس کا بہت زیادہ خون آیا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I46 (3C320)	Was there vaginal bleeding during the first 6 months of pregnancy? کیا حمل کے پہلے چھ ماہ کے دوران اس کا بہت زیادہ خون آیا تھا؟	Yes..... 1 No ..... 2 Don't know 8

Q.NO.	Questions and Filters	Coding Categories
I47 **(3C330)**	Was there vaginal bleeding during the last 3 months of pregnancy but before labor started? حمل کے آخری تین ماہ کے دوران اس کی اندام نہانی سے خون آیا تھا؟ [مگر درد شروع ہونے سے پہلے]	Yes..... 1 No ..... 2 Don't know 8
I48 **(3C340)**	Was there excessive vaginal bleeding during labor? کیا دوران زچگی اس کا بہت زیادہ خون بہہ گیا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I49	Was there excessive vaginal bleeding after delivery? کیا زچگی کے بعد اس کا بہت زیادہ خون بہہ گیا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I50	The quantity of blood was more than a cup? خون کی مقدار ایک کپ سے زیادہ تھی؟	Yes..... 1 No ..... 2 Don't know 8
I51	Was there constant trickling of blood? کیا خون مسلسل بہہ رہا تھا ؟	Yes..... 1 No ..... 2 Don't know 8
I52	Was she bleeding when she was being taken to health facility? جب اس کو صحت کی سہولت پر لے جایا جارہا تھا تو کیا اس دوران بھی اس کا خون بہہ رہا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I53	Was she in pain while bleeding? کیا خون آنے کے دوران اس کو درد ہو تا تھا؟	Yes..... 1 No ..... 2 Don't know 8

SECTION-J: SYMPTOMS NOTED DURING THE FINAL ILLNESS

بیماری کے آخری ایام میں مشاہدہ کی جانے والی علامات

Q.NO.	Questions and Filters	Coding Categories
J1 (3B100)	Did she have a fever? موت سے پہلے کیا اس کو بخار تھا؟	Yes.....1 No.....**(Go to J3)** .....2 Don't know.....**(Go to J3)** 8
J2 (3B110)	For how long did she have a fever? اس کو کتنے عرصے سے بخار تھا؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J3 (3B120)	Did she have night sweats? کیا اس کو رات کو پسینے آتے تھے؟	Yes.....1 No .....2 Don't know 8
J4 (3B130)	Did she have a cough? کیا اس کو کھانسی تھی؟	Yes.....1 No.....**(Go to J8)** .....2 Don't know.....**(Go to J8)** 8
J5 (3B140)	For how long did she have a cough? اس کو کب سے کھانسی تھی؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J6 (3B150)	Was the cough productive with sputum? کیا اس کو کھانسی کے ساتھ بلغم بھی آتا تھا؟	Yes.....1 No .....2 Don't know 8
J7 (3B160)	Did she cough out blood? کیا اس کو کھانسی کے ساتھ خون آتا تھا؟	Yes.....1 No .....2 Don't know 8
J8 (3B180)	Did she have any breathing problem? کیا اس کو سانس کا کوئی مسئلہ درپیش تھا؟	Yes.....1 No.....**(Go to J15)** .....2 Don't know.....**(Go to J15)** 8
J9 (3B190)	Did she have fast breathing? کیا وہ تیز سانس لیتی تھی؟	Yes.....1 No.....**(Go to J11)** .....2 Don't know.....**(Go to J11)** 8
J10 (3B200)	For how long did she have fast breathing? وہ کب سے تیز سانس لے رہی تھی؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J11 (3B210)	Did she have breathlessness? کیا اس کا سانس اکھڑتا تھا؟	Yes.....1 No.....**(Go to J13)**.....2 Don't know.....**(Go to J13)** 8

Q.NO.	Questions and Filters	Coding Categories
J12 (3B220)	For how long did she have breathlessness? اس کا سانس کب سے اکھڑتا تھا؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J13 (3B230)	Was she unable to carry out daily routine activities due to breathlessness? کیا سانس کے اکھڑنے کی وجہ سے اس کو گھر کے کام کاج کرنے میں دشواری پیش آتی تھی؟	Yes.....1 No .....2 Don't know 8
J14 (3B240)	Was she breathless while lying flat? کیا سیدھے لیٹنے سے اس کو سانس لینے میں دشواری پیش آتی تھی؟	Yes.....1 No .....2 Don't know 8
J15 (3B260)	Did she have noisy breathing (grunting or wheezing)? کیا سانس لیتے وقت دشواری کی وجہ سے کوئی آواز آتی تھی؟ **(DEMONSTRATE)**	Yes.....1 No .....2 Don't know 8
J16 (3B270)	Did she have severe chest pain? کیا اس کی چھاتی میں شدید درد ہوتا تھا؟	Yes.....1 No .....2 Don't know 8
J17 (3B280)	Did she have diarrhea? کیا اس کو اسہال تھے؟	Yes.....1 No.....**(Go to J19)**.....2 Don't know.....**(Go to J19)** 8
J18 (3B290)	For how long did she have diarrhea? اس کو کب سے اسہال تھے ؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J19 (3B300)	At any time during the final illness was there blood in the stools? کیا موت کے آخری ایام میں اس کے پاخانے میں خون آتا تھا؟	Yes.....1 No .....2 Don't know 8
J20 (3B310)	Did she vomit? کیا اسے قے آئی تھی؟	Yes.....1 No.....**(Go to J22)**.....2 Don't know.....**(Go to J22)**.....8
J21 (3B320)	Did she vomit "coffee grounds" or bright red/blood? کیا اس کی قے کا رنگ بھورا یا ہلکا سرخ یا اس میں خون تھا؟	Yes.....1 No .....2 Don't know 8
J22 (3B330)	Did she have any abdominal problem? کیا اس کے پیٹ میں کوئی مسئلہ تھا؟	Yes.....1 No.....**(Go to J25)**.....2 Don't know.....**(Go to J25)**.....8
J23 (3B340)	Did she have severe abdominal pain? کیااس کے پیٹ میں شدید درد تھا؟	Yes.....1 No.....**(Go to J25)**.....2 Don't know.....**(Go to J25)**.....8

J24 **(3B350)**	For how long before death did she have severe abdominal pain? موت سے کتنے دن پہلے اس کے پیٹ میں شدید درد تھا؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J25 **(3B360)**	Did she have more than usual protruding abdomen? کیا اس کا پیٹ ضرورت سے زیادہ آگے کی طرف نکلا ہوا تھا؟	Yes.....1 No.....**(Go to J27)**.....2 Don't know.....**(Go to J27)**.....8
J26 **(3B370)**	For how long did she have a more than usual protruding abdomen? اس کا پیٹ کب سے ضرورت سے زیادہ بڑھا ہوا تھا؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J27 **(3B380)**	Did she have any lump inside the abdomen? کیا اس کے پیٹ کے اندر گلٹیاں تھیں؟	Yes.....1 No.....**(Go to J29)** .....2 Don't know.....**(Go to J29)** 8
J28 **(3B390)**	For how long did she have the lump inside the abdomen? اس کے پیٹ کے اندر کب سے گلٹیاں تھیں؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J29 **(3B400)**	Did she have a severe headache? کیا اس کے سر میں شدید درد ہوتا تھا؟	Yes.....1 No .....2 Don't know 8
J30 **(3B405)**	Did she have a stiff or painful neck? کیا اس کی گردن اکڑ گئی تھی، یا اس میں درد تھا؟	Yes.....1 No.....**(Go to J32)** ..... Don't know.....**(Go to J32)** 8
J31 **(3B410)**	For how long did she have a stiff or painful neck? اس کی گردن کب سے اکڑی ہوئی تھی، یا اس میں کب سے درد تھا؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J32 **(3B420)**	Did she have mental confusion? کیا وہ ذہنی طور پر گھبراہٹ کا شکار رہتی تھی؟	Yes.....1 No.....**(Go to J34)**.....2 Don't know.....**(Go to J34)** 8
J33 **(3B430)**	For how long did she have mental confusion? اسے گھبراہٹ کب سے تھی؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J34 **(3B440)**	Was she unconscious for more than 24 hours just before death? کیا موت سے پہلے چوبیس گھنٹوں کے دوران وہ بے ہوش ہوئی تھی؟	Yes.....1 No.....**(Go to J36)**.....2 Don't know.....**(Go to J36)** 8

J35 **(3B450)**	Did the unconsciousness start suddenly, quickly (at least within a single day)? کیا وہ اچانک بے ہوش ہوجاتی تھی؟	Yes.....1 No .....2 Don't know 8
J36 **(3B490)**	Did she have any urine problems? کیا اسے چھوٹے پیشاب کا کوئی مسئلہ تھا؟	Yes.....1 No.....**(Go to J40)** .....2 Don't know.....**(Go to J40)** 8
J37 **(3B500)**	Did she pass no urine at all? کیا اسے چھوٹا پیشاب بالکل نہیں آتا تھا؟	Yes.....1 No .....2 Don't know 8
J38 **(3B510)**	Did she go to urinate more often than usual? کیا وہ چھوٹے پیشاپ کے لیے بار بار جاتی تھی؟	Yes.....1 No .....2 Don't know 8
J39 **(3B520)**	During the final illness did she ever pass blood in the urine? بیماری کے آخری ایام میں اس کے چھوٹے پیشاب میں کبھی خون آیا؟	Yes.....1 No .....2 Don't know 8
J40 **(3B530)**	Did she have any skin problems? کیا اس کو جلد کا کوئی مسئلہ تھا؟	Yes.....1 No .....2 Don't know 8
J41 **(3B540)**	Did she have any ulcers, abscess or sores anywhere except the feet? کیا پاوں کے علاوہ کہیں اس کو کوئی زخم یا السر تھا؟	Yes.....1 No .....2 Don't know 8
J42 **(3B550)**	Did she have any ulcers, abscess or sores on the feet that were not also on other parts of the body? کیا اس کے پاوں پر کوئی زخم یا السر تھا جو کہ جسم کے کسی اور حصے پر نہیں تھا؟	Yes.....1 No .....2 Don't know 8
J43 **(3B560)**	During the illness that led to death, did s/he have any skin rash? بیماری اور موت کے آخری ایام میں اس کی جلد پر کوئی دھبے تھے؟	Yes.....1 No.....**(Go to J45)** .....2 Don't know.....**(Go to J45)** 8
J44 **(3B570)**	For how long did she have the skin rash? اس کی جلد پر کب سے دھبے تھے؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J45 **(3B580)**	Did she have measles rash? کیااس کے جسم پر خسرے کے دھبے/نشان تھے؟	Yes.....1 No .....2 Don't know 8
J46 **(3B590)**	Did she ever have shingles/herpes zoster? کیا اس کو جلد کی کوئی ایسی بیماری تھی جس میں سوزش اور دھبے ہوں؟	Yes.....1 No .....2 Don't know 8
J47 **(3B600)**	Did she have bleeding from the nose, mouth, or anus? کیا اس کے ناک، منہ یا پیشاب کی جگہ سے خون آتا تھا؟	Yes.....1 No .....2 Don't know 8

J48 **(3B610)**	Did she have weight loss? کیا اس کا وزن کم ہوگیا تھا؟	Yes.....1 No .....2 Don't know 8
J49 **(3B620)**	Was she severely thin or wasted? کیا وہ شدید کمزور ہوگئی تھی؟	Yes.....1 No .....2 Don't know 8
J50 **(3B630)**	Did she have mouth sores or white patches in the mouth or on the tongue? کیا اس کے منہ میں سوجن تھی یا منہ اور زبان پر سفید رنگ کے داغ تھے؟	Yes.....1 No .....2 Don't know 8
J51 **(3B640)**	Did she have stiffness of the whole body or was unable to open the mouth? کیا اس کے پورے جسم میں اکڑاو آجاتا تھا اور وہ اپنا منہ نہیں کھول سکتی تھی؟	Yes.....1 No .....2 Don't know 8
J52 **(3B650)**	Did she have swelling (puffiness) of the face? کیا اس کے چہرے پر سوجن تھی؟	Yes.....1 No .....2 Don't know 8
J53 **(3B660)**	Did she have both feet swollen? کیا اس کے دونوں پاوں میں سوجن تھی؟	Yes.....1 No .....2 Don't know 8
J54 **(3B670)**	Did she have any lumps? کیاں اس کو کوئی گلٹیاں تھیں؟	Yes.....1 No.....**(Go to J59)**.....2 Don't know.....**(Go to J59)** 8
J55 **(3B680)**	Did she have any lumps or lesions in the mouth? کیا اس کے منہ میں گلٹیاں یا زخم کے نشان تھے؟	Yes.....1 No .....2 Don't know 8
J56 **(3B690)**	Did she have any lumps on the neck? کیا اس کی گردن پر کوئی گلٹی تھی؟	Yes.....1 No .....2 Don't know 8
J57 **(3B700)**	Did she have any lumps on the armpit? کیا اس کے بغل میں گلٹیاں تھیں؟	Yes.....1 No .....2 Don't know 8
J58 **(3B710)**	Did she have any lumpon the groin? کیا اس کے دونوں ٹانگوں کے درمیان گلٹیاں تھیں؟	Yes.....1 No .....2 Don't know 8
J59 **(3B730)**	Did she have paralysis of one side of the body? کیا اس کے جسم کا ایک حصہ مفلوج تھا؟	Yes.....1 No .....2 Don't know 8
J60 **(3B740)**	Did she have difficulty or pain while swallowing liquids? کیا اس کو کوئی پینے کی چیز نگلنے میں دشواری پیش آتی تھی؟	Yes.....1 No .....2 Don't know 8
J61 **(3B750)**	Did she have yellow discoloration of the eyes? کیا اس کی آنکھوں میں پیلا پن تھا؟	Yes.....1 No .....2 Don't know 8

J62 **(3B770)**	Did she look pale (thinning/lack of blood) or have pale palms, eyes or nail beds? کیا وہ کمزور دکھائی دیتی تھی یعنی اسے خون کی کمی وغیرہ تھی ؟	Yes.....1 No .....2 Don't know 8
J63 **(3B780)**	Did she have sunken eyes? کیا اس کی آنکھیں اندر کے جانب دھنسی ہوئی تھی؟	Yes.....1 No .....2 Don't know 8
J64 **(3B790)**	Did she drink a lot more water than usual? کیا وہ معمول سے زیادہ پانی پیتی تھی؟	Yes.....1 No .....2 Don't know 8
J65 **(3F110)**	Did she smoke tobacco or any other intoxicant? (Cigarette, Hukka, Naswar, Paan, Gutka, etc.)? کیا وہ تمباکو نوشی یا کوئی نشہ وغیرہ کرتی تھی؟	Yes.....1 No .....2 Don't know 8
J66 **(Q1306)**	Did she ever use any family planning method? کیا اس نے کبھی کوئی خاندانی منصوبہ بندی کا طریقہ استعمال کیا؟	Yes.....1 No .....2 Don't know 8
J67 **(3B720)**	Did she have an ulcer or swelling in the breast? کیا اس کی چھاتی پر کوئی زخم یا سوجن تھی؟	Yes .....1 No ..... 2 Don't know 8
J68 **(3B800)**	Did she have excessive vaginal bleeding in between menstrual periods? کیا ماہواری کے دوران اس کو بہت زیادہ خون آتا تھا؟	Yes .....1 No ..... 2 Don't know 8
J69 **(3B810)**	Did her vaginal bleeding stop naturally during menopause? کیا اس کی ماہواری قدررتی طور پر رک گئی تھی؟	Yes .....1 No ..... 2 Don't know 8
J70 **(3B820)**	Did she have vaginal bleeding after menopause? کیا ماہواری کے قدرتی طور پر رک جانے کے بعد اس کو خون آیا؟	Yes .....1 No ..... 2 Don't know 8

SECTION-K: TREATMENT AND HEALTH SERVICE USE FOR THE FINAL ILLNESS

بیماری کے آخری ایام میں صحت کی سہولیات سے استفادہ حاصل کرنا اور اس کا علاج کروانا

Q.NO.	Questions and Filters	Coding Categories
K1 (3G110)	Did she receive any treatment for the illness that led to death? کیا اس نے بیماری کا علاج کروایا تھا، جس کی وجہ سے اس کی موت واقع ہوئی؟	Yes..... 1 No.....**(Go to Section L)**..... 2 Don't know.....**(Go to Section L)**..... 8
K2 (3G130)	Did she receive (or needed) intravenous fluids (drip) treatment? بیماری کے آخری ایام میں کیا اس کو کبھی گلوکوز کی بوٹل یعنی ڈرپ لگی تھی؟	Yes..... 1 No ..... 2 Don't know 8
K3 (3G140)	Did she receive (or needed) a blood transfusion? بیماری کے آخری ایام میں کیا کبھی اس کو خون لگا تھا؟	Yes..... 1 No ..... 2 Don't know 8
K4 (3G150)	Did she receive (or needed) treatment/food through a tube passed through the nose? بیماری کے آخری ایام میں کیا اس کو کبھی ناک کی نالی کے ذریعے خوراک دی گئی تھی؟	Yes..... 1 No ..... 2 Don't know 8
K5 (3G160)	Did she receive (or needed) injectable (IV or IM) antibiotics? بیماری کے آخری ایام میں کیا اس کو کبھی اینٹی بائیو ٹیک کے ٹیکے لگے تھے؟	Yes..... 1 No ..... 2 Don't know 8
K6 (3G170)	Did she have (or needed) an operation for the illness? کیا اس کا بیماری کے سلسلے میں کوئی آپریشن ہوا تھا، یا آپریشن ہونا ضروری تھا؟	Yes..... 1 No ..... 2 Don't know 8
K7 (3G180)	Did she have the operation within 1 month before death? کیا موت سے ایک ماہ پہلے اس کا آپریشن ہوا تھا؟	Yes..... 1 No ..... 2 Don't know 8
K8 (3G190)	Was she discharged from the hospital very ill? کیا ہسپتال سے اس کو بہت زیادہ بیماری کی حالت میں ڈسچارج کیا گیا تھا؟	Yes..... 1 No ..... 2 Don't know 8

SECTION-L: HEALTH CARE INCLUDING ANTENATAL CARE BEFORE DEATH DURING MOST RECENT PREGNANCY/DELIVERY

(Both Delivered Alive or Stillbirth)

موت سے پہلے حمل کے سلسلے میں چیک اپ ۔ حال ہی میں ہونے والے حمل یا ڈلیوری سے متعلق معلومات[مردہ اور زندہ دونوں بچے]

Q.NO.	Questions and Filters	Coding Categories
L1	Did she receive antenatal care for her most recent pregnancy? کیا اس نے حالیہ حمل کے دوران طبی معائنہ کروایا؟	Yes.....**(Go to L3)**.....1 No..... 2 Don't know.....**(Go to L22)** 8
L2	If no what were the reasons for not seeking ANC? دوران حمل خدمات نہ حاصل کرنے کی کیا وجوہات تھیں؟ **(Multiple responses are allowed)**	Lack of awareness..... 01 Not easy to reach..... 02 Lack of funds..... 03 Lack of attendee ..... 04 Family problems..... 05 Others (Specify) 77
	After asking L2 ---- Go to L22	
L3	Where did she go for antenatal care for this most recent pregnancy? موجودہ حمل کی دیکھ بھال کے لیے وہ کہاں جاتی تھی؟ **(Multiple responses are allowed)**	Private Clinic/ Hospital..... 01 Government Hospital..... 02 LHW House ..... 03 Community health center ..... 04 TBA..... 05 Others (specify)..... 77
L4	Did she see any of the following for antenatal care for this most recent pregnancy? حالیہ حمل کے دوران چیک اپ کے سلسلے میں کیا اس نے درج زیل میں سے کسی سے بھی ملاقات کی تھی؟ **(Multiple responses are allowed)**	Doctor/OB/GYN ..... 1 Nurse/LHV..... 2 LHW..... 3 TBA..... 4 Others (Specify) 7
L5	How many antenatal visits in total during the entire duration of the pregnancy? دوران حمل چیک اپ کے لیے کتنی دفعہ گئی تھی ؟	Number of visits.....__|__ Don't know..... 88
L6	How many months pregnant was she when she had her first antenatal care visit? جب دوران حمل اس نے چیک اپ کے لیے رجوع کیا تو اس کے حمل کا کون سا مہینہ چل رہا تھا؟	Month of pregnancy .....__|__ Don't know..... 88
L7	How many months pregnant was she when she had her last antenatal care visit? اس کا حمل کتنے ماہ کا تھا جب وہ چیک اپ کے لیے آخری بار گئی؟	Month of pregnancy .....__|__ Don't know..... 88
L9	During the antenatal visit was she told that she had high blood pressure anytime during her pregnancy? کیا حمل کے دوران کسی بھی وقت اس کا بلڈ پریشر زیادہ ہوا تھا؟	Yes..... 1 No..... 2 Don't know..... 8

L10	Was she given treatment for high blood pressure? کیا ہائی بلڈ پریشر کا علاج ہوا تھا؟	Yes..... 1 No ..... 2 Don't know 8
L11	If yes what was the treatment? اگر ہاں تو کیا علاج ہوا تھا؟	----------
L12	Did she consume any Iron/ Folic acid tablets? کیا اس نے کسی قسم کی آئرن/فولک ایسڈ/طاقت کی گولیاں کھائی تھیں؟	Yes..... 1 No.....**(Go to L14)** ..... 2 Don't know.....**(Go to L14)** 8
L13	How many tablets did she consume in a day? حمل کے دوران ٹوٹل کتنی گولیاں کھائی تھی؟	Number of tablets .....__|__ Don't Know 88
L14	Was she advised to deliver her baby in a health facility? کیا اسے تاکید کی گئی تھی کہ وہ اپنے بچے کی پیدائش صحت کی سہولت پر کروائے؟	Yes..... 1 No.....**(Go to L16)** ..... 2 Don't know.....**(Go to L16)** 8
L15	Why was she advised to deliver in a health facility? صحت کی سہولت پر بچے کی پیدائش کا مشورہ کیوں دیا گیا تھا؟	Bad history of previous delivery .....1 Sick in this pregnancy .....2 High risk delivery.....3 Other (Specify).....7 Don't know 8
L16 **(3G100)**	Was she vaccinated for tetanus? کیا اسے تشنج کے ٹیکے لگے تھے؟	Yes.....1 No.....**(Go to 18)** .....2 Don't know.....**(Go to 18)** 8
L17	If yes how many doses did she received? اگر ہاں تو کتنی بار اس کو تشنج کے ٹیکے لگے تھے؟	Number of doses .....__|__ Don't Know 88
L18	Did she get the urine test? کیا اس نے چھوٹے پیشاب کے ٹیسٹ کروائے تھے؟	Yes.....1 No .....2 Don't know 8
L19	Did she get Hepatitis B and C test? کیا اس نے ہیپاٹائٹس بی اور سی کے ٹیسٹ کروائے تھے؟	Yes.....1 No .....2 Don't know 8
L20	Did she get the Hemoglobin test? کیا اس نے ہیموگلوبن کا ٹیسٹ کروایا تھا؟	Yes.....1 No .....2 Don't know 8

L21	Whether the family members were aware of the danger signs of pregnancy? کیا خاندان کے دیگر افراد حمل کی خطرناک علامات سے واقف تھے؟ **(Multiple responses allowed)**	Bleeding ..... 01 Edema hand and face..... 02 Blurring of vision ..... 03 Severe headache..... 04 Persistent vomiting ..... 05 Epigastric pain..... 06 Tiredness and palpitation ..... 07 Jaundice during antenatal period ... 08 Loss of foetal movements..... 09 Fever following abortion/ delivery . 10 Other..... 77
L22	Did she receive the Postnatal care? کیا بچے کی پیدائش کے بعد اس کی دیکھ بھال کی گئی تھی؟	Yes.....1 No.....**(Go to L26)** .....2 Don't know.....**(Go to L26)** 8
L23	How many times she had Postnatal checkups? بچے کی پیدائش کے بعد اس کا کتنی دفعہ چیک اپ ہوا تھا؟	1 checkup ..... 1 2-3 Checkups..... 2 >3 Checkups ..... 3 Don't know..... 8
L24	When were postpartum care services provided? بعد از زچگی /چھلے کے دوران کب اس کا معائنہ کیا گیا؟	First 24 hours .....1 72 hours postpartum (Day 1 - 3).....2 First week postpartum (Day 1 - 7).....3 6 weeks postpartum .....4 Others (Specify).....7
L25	Where was postpartum care services provided? بعد از زچگی /چھلے کے دوران کہاں پر اس کو خدمات فراہم کی گئیں؟ **(Multiple responses are allowed)**	Private Clinic/ Hospital..... 01 Government hospital ..... 02 LHW House..... 03 Community health center ..... 04 TBA..... 05 Others (specify)..... 77
L26	Were there any problems during the post partum period? بچے کی پیدائش کے بعد مرحومہ کو کوئی مسائل درپیش آئے تھے؟	Yes..... 1 No.....**(Go to Section M)** .... 2 Don't know.....**(Go to Section M)** 8

L27	What were the problems? وہ مسائل کیا تھے؟ **(Multiple responses are allowed)**	Severe bleeding..... 01 Fever ..... 02 Foul smelling discharge..... 03 Unconsciousness..... 05 Visual disturbance..... 06 Fits ..... 07 High BP ..... 08 Bleeding from multiple sites ..... 09 Abnormal behavior ..... 10 Abdominal Pain ..... 11 Vomiting..... 12 Severe anemia..... 13 High BP ..... 14 Non healing of Perineal and abdominal stiches 15
L28	Did she seek treatment? کیا اس نے ان مسائل کا علاج کروایا تھا؟	Yes..... 1 No.....**(Go to section-M)** ..... 2 Don't know.....**(Go to section-M)**..... 8
L29	What happened during postnatal checkup? بعد از زچگی اس کے معائنے کے دوران کیا ہوا تھا؟	BP Check ..... 1 Fever check ..... 2 Blood tests ..... 3 Physical examination 4

SECTION-M: Newborn

M1	What was the sex of the baby? بچے کی جنس کیا تھی؟	Boy ..... 1 Girl 2
M2	What was the weight of the baby? بچے کا وزن کتنا تھا؟	Weight in KGs..... __|__ Don't know 88
M3	Was the child born in a health facility? کیا بچہ صحت کی سہولت/ہسپتال میں پیدا ہوا تھا	Yes.....1 No.....**(Go to M5)**.....2 Don't know.....**(Go to M5)** 8
M4	What was the type of health facility? اس صحت کی سہولت کی سطح کیا تھی؟	Teaching hospital .....01 DHQ.....02 THQ .....03 RHC .....04 BHU .....05 Private Clinic .....06 Private hospital .....07 Others (Specify) 77

M5	Was the child born at home? کیا بچہ گھر پر پیدا ہوا تھا؟	Yes.....**(Go to M7)**.....1 No .....2 Don't know.....**(Go to M7)** 8
M6	Was the child born somewhere else (e.g. on the way to a health facility)? کیا بچہ کسی اور جگہ پر پیدا ہوا تھا[مثال کے طور پر صحت کی سہولت پر سفر کے دوران] ؟	Yes.....1 No .....2 Don't know 8
M7	Was the baby born 24 hours or more after the water broke? کیا بچہ پانی کی تھیلی پھٹنے کے 24 گھنٹوں کے بعد پیدا ہوا تھا؟	Yes.....1 No .....2 Don't know 8
M8	What was the gestational age of the baby at birth? بچے کی پیدائش کی وقت حمل کا دورانیہ کتنا تھا؟	Before 37 weeks .....1 37-42 weeks.....2 After 42 weeks 3
M9	Was baby born by normal vaginal delivery? کیا بچے کی پیدائش نارمل طریقے سے ہوئی تھی؟	Yes.....1 No .....2 Don't know 8
M10	Was baby born with forceps/vacuum? کیا بچے کی پیدائش کے لے فورسیپ یا اوزار کی مدد لی گئی تھی؟	Yes.....1 No .....2 Don't know 8
M11	Was baby delivered by caesarean section? کیا بچہ بڑے آپریشن کے ذریعے پیدا ہوا تھا؟	Yes.....1 No .....2 Don't know 8
M12	Was the umbilical cord wrapped several times (more than once) around the neck of the child at birth? کیا ناڑو بچے کی گردن پر لپٹا ہوا تھا؟	Yes.....1 No .....2 Don't know 8
M13	Did the baby cry immediately after birth? کیا بچہ پیدائش کے فورا بعد رویا تھا؟	Yes.....1 No .....2 Don't know 8
M14	Was the baby given assistance to breathe at birth? کیا بچے کو پیدائش کے وقت سانس لینے کے لیے مدد فراہم کی گئی تھی؟	Yes.....1 No .....2 Don't know 8
M15	Did the baby need hospitalization? کیا بچے کو علاج وغیرہ کی ضرورت تھی؟	Yes.....1 No .....**(Go to Section N)**.....2 Don't know.....**(Go to Section N)** 8
M16	For how many days baby remained hospitalized? بچہ کتنے عرصے تک ہسپتال میں زیر علاج رہا؟	Number of days ..... __|__ Don't know 88

M17	Why the baby need hospitalization? بچے کو علاج کی کیوں ضرورت تھی؟ **(Multiple responses are allowed)**	Fever .....01 Fits.....02 Feeding problems .....03 Excessive cry .....04 Breathing problems .....05 Yellow Skin .....06 Hypothermia .....07 Heart Problems .....08 Others (Specify) 77
M18	Was the baby discharged from hospital کیا بچے کو ہسپتال سے ڈسچارج کیا گیا تھا؟	Yes.....**(Go to Section N)**.....1 No .....2 Don't know 8
M19	Did the baby die at hospital کیا بچہ ہسپتال میں مر گیا تھا؟	Yes.....1 No .....2 Don't know 8

انٹرویو لینے والی کے لئے ہدایات:۔

برائے مہربانی جہاں تک ممکن ہو گہرائی میں جا کر (تفصیل سے) ان حالات کے بارے میں جو مرحومہ کو مرنے سے پہلے پیش آئیں، وہ معلومات لینے کی کوشش کریں ؟

صحت کے مسائل کا آغاز :۔

برائے مہربانی سے تفصیل سے جوابات دیں؟

- حمل کے کون سے مرحلے میں مرحومہ کو صحت کی خرابی کے مسائل پیش آئے ؟
- صحت کی خرابی کے وہ کون سے مسائل تھے؟
- یہ کیسے پتہ چلا کہ اسے یہ مسائل درپیش ہیں؟
- ان مسائل کا کس کو پتہ چلا (مرحومہ خود، شوہر کو ، اس کے خاندان کے لوگوں کو ، اس کے سسرال والوں کو ، دوستوں کو)

علاج حاصل کرنے کے لیے فیصلہ سازی :۔

- صحت کی خرابی کے مسائل معلوم ہونے پر علاج کے لئے جانے میں کس نے پہل کی؟
- علاج حاصل کرنے میں اسکا اپنا، شوہر کا ، سسرال والوں کا، خاندان کے افراد کا ، دوستوں کا اور سہولت مہیا کرنے والے کا کیا کردار تھا؟
- خاندان والے افراد کے درمیاں مرحومہ کو علاج کے لئے لے جانے میں باہمی مشاورت کس درجے کی تھی؟ اگر اختلاف تھا تو اس کی کیا وجوہات تھیں؟
- آخر میں کس نے فیصلہ کیا کہ علاج کی سہولت حاصل کی جائے اور یہ فیصلہ کرنے میں کتنا وقت لگا؟
- کیا آپ کے خیال میں فیصلہ کرنے میں تاخیر برتی گئی؟
- اگر ہاں تو تاخیر کے کیا عوامل تھے؟

- آپ کے خیال میں ان عوامل کا مرحومہ کی موت میں کتنا کردار تھا؟

TRANSPORTING TO HEALTH FACILITIES.

محکمہ صحت تک رسائی

- سہولت حاصل کرنے کے فیصلے کے بعد ذرائع آمد ورفت کا انتظام کیسے کیا گیا؟
- کیا انہیں ذرائع آمد ورفت کا ایک سے زیادہ دفعہ انتظام کرنا پڑا، یعنی مرحومہ کو ایک طبعی سہولت سے دوسری سہولت میں منتقل کرنے کےدوران ہر دفعہ استعمال کئے جانے والے ذرائع آمد ورفت کون سے تھے؟
- کیا انہیں ذرائع آمد رفت کا انتظام کرنے میں کوئی مسئلہ ہوا؟
- کیا آپ سمجھتے ہیں کہ ذرائع آمد ورفت کا انتظام کرنے میں تاخیر کی گئی؟
- اگر ہاں تو وہ کیا عوامل تھے جن کی وجہ سے فیصلہ کرنے میں تاخیر ہوئی؟(گاڑی کا انتظام، کرائے کی رقم کا انتظام)
- آپ کے خیال میں وہ تمام عوامل مرحومہ کی موت کا کیسے سبب بنے یا آپ کے خیال میں ان تمام عوامل کا مرحومہ کی موت میں کتنا کردار ہے؟

طبعی سہولتوں پر دی جانے والی خدمات:۔

- پہلی طبعی سہولت پہنچنے پر (سرکاری/غیر سرکاری سہولت) اس کا کیسے استقبال کیا گیاکیسے خدمات دی گئی اور کیسا برتاو کیا گیا؟
- کیا ہوا ادھر اور مہیا کی جانے والی سہولیات کیسی تھیں ؟ انکا معیار کیسا تھا؟
- اوزار اور فراہمی (آکسیجن)
- آپریشن تھیٹر فعال
- خدمات دینے والے کا رویہ
- خدمات دینے والے کی مہارت

- کیا مریضہ کو ایک طبعی سہولت سے دوسری میں منتقل کرنے میں ، سہولت فراہم کرنے والے اور خاندان کے افراد کی باہمی مشاور ت شامل تھی یا صرف ان میں سے کسی ایک کا فیصلہ تھا؟
- آپ کے خیال میں منتقل [ریفرل] کرنے سے پیچیدگی ہوئی ؟
- آپ کیا سمجھتے ہیں منتقل [ریفرل] کرنے کا فیصلہ بر وقت کیا گیا؟
- آپ کے خیال میں سہولیات حاصل کرنے میں تاخیر کی گئی؟
- اگر ہاں تو وہ کون سے عوامل تھے جن کی وجہ سے سہولت میں دیر ہوئی ؟
- آپ کیا سمجھتے ہیں مر حومہ کی موت میں ان عوامل کا کتنا عمل دخل تھا؟

انٹرویو دینے والے کی تجاویز اور سفارشات:۔

- کیا آپ کے خیال میں ان نتائج کو تبدیل کیا جاسکتا تھا یا موت کو روکا جا سکتا تھا؟
- دوران زچگی وحمل ماں کی دیکھ بھال کو بہتر بنانے کے لئے تجاویز؟

SECTION-O: DEATH REGISTERATION AND CERTIFICATION

موت کی رجسٹریشن اور سرٹیفیکیٹ

Q.NO.	Questions and Filters	Coding Categories
O1 **(1A700)**	Was the death registered? کیا یہ موت رجسٹرڈ تھی؟	Yes..... 1 No.....**(Go to O5)**..... 2
O2 **(1A710)**	Death registration number موت کا رجسٹریشن نمبر	
O3 **(1A720)**	Date of registration رجسٹریشن کی تاریخ	__|__:__|__:__|__|__|__| DD MM YYYY Don't know 88:88:8888
O4 **(1A730)**	Place where the death is registered: وہ جگہ جہاں موت کی رجسٹریشن کی گئی	a) Province ..... __|__ b) District ..... __|__ c) Tehsil ..... __|__
O5 **(1A740)**	What was the reason for not registering the death? موت کو رجسٹر نہ کرانے کی کیا وجہ تھی؟	

Would it be all right if we come back to talk to you again after some time

اگر ہم دوبارہ آپ کے پاس بات چیت کرنے کے لیے آئیں تو کیا آپ سے بات چیت ہو سکے گی؟

Yes.....1

No 2

Thank you very much for the information you provided and the time you spared for me.

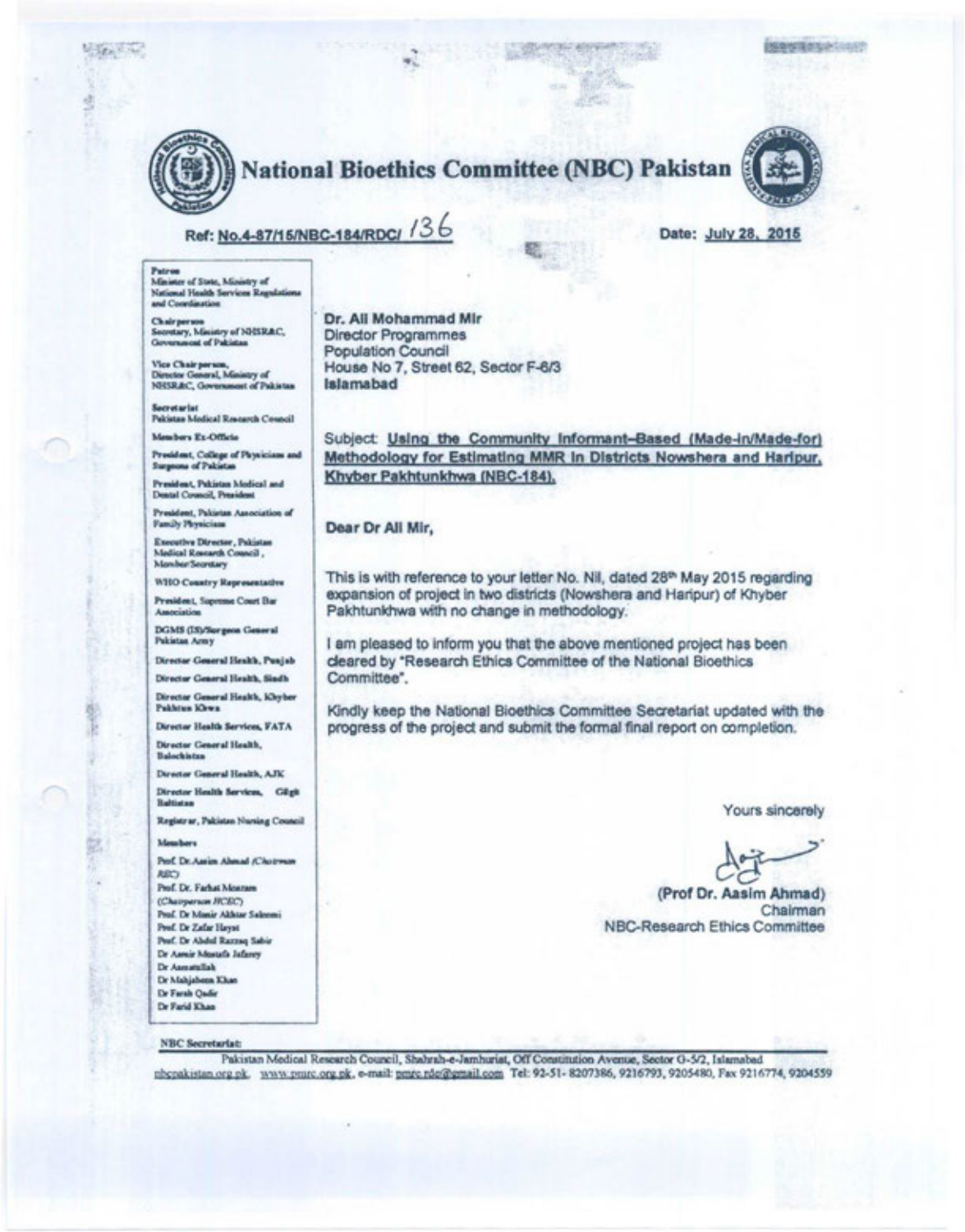
آپ کی طرف سے معلومات فراہم کرنے اور ہمارے لیے وقت نکالنے کا بہت شکریہ

SUPERVISOR'S OBSERVATIONS

سپروائزر کے مشاہدات/ملاحظات

NAME OF THE SUPERVISOR:_____DATE:_____

9.3 Ethical Approval from National Bioethics Committee of Pakistan and the Institutional Review Board of the Population Council, New York



National Bioethics Committee (NBC) Pakistan

Ref: No.4-87/15/NBC-184/RDC/ 136

Date: July 28, 2015

Patron
Minister of State, Ministry of National Health Services Regulations and Coordination

Chairperson
Secretary, Ministry of NHSR&C, Government of Pakistan

Vice Chairperson,
Director General, Ministry of NHSR&C, Government of Pakistan

Secretariat
Pakistan Medical Research Council

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President, Pakistan Medical and Dental Council, President

President, Pakistan Association of Family Physicians

Executive Director, Pakistan Medical Research Council, Member/Secretary

WHO Country Representative

President, Supreme Court Bar Association

DGMS (IS)/Surgeon General Pakistan Army

Director General Health, Punjab

Director General Health, Sindh

Director General Health, Khyber Pakhtun Khwa

Director Health Services, FATA

Director General Health, Balochistan

Director General Health, AJK

Director Health Services, Gilgit Baltistan

Registrar, Pakistan Nursing Council

Members

Prof. Dr. Aasim Ahmad (Chairman NBC)
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Dr Asmatullah
Dr Mahjabeen Khan
Dr Farah Qadir
Dr Farid Khan

Dr. Ali Mohammad Mir
Director Programmes
Population Council
House No 7, Street 62, Sector F-6/3
Islamabad

Subject: Using the Community Informant-Based (Made-in/Made-for) Methodology for Estimating MMR in Districts Nowshera and Haripur, Khyber Pakhtunkhwa (NBC-184).

Dear Dr Ali Mir,

This is with reference to your letter No. Nil, dated 28th May 2015 regarding expansion of project in two districts (Nowshera and Haripur) of Khyber Pakhtunkhwa with no change in methodology.

I am pleased to inform you that the above mentioned project has been cleared by "Research Ethics Committee of the National Bioethics Committee".

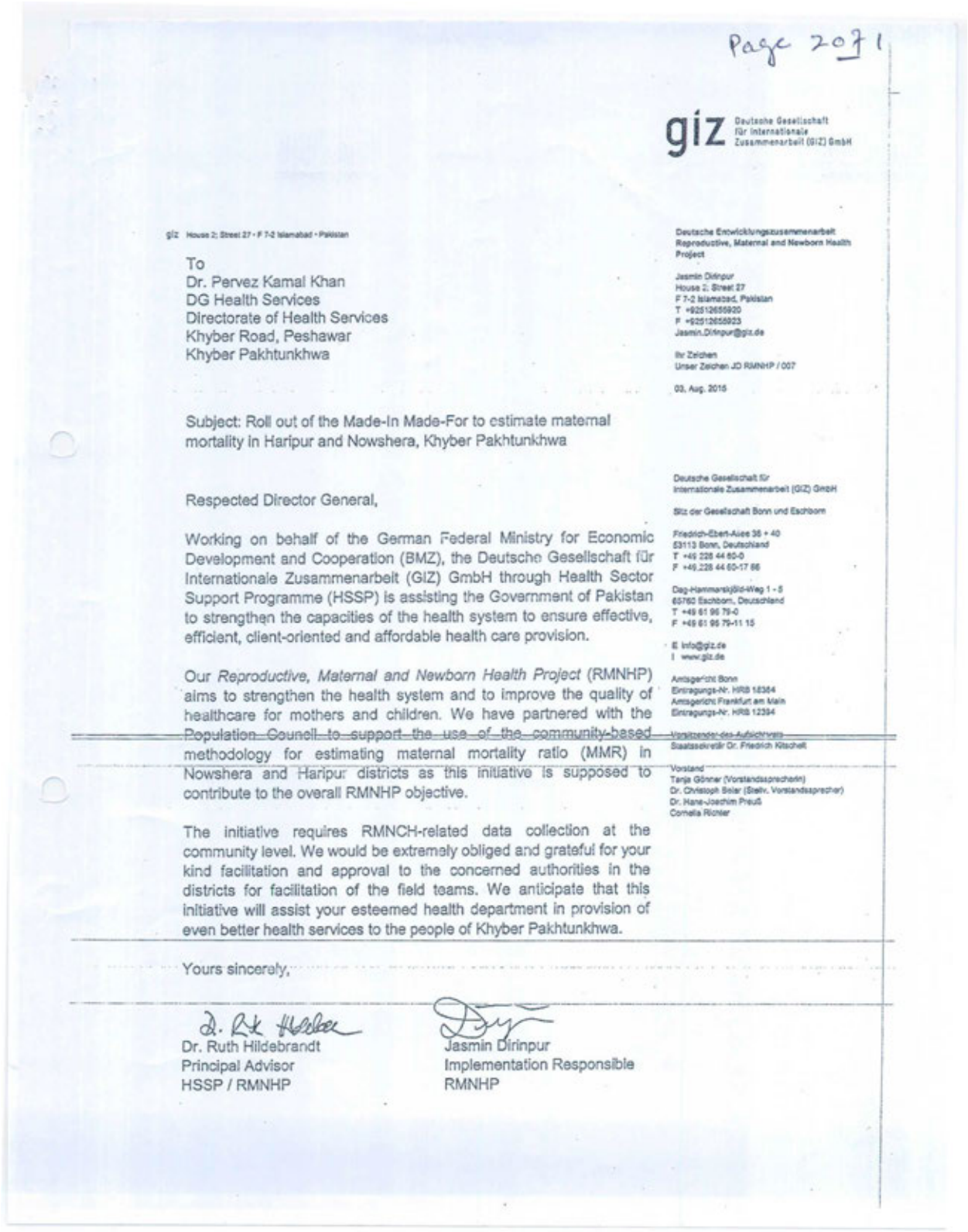
Kindly keep the National Bioethics Committee Secretariat updated with the progress of the project and submit the formal final report on completion.

Yours sincerely

(Prof Dr. Aasim Ahmad)
Chairman
NBC-Research Ethics Committee

NBC Secretariat:
Pakistan Medical Research Council, Shahrah-e-Jamhuriat, Off Constitution Avenue, Sector G-5/2, Islamabad
nbcpakistan.org.pk, www.pmrc.org.pk, e-mail: pmrc.nbc@gmail.com Tel: 92-51- 8207386, 9216793, 9205480, Fax 9216774, 9204559

9.4 Study Support Letters



Page 2071

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

giz House 2; Street 27 • F 7-2 Islamabad • Pakistan

To
Dr. Pervez Kamal Khan
DG Health Services
Directorate of Health Services
Khyber Road, Peshawar
Khyber Pakhtunkhwa

Deutsche Entwicklungszusammenarbeit
Reproductive, Maternal and Newborn Health Project

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T +92512655920
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Jasmin.Dirinpur@giz.de

Ihr Zeichen
Unser Zeichen JD RMNHP / 007

03, Aug. 2015

Subject: Roll out of the Made-In Made-For to estimate maternal mortality in Haripur and Nowshera, Khyber Pakhtunkhwa

Respected Director General,

Working on behalf of the German Federal Ministry for Economic Development and Cooperation (BMZ), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH through Health Sector Support Programme (HSSP) is assisting the Government of Pakistan to strengthen the capacities of the health system to ensure effective, efficient, client-oriented and affordable health care provision.

Our *Reproductive, Maternal and Newborn Health Project* (RMNHP) aims to strengthen the health system and to improve the quality of healthcare for mothers and children. We have partnered with the Population Council to support the use of the community-based methodology for estimating maternal mortality ratio (MMR) in Nowshera and Haripur districts as this initiative is supposed to contribute to the overall RMNHP objective.

The initiative requires RMNCH-related data collection at the community level. We would be extremely obliged and grateful for your kind facilitation and approval to the concerned authorities in the districts for facilitation of the field teams. We anticipate that this initiative will assist your esteemed health department in provision of even better health services to the people of Khyber Pakhtunkhwa.

Yours sincerely,

Dr. Ruth Hildebrandt
Principal Advisor
HSSP / RMNHP

Jasmin Dirinpur
Implementation Responsible
RMNHP

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Sitz der Gesellschaft Bonn und Eschborn

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Amtsgericht Bonn
Eintragungs-Nr. HRB 18384
Amtsgericht Frankfurt am Main
Eintragungs-Nr. HRB 12394

Vorsitzender des Aufsichtsrats
Staatssekretär Dr. Friedrich Kitschelt

Vorstand
Tanja Gönner (Vorstandssprecherin)
Dr. Christoph Beier (Stellv. Vorstandssprecher)
Dr. Hans-Joachim Preuß
Cornelia Richter

OFFICE OF THE DEPUTY COMMISSIONER HARIPUR,
No. 11457-63 /PS/DC (H).
Dated: September 7, 2015.

To,

Dr. Ali Mohammad Mir,
Director Programmes and Research,
Population Council Islamabad.

SUBJECT:- **REQUEST FOR USING THE COMMUNITY INFRMANT BASED (MADE-IN / MADE-FOR) METHODOLOGY FOR ESTIMATING MMR IN DISTRICT HARIPUR.**

Memo;

With reference to your request dated 31.08.2015 for grant of permission to conduct MMR study in District Haripur, it is to inform you that this office will extend full support in connection with subject study, however, it is desired that all the stakeholders including A.C Haripur, DHO Haripur, M.S DHQ Haripur, DSM Haripur, AD LG Haripur and the representatives of District Government Haripur may be taken onboard. The day-to-day activities relating to the subject study may be shared with this office.

Deputy Commissioner
Haripur.
DEPUTY COMMISSIONER
HARIPUR

Copy to the:-

1. D.G Health, Khyber Pakhtunkhwa, Peshawar.
2. D.G Local Government, Khyber Pakhtunkhwa, Peshawar.
3. A.C Haripur.
4. M.S Haripur.
5. DHO Haripur.
6. DSM Haripur.

Deputy Commissioner
Haripur.

Office of The Deputy Commissioner, Haripur.
Phone No. 0995- 613391, 613349, Fax – 615412
No.1 (2)/2015/AE/DC (H)
Dated: 30 / 09 /2015

Office Order.

The Population Council, Islamabad office will conduct interview to hire Filed Staff for MMR (Maternal Mortality Ratio) Study in District Haripur in the office of District Health Officer, Haripur on 01.10.2015.

Mr. Atta-ur-Rehman Abbasi, Accounts Officer is hereby deputed to participate in the Interview Panel / Selection Committee on behalf of DC Office.

Deputy Commissioner,
Haripur.

Copy to the:-

1. District Health Officer, Haripur.
2. Director Programmes & Research, Population Council, Islamabad.
   (House No.7, St No.62, F-6/3, Islamabad, Ph: 0518445566, Fax: 051-2821401)
3. Accounts Officer O/O DC Haripur.

Deputy Commissioner,
Haripur.

OFFICE OF THE ASSISTANT DIRECTOR
LOCAL GOVERNMENT & RURAL DEVELOPMENT
DEPARTMENT NOWSHERA

No. 1965-69 /AD/LG&RDD/NSR Dated Nowshera 17/9/2015

To

All the Secretaries,
Village Councils/Neighborhood Councils,
Nowshera

Subject: - **REQUESTING SUPPORT LETTER FOR A RESEARCH STUDY ON "MEASURING PROVINCIAL ESTIAMTES FOR MATERNAL MOTILITY RATIO IN NOWSHERA DISTRICT OF KHYBER PAKHTUNKHWA/REPRODUCTIVE, MATERNAL AND NEW BORN HEALTH PROJECT".**

Memo:

The Director General, Local Govt: and Rural Development Department Khyber Pakhtunkhwa vide his letter No. Director(LG)3-23/Project File/2013/3635 dated 24-08-2015 has informed that a team of population council (An NGO) will visited your offices on account of data collection/survey on maternal motility in the jurisdiction of each Village Council/Neighborhood Council.

Therefore, you are all directed to extend your possible co-operation to the visiting team under the rules/accordingly.

Assistant Director
Local Govt: & Rural Dev: Department
Nowshera

Endst: No and Date Even:

Copy of the above is forwarded to:-

1. The Director General, Local Govt: and Rural Development Department Khyber Pakhtunkhwa.
2. The Director General, Health Services, Khyber Pakhtunkhwa.
3. The Deputy Commissioner, Nowshera.
4. The Director Program, Population Council Islamabad.

For information with reference to above please.

Assistant Director
Local Govt: & Rural Dev: Department
Nowshera

DIRECTORATE
GENERAL HEALTH SERVICES
KHYBER PAKHTUNKHWA
PESHAWAR

No. 3467-74/DHS
Dated 21/08/2015

To

The Deputy Commissioner,
Nowshera / Haripur
Khyber Pakhtunkhwa,

Subject: **Cooperation in KAP-Survey in Nowshera & Haripur District KP.**

In line with the Provincial Acceleration Operational Plan for Child and Maternal Health 2012-2015 Khyber Pakhtunkhwa, the Integrated Development Strategy 2014-18 for improved Health Services Delivery the Department of Health Khyber Pakhtunkhwa in collaboration with Health Sector Support Programme (HSSP) GIZ is implementing Reproductive, Maternal and Newborn Health Project (RMNHP) in two districts of KP-Haripur and Nowshera, on behalf of the German Ministry for Economic Cooperation and Development.

Reference is made to the requested received from the principal advisor HSSP and RMNHP Islamabad on 03.08.2015 to undertake the field survey on the subject matter (copy attached)

You are requested to take necessary action and extend maximum cooperation and help with the research team.

21/8/15

Director General Health Service,
Khyber Pakhtunkhwa, Peshawar.

Cc:

1. The Director Health Services, Khyber Pakhtunkhwa.
2. District Health Officer (Nowshera / Haripur).
3. Dr. Ruth Hildebrandt, Principal Advisor, GIZ Health Sector Support Programme Pakistan.
4. Dr. Ayesha Khan, Research and Development Solutions.
5. PS to Secretary Home and Tribal Affairs Khyber Pakhtunkhwa.
6. PS to Secretary Health Khyber Pakhtunkhwa.

OFFICE OF THE DIRECTOR GENERAL
LOCAL GOVERNMENT & RURAL DEVELOPMENT
DEPARTMENT KHYBER PAKHTUNKHWA

No. Director (LG) 3-23/Project File/2013/3635
Dated Peshawar, the 24th August 2015

The Assistant Directors,
LG&RDD, Nowshera & Haripur

Subject: - **REQUESTING SUPPORT LETTER FOR A RESEARCH STUDY ON "MEASURING PROVINCIAL ESTIMATES FOR MATERNAL MOTILITY RATIO IN NOWSHERA AND HARIPUR DISTRICT OF KHYBER PAKHTUNKHWA / REPRODUCTIVE, MATERNAL AND NEW BORN HEALTH PROJECT"**

I am directed to refer to subject noted above and to inform that a team of population council (an NGO) will visited at your office on account of data collection / survey on maternal mortality in your respective district and to request you to extend your support to the visiting team subject to approval from the Deputy Commissioner of the concerned district.

Deputy Director (Admin)
LG&RDD

Cc.

1. Dr. Ali Muhammad Mir Director Programme Population Council
2. PA to Director General LG&RDD, Khyber Pakhtunkhwa.

Deputy Director (Admin)
LG&RDD

Office Tel: 091-9223563: Fax: 091-5270460: e-mail: dir.a.lg@kp.gov.pk

DIRECTORATE
GENERAL HEALTH SERVICES
KHYBER PAKHTUNKHWA
PESHAWAR

All communications should be addressed to the Director General Health Services Peshawar and not to any official by name.

E-Mail Address: dghskhyk2014@gmail.com
Office Ph# 091-9210260
Exchange# 091-9210187, 9210196

No. 3475-82/DHS
Dated 21/08/2015

To

The Deputy Commissioner,
Nowshera / Haripur
Khyber Pakhtunkhwa,

Subject: **COOPERATION IN ROLL OUT OF THE MADE-IN MADE-FOR TO ESTIMATE MATERNAL MORTALITY IN NOWSHERA & HARIPUR DISTRICT KP.**

In line with the Provincial Acceleration Operational Plan for Child and Maternal Health 2012-2015 Khyber Pakhtunkhwa, the Integrated Development Strategy 2014-18 for improved Health Services Delivery the Department of Health Khyber Pakhtunkhwa in collaboration with Health Sector Support Programme (HSSP) GIZ is implementing Reproductive, Maternal and Newborn Health Project (RMNHP) in two districts of KP-Haripur and Nowshera, on behalf of the German Ministry for Economic Cooperation and Development.

Reference is made to the requested received from the principal advisor HSSP and RMNHP Islamabad on 03.08.2015 to undertake the field survey on the subject matter (copy attached)

You are requested to take necessary action and extend maximum cooperation and help with the research team.

Director General Health Service,
Khyber Pakhtunkhwa, Peshawar.

Cc:

1. The Director Health Services, Khyber Pakhtunkhwa.
2. District Health Officer (Nowshera / Haripur).
3. Dr. Ruth Hildebrandt, Principal Advisor, GIZ Health Sector Support Programme Pakistan.
4. Dr. Ali Mir, Director Programme and Research Population Council, Islamabad.
5. PS to Secretary Home and Tribal Affairs Khyber Pakhtunkhwa.
6. PS to Secretary Health Khyber Pakhtunkhwa.

9.5 Dates of Trainings and Field Activities

MMR STUDY ACTIVITY SHEDULE					
Sr	DISTRICT NAME	TRAINING		FIELD WORK	
		START	END	START	END
1	Haripur	12-102015	21-10-2015	22-10-2015	15-12-2015
2	Nowshera	28-102015	08-11-2015	09-11-2015	11-01-2016

9.6 Pictures of Trainings in Six Districts

9.7 List of Health Department Staff Who Were Trained

HARIPUR

Name	Designation	Address
Dr. Imran	MNCH Coordinator	DHO Office Haripur
Dr. Tamraiz	Medical officer	DHO Office Haripur
Ms. SharafuNissa	ADC, LHW Program	National program office, Haripur

NOWSHERA

Name	Designation	Address
Dr Quasim	ADHO	DHO Office Nowshera
Mr. Zahid	Data Officer	National program office, Nowshera
Naeed Kausar	ADC	National program office, Nowshera

9.8 Pictures of Field Activities

9.9 Healthcare Structure in Pakistan

Primary Care facilities:

These include MCH Centres (MCHC), Basic Health Units (BHUs) and Rural Health Centres (RHCs). There is at least one primary health care centre present in each Union Council catering to population ranging from ten to twenty five thousand people. MCHCs and BHUs are to operate from 8 am to 3 pm, except on Sundays, while RHCs are to provide 24-hour services. MCH centres are being managed by LHVs and provide basic antenatal care, normal delivery, post-natal and family planning services, and treatment of minor ailments to women and children.

In 2005, the Federal Government launched a country-wide program, known as the People's Primary Health care Initiative PPHI (formerly known as President's Primary Healthcare Initiative) for improving the service delivery at First Level Care Facilities (FLCFs). The purpose of this initiative was to strengthen the curative and preventive services provided in FLCFs, by handing over the management and finances of running the BHUs to the Rural Support Programs (RSPs) in their respective provinces. The objective of the initiative was to re-organize and re-structure the management of all the BHUs in the district with a central role for community-based support groups.

BHUs have a staff of 10 people consisting of a male doctor, a LHV or a FHT, a Male Medical Technician or/and a dispenser and other support staff. They are required to offer first level curative care, MCH services including obstetric first aid, family planning and preventive services through doctors and paramedics.

RHCs provide more extensive outpatient services and some inpatient services, usually limited to short-term observation and treatment of patients who are not expected to require transfer to a higher level facility. They serve a catchment population of about 50,000 to 100,000 people, with about 30 staff including 2 male medical officers, 1 female medical officer, 1 dental surgeon and a number of paramedics. They typically have 10 to 20 beds, an x-ray machine, a laboratory and minor surgery facilities. RHCs are mandated to provide Basic Emergency Obstetric Care.

Referral level facilities:

These include Tehsil Headquarters (THQ – sub district units) and District Headquarters (DHQ) Hospitals that are located at respective levels and offer first line referral services. Tehsil Headquarters Hospitals (THQH) serves a catchment population of about 100,000 to 300,000 people. They typically have 40-60 beds and appropriate support services including x-ray, laboratory and surgery facilities. The staff includes at least three specialists: an obstetrician and gynaecologist, a paediatrician and a general surgeon. District Headquarters Hospitals (DHQH) serve a catchment population of about 1 to 2 million people and typically have about 100-150 beds. There are at least 8 specialists including an obstetrician and an anaesthetist. These hospitals provide Comprehensive EmOC services.

Tertiary care facilities:

The teaching hospitals in Pakistan provide tertiary as well as sub-specialty care. These hospitals mainly provide curative services and to a limited extent some preventive services.

9.10 Indicators for Measuring Maternal Mortality

A number of different indicators have been developed for the measurement of maternal mortality. The most commonly used indicator is the maternal mortality ratio (MM Ratio), which refers to the number of maternal deaths per live birth, multiplied by a conventional factor of 100,000:

MM Ratio = Number of maternal deaths * 100,000

Number of live births

The MM Ratio was designed to express obstetric risk. In fact, the MM Ratio may overestimate obstetric risk by excluding from the denominator pregnancies which do not terminate in a live birth.

The MM Ratio is frequently, though erroneously, referred to as the maternal mortality rate (MM Rate). The MM Rate is an indicator of the risk of maternal death among women of reproductive age. The MM Rate is usually multiplied by a factor of 1,000.

9.11 Demographic Description of All Study Districts

District Haripur

Haripur district consists of two tehsils namely Haripur and Ghazi with 44 union councils: 15 are Urban and 29 Rural. The estimated population of Haripur district was 986000 mid of 2014 out of which 12 % live in urban areas while the remaining 88 % are residing in rural areas. The population is spread over an area of 1,725 square kilometers. Hindko is main language of the district. However, in some part of the district, Pashto, Khohistani and Khowar languages are also spoken. Literacy rate is 82.1 % for males and 60.3 % for females.

Haripur district consisting of one district headquarter hospital, one tehsil head quarter hospitals, 6 RHCs, 42 BHUs, 10 civil dispensaries, 2 MCH centres and 6 other public sectors hospitals of various levels and capacities

Geographically, the district borders Abbottabad District to the north east, Mansehra District in the north-east, the Punjab to the south east, the Buner to the north-west and Swabi to the west. The Federal Capital of Islamabad is also adjacent to the district in the south.

District Nowshera

Nowshera district was a part of Afghanistan as Nowkhaar Province till it was annexed into British India via the Durand Line Agreement. The total population of the district is 1394,000 with the population density of 500 per kilometer square. 26 % population of the district is urban. District is spread over an area 1748 square kilometers.

The district consists of 3 tehsils (Nowshera, Nizampur and Pubbi) with 48 union councils. The main Language is Pushto followed by Jandali and Majhi dialects of Punjabi Language which is spoken in areas of Nowshera Kalan, Akora Khattak, Shaidu, Jehangira and several other villages situated along the Grand Trunk Road. The district has 57 % literacy rate of persons above 10 years of age: 75 % for males and 41.5 % for females. The Human development index of district Nowshera falls in medium ranking (0.655) among the all districts of Pakistan.

Health: Nowshera district has one district headquarter hospital, two tehsil head quarter hospitals, 7 RHCs, 32 BHUs, 16 civil dispensaries, 4 MCH centers and 5 other public sectors hospitals of various levels and capacities. There is one TB clinic in Nowshera. There are two Combined Military Hospitals in the district i.e. Combined Military Hospital - Nowshera and Cantonment and Combined Military Hospital - Risalpur Cantonment.

It is bordered by Peshawar District to the West, Mardan District to the North, Charsadda District to the North West, Swabi District to the North East, Kohat District to the South, Orakzai Agency to the South West & Attock District to the East.

Table 1: Estimated population of Haripur and Nowshera Districts: (mid-year estimated population -2014)

District	Male	Female	Total
Haripur	492,000	494,000	986,000
Nowshera	727,000	668,000	1,394,000

Table 2: Development indicators of KP according to PDHS 2012-13

Indicator	Haripur	Nowshera	KPK
Infant mortality rate	….	….	58
Under-five mortality rate	….	….	70
Use of contraception (any method)	….	….	28.1
Any modern method	….	….	19.5
Any traditional method	….	….	8.6
TFR			3.9
Antenatal care by SBA	….	….	60.6
Assistance during delivery by SBA	….	….	48.3
Postnatal care	….	….	39.3

Table 3: Development indicators of Haripur and Nowshera districts according to MICS survey 2008

Indicator	Haripur	Nowshera	KPK
Infant mortality rate	….	….	76
Under-five mortality rate	….	….	100
Maternal mortality ratio* **	**….**	**….**	**275**
Use of contraception (any method)	40.1	46.8	38.6
Any modern method	28.9	20.6	23.6
Any traditional method	11.2	26.2	15.0
TFR			**5.16**
Urban	….	….	3.52
Rural	….	….	5.53
Antenatal care by SBA	61.7	63.9	46.5
Assistance during delivery by SBA	48.6	55.5	41.1
Postnatal care	20.5	14.9	13.0

*** *PDHS 2006-07*

Table 4: Development indicators of Haripur and Nowshera districts according to PSLMS 2012-13

Indicator	Haripur	Nowshera	KPK
Literacy, 10 & above, Overall	70	57	52
Literacy, 10 & above, Female	60.3	41.5	34.7
Literacy, 10 & above, Male	82.1	75.0	71.2
Literacy, 15-49, Female	67.4	46.5	35.7
Pregnant Women That Have Received Tetanus Toxoid Injection	82.4	70.6	64.8
Antenatal care by SBA (Skilled Birth Attendant)	81.8	76.7	58.8
Assistance during delivery by SBA (Skilled Birth Attendant)	60.5	50.4	50.2
Institutional deliveries	56.6	49.0	45.5

9.12 Terms of Reference for Technical Advisory Group

A Technical Advisory Group was formed and notified by the Director General Health, KP. The Technical Advisory Group (TAG) provided support and guidance during the conceptualization and implementation of the study.

More specifically the Duties and Responsibilities of the group were to:

- Provide technical advice on the study design and tools
- Facilitate in the implementation of the research by issuing letters informing key stakeholders about the purpose of the study and in obtaining necessary permissions for undertaking the field work
- Periodically (every two months), assess progress based on predefined metrics
- Recommend alternative technical solutions for issues arising during the implementation of the study
- Make recommendations regarding the appropriate sources of data for calculating the denominator population
- Support the study findings and assist in gaining credibility and ownership for the study

Membership:

Representatives of Government, Research Organizations, Academic Institutions and Development Partners

Frequency of Meetings:

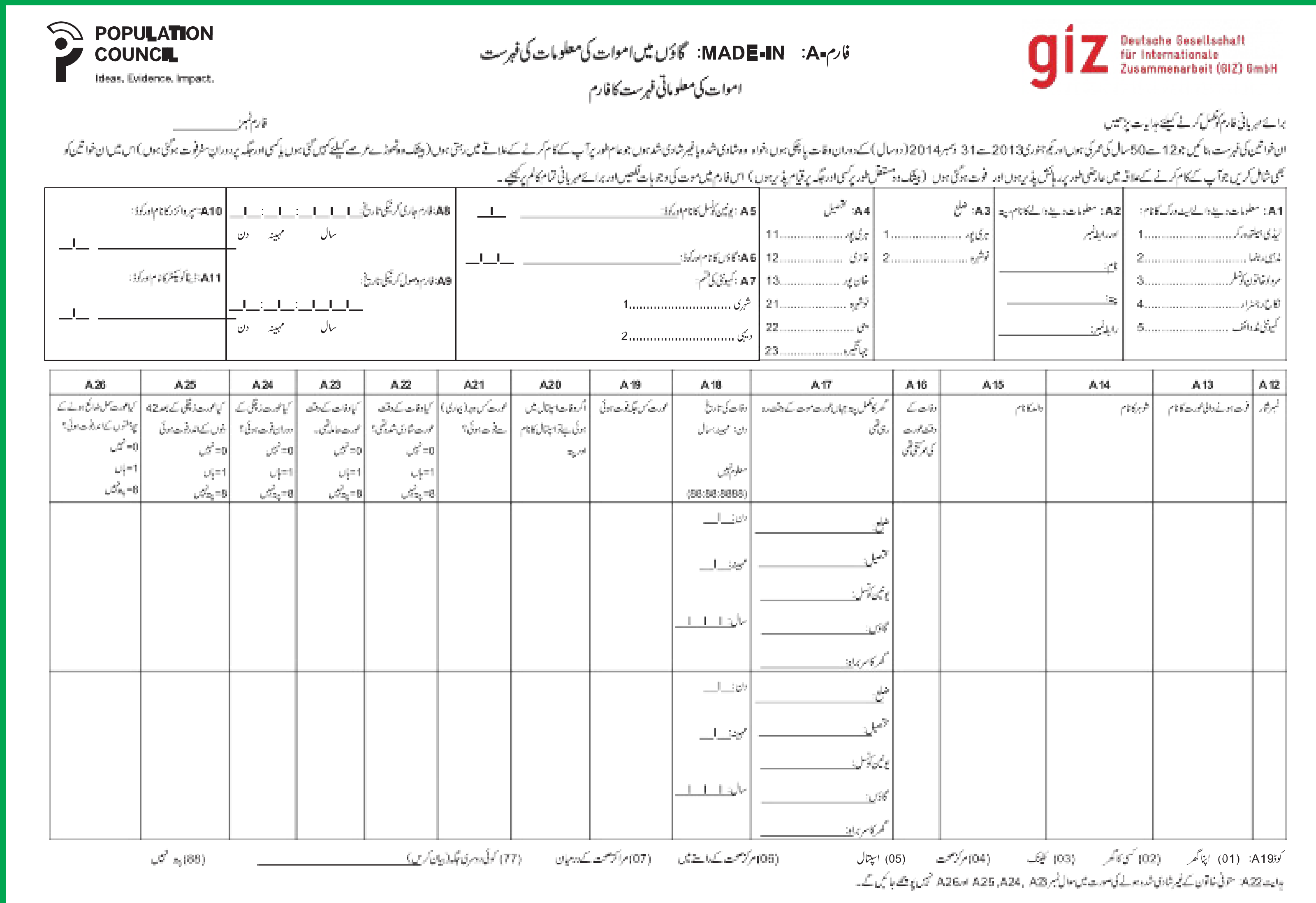
The Technical Advisory Group met twice or by exception where significant issues arise.

Methods of Communication:

In addition to the pre-planned group meetings, the Chair of the Technical Advisory Group and the Project Manager was available for one-to-one communication with other Group members and other stakeholders as and when required.

9. Annexes

9.1 Listing Forms


POPULATION COUNCIL
Ideas. Evidence. Impact.

فارم-A: MADE-IN: گاؤں میں اموات کی معلومات کی فہرست
اموات کی معلوماتی فہرست کا فارم

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

فارم نمبر ________

A1 · A2 · A3 · A4 · A5 · A6 · A7 · A8 · A9 · A10 · A11

A12 · A13 · A14 · A15 · A16 · A17 · A18 · A19 · A20 · A21 · A22 · A23 · A24 · A25 · A26

POPULATION COUNCIL
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فارم-B: MADE-IN: گاؤں میں اموات کی معلومات کی فہرست

اموات کی معلوماتی فہرست کا فارم

فارم نمبر: ________

براے مہربانی فارم کو مکمل کرنے کیلئے ہدایات پڑھیں

جب معلومات دینے والے گاؤں کے گروپس آپس میں بات چیت کرلیں تو ہر گروپ کو چاہیئے کہ وہ ایک حتمی فہرست بنائیں ان خواتین کی جو 12 سے 50 سال کی عمر میں فوت ہوئیں اور وہ جو ان کے گاؤں میں یکم جنوری 2013 سے 31 دسمبر 2014 (دوسال) کے درمیان فوت ہوئیں۔ ان نئے کیسز کو بھی شامل کریں جو میٹنگ کے دوران علم میں آئے اور ایک جیسے دوہرے کیسز کو ختم کریں۔ میٹنگ کے بعد معاون کار کو چاہیئے کہ وہ ان کیسز کو بھی شامل کرے یا ترمیم کرے جو Mop-up visits سے منتخب ہوئے۔

B1 معلومات دینے والے گروپ کا نام:
1. لیڈی ہیلتھ ورکر ....
2. دائی/ دایہ ....
3. مرد/ خواتین کونسلر ....
4. نکاح رجسٹرار ....
5. کمیونٹی مڈوائف ....

B2 ضلع:
ہری پور 1
نوشہرہ 2

B3 تحصیل:
ہری پور 11
غازی 12
خان پور 13
نوشہرہ 21
پبی 22
جہانگیرہ 23

B4 یونین کونسل کا نام اور کوڈ: ________ __|__

B5 گاؤں کا نام اور کوڈ: ________ __|__

B6 کمیونٹی کی قسم: شہری ...... 1 دیہی 2

B7 فارم مکمل کرنے کی تاریخ: __|__ : __|__ : __|__|__|__ دن مہینہ سال

B8 سپروائزر کا نام اور کوڈ: ________ __|__

B9 ڈیٹا کولیکٹر کا نام اور کوڈ: ________ __|__

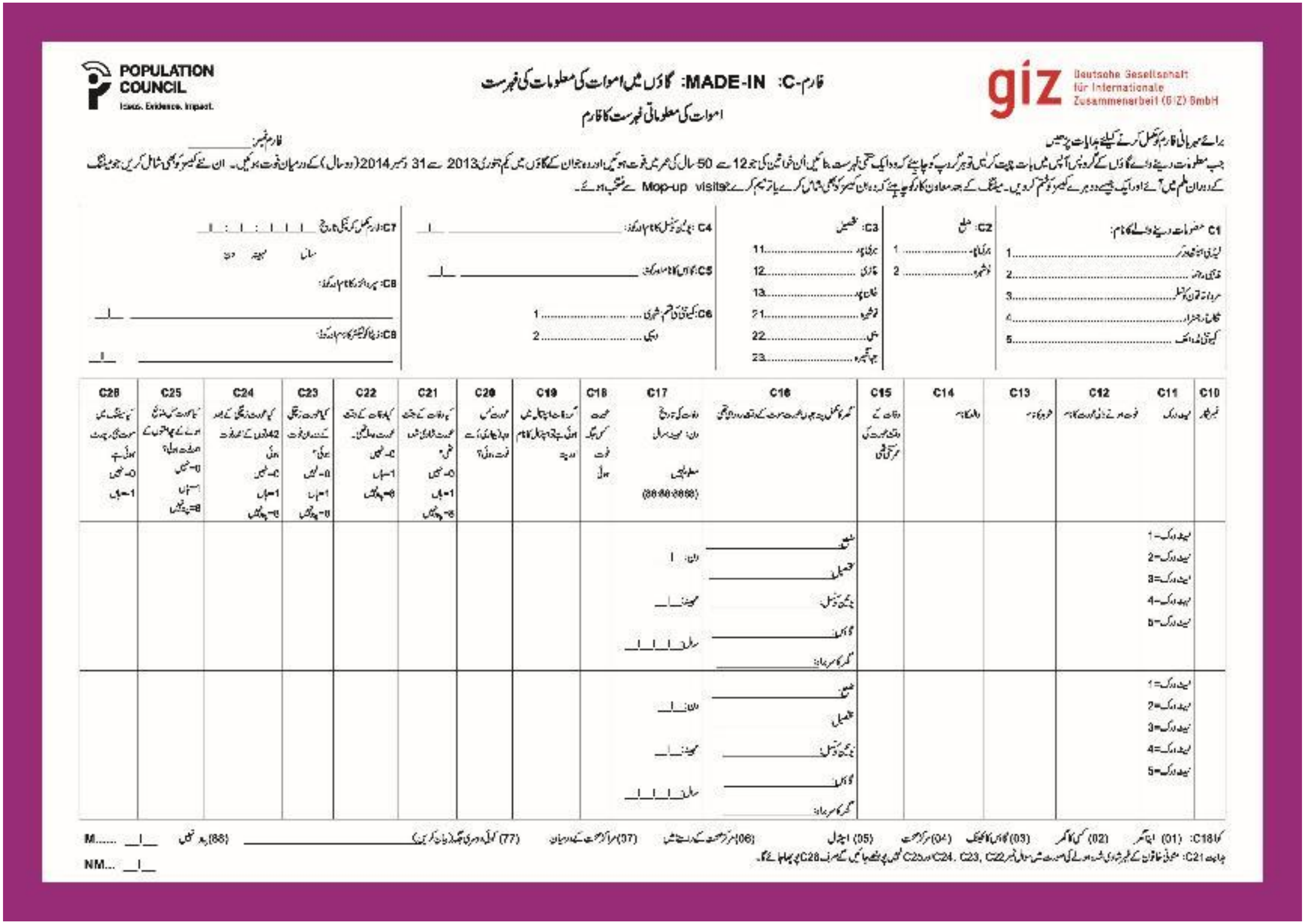
B25	B24	B23	B22	B21	B20	B19	B18	B17	B16	B15	B14	B13	B12	B11	B10
کیا میٹنگ میں موجود کسی کو اس کا علم ہے؟ 0=نہیں 1=ہاں	کیا عورت حمل ضائع ہونے کے چھ ہفتوں کے اندر فوت ہوئی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	کیا عورت زچگی کے بعد 42 دن کے اندر فوت ہوئی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	کیا عورت زچگی کے دوران فوت ہوئی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	کیا وفات کے وقت عورت حاملہ تھی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	کیا وفات کے وقت عورت شادی شدہ تھی؟ 0=نہیں 1=ہاں 8=پتہ نہیں	عورت کس وجہ (بیماری) کے سبب فوت ہوئی؟	اگر وفات ہسپتال میں ہوئی ہے تو ہسپتال کا نام اور پتہ	عورت کس جگہ فوت ہوئی	وفات کی تاریخ دن: مہینہ: سال معلوم نہیں (88:88:8888)	گھر کا مکمل پتہ جہاں عورت موت کے وقت رہ رہی تھی	وفات کے وقت عورت کی عمر کتنی تھی	والد کا نام	شوہر کا نام	فوت ہونے والی عورت کا نام	نمبر شمار
									دن: __|__ مہینہ: __|__ سال: |_|_|_|	ضلع: ____ تحصیل: ____ یونین کونسل: ____ گاؤں: ____ گھر کا سربراہ: ____					
									دن: __|__ مہینہ: __|__ سال: |_|_|_|	ضلع: ____ تحصیل: ____ یونین کونسل: ____ گاؤں: ____ گھر کا سربراہ: ____					

B17 کوڈ: (01) اپنا گھر (02) کسی کا گھر (03) پرائیویٹ کلینک (04) پرائیویٹ ہسپتال (05) گورنمنٹ مرکز صحت (06) گورنمنٹ ہسپتال (07) مرکز صحت کے راستے میں (08) مرکز صحت کے درمیان (77) کوئی دوسری جگہ (بیان کریں) ____________ (88) پتہ نہیں

M...... __|__

NM... __|__

ہدایت B20: حتمی خاتون کے غیر شادی شدہ ہونے کی صورت میں سوال نمبر B21, B22 اور B23 نہیں پوچھے جائیں گے۔


POPULATION COUNCIL
Ideas. Evidence. Impact.
فارم-C: MADE-IN: گاؤں میں اموات کی معلومات کی فہرست
اموات کی معلوماتی فہرست کا فارم
giz
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
فارم نمبر
31 دسمبر 2014 سے 2013
Mop-up visits
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9.2 Verbal Autopsy Questionnaire

PROCESSING CODE

District (Code)	Tehsil (Code)	Union Council (Code)	Village/PSU (Code)	Woman line # (Form-C)

Was the death maternal, non-maternal or late maternal	Maternal ..... 1 Non-maternal ..... 2 Late maternal 3

VERBAL AUTOPSY QUESTIONNAIRE

Informed Consent for the Respondents of Verbal Autopsy

Purpose of the study:
The purpose of this interview is to find out the circumstances of death of your wife/ daughter/ sister/ aunt/ relative. Your answers are very important to us and will help to find better ways to deliver health services to other women in Pakistan to prevent them from dying during pregnancy and in childbirth.

Procedures to be followed:
My name is _____ and I am working with an organization called Population Council, which is a research organization working with the Government of Pakistan to improve the wellbeing of the people. We are conducting a study in two districts of the Khyber Pakhtunkhwa province to estimate the maternal mortality ratio in Khyber Pakhtunkhwa. We would like to seek your cooperation in getting a better idea of the maternal mortality situation in Pakistan, but especially in the Khyber Pakhtunkhwa province.

Discomforts and risks:

If this is not a convenient time for you, we can come later to discuss with you. You may end the interview at any time without penalty or loss. You don't have to answer any questions that you don't want to answer, and you may end this interview at any time you want to. You may feel sad, distressed in recalling the past events. If you do so and want to discontinue the interview you can do so at any time.

Benefits:

There are no direct benefits to you for participating in the study. You may find an indirect benefit in knowing you have participated in an important study that could help others in the future.

Duration of the procedures and study:
We will greatly appreciate if you base your answers on your knowledge regarding the circumstances and cause of death of the deceased woman (to be filled in after exploring relationship). We request you however, to answer as fully as possible because your perceptions and opinions are valuable information.

Your responses to this questionnaire will be completely confidential and will be used for research purposes only. No personal reference will be made to your participation in this survey. We will combine your responses with those of other participants in a report to estimate the maternal mortality and causes of death to get the broader picture regarding maternal health situation in Pakistan.

The interview will take 30-45 minutes to complete. The duration of the entire study is about three months. We may need to contact you again if we need clarification to clear a point, for which you can agree or disagree.

Compensation:
Your participation in this study is purely voluntary and will not be paid any compensation for participation in the study. There is no penalty for refusing to take part. If you agree to participate in this study, you may end your participation at any time without any penalty or loss.

Whom to call in case of an emergency:
If you have a concern about any aspect of the study, you should ask to speak to the researchers who will do their best to answer your questions. Any complaint about the way you have been treated during the study or any possible harm you might suffer will be addressed. You may call Dr Saleem Shaikh at this number 0092-51-8445566 Ext. 195 for any complaints. For information about your rights or in case of violation of rights you may contact Dr Mushtaq Khan Tanoli DHO, Haripur at this number 0995-610997 and Dr Arshad khan DHO Nosehra at this number 0923-580759.

Offer to answer questions and freedom to withdraw from the study:
Your participation in this study is purely voluntary. If you do not agree to participate in the study, you can withdraw from the study at any time without prejudice.

Confidentiality:
Your responses to this questionnaire will be completely confidential and will be used for research purposes only. No personal reference will be made to your participation in this study of measuring maternal mortality. We will combine your responses with those of other participants to describe the general picture in Pakistan. Data will be stored in a locked cabinet dedicated to this study that only the study team can access.

Subject's statement:

"I have been given an opportunity to ask any questions I may have, and all such questions or inquiries have been answered to my satisfaction."

"I further understand that my records will be kept confidential and that I may withdraw from this study at any time.

"My withdrawal from this study or my refusal to participate will in no way affect my medical care from the hospital or clinic.

"I have been informed orally and in writing of whom to contact in case of an emergency. I agree to participate in this study as a volunteer subject."

_____ _____
Date Signature of Volunteer

Investigator's statement:

An example of a suggested statement is as follows:

"I, the undersigned, have explained to the volunteer in a language he/she understands the procedures to be followed in the study and the risks and benefits involved.

_____ _____
Date Signature of Investigator

_____ _____
Date Signature of Witness to the Above Signatures and Explanations

The Informed Consent must include any additional information that applicable Federal, State, or local laws require to be disclosed in order for informed consent to be legally effective.

جواب دہندہ سے انٹرویو کا اجازت نامہ

میرا نام۔۔۔۔۔۔۔۔۔۔۔۔۔۔ ہے اور میرا تعلق پاپولیشن کونسل سے ہے ۔جو تحقیق کا ایک ادارہ ہے اور حکومت پاکستان کے ساتھ مل کر لوگوں کی فلاح و بہبود کے لئے کام کر رہا ہے۔ ہم صوبہ خیبر پختونخواہ میں پیدائش کے عمل کے دوران فوت ہونے والی عورتوں کی شرح کا اندازہ لگانے کے لئے دو اضلاع میں ایک تحقیق کر رہے ہیں ۔ ہمیں اس شرح کا اندازہ لگانے کے لئے آپ کا تعاون درکار ہے۔

تحقیق کا مقصد:۔

اس انٹرویو کا مقصد یہ ہے کہ ان حالات و واقعات کے بارے میں جانا جائے جو خاتون کی موت کی وجہ بنے۔ آپ کی دی گئی معلومات عورتوں کو حمل اور زچگی کے دوران صحت کی بہتر سہولتیں فراہم کرنے اور اموات سے بچانے میں مددگار ہوں گی۔

خدشات:۔

اگر اس وقت آپ مصروف ہیں تو ہم آپ کے ساتھ بات چیت کے لئے بعد میں آجائیں گے۔ آپ جس وقت چاہیں انٹرویو ختم کر سکتی ہیں اور اس کا آپ کو کوئی نقصان نہیں ہوگا۔ آپ کو اس بات کا اختیار ہوگا کہ آپ کو جو سوال اچھا نہ لگے اس کا جواب نہ دیں ۔ ماضی کے واقعات کو یاد کر کے اگر آپ پریشان ہو جائیں اور انٹرویو ختم کر ناچاہیں تو کر سکتی ہیں۔

فائدہ :۔

آپ کو اس تحقیق میں شرکت کرنے کا کوئی براہ راست فائدہ نہیں ہوگا لیکن یہ بات آپ کے لئے سکون کا باعث ہوگی کہ آپ نے ایک ایسی تحقیق میں حصہ لیا ہے جو دوسروں کے لئے فائدہ مند ہے۔

انٹرویو کا دورانیہ:۔

یہ بات ہمارے لئے باعث اطمینان ہوگی کہ آپ کی دی گئی معلومات اُن حالات و واقعات کی بنیاد پر ہوں جو خاتون کی موت کی وجہ بنے۔ہم آپ سے درخواست کریں گے کہ آپ سوالات کا تفصیلی جواب دیں کیونکہ آپ کی آراء اور معلومات قیمتی ہیں ۔آپ کی معلومات مکمل طور پر صیغہ راز میں رکھی جائیں گی اور صرف تحقیق کے لئے استعمال ہوں گی۔ آپ کی کوئی ذاتی معلومات انٹرویو میں شامل نہیں ہو گی۔ ہم آپ کے جوابات کو دوسرے لوگوں کے جوابات کے ساتھ ایک رپورٹ میں جمع کریں گے تاکہ ماوں کی شرح اموات ، اموات کی وجو ہات کا بہتر اندازہ لگایا جا سکے۔ انٹرویو مکمل کرنے میں 45-30 منٹ لگیں گے۔ تحقیق کا مکمل دورانیہ تقریبا تین مہینے ہے۔ ہوسکتا ہے کہ کسی بات کی وضاحت کے لئے آپ سے دوبارہ رابطہ کریں ۔.

ادائیگی:۔

آپ کی اس تحقیق میں شرکت خالصتا رضاکارانہ ہوگی اور آپ کو کوئی مالی ادائیگی نہیں کی جائے گی۔ اگر آپ اس تحقیق میں شرکت نہ کرنا چاہیں تو آپ پر کوئی جرمانہ بھی نہ ہوگا۔اگر آپ رضامند ہیں تو انٹر ویو شر وع کیا جا سکتا ہے آپ جس وقت چاہیں انٹرویو چھوڑ سکتی ہیں ۔

ہنگامی صورتحال میں کسی سے رابطہ کرنا ہے :۔

اگر تحقیق کے کسی پہلو کے بارے میں آپ کو کوئی خدشات ہوں تو آپ محقیقین سے رابطہ کر سکتی/سکتے ہیں وہ آپ کے سوالات کے جوابات دے کر آپ کو مطمئن کرنے کی کوشش کریں گے۔ آپ کسی بھی شکایت کے لئے ڈاکٹر سلیم شیخ سے اس نمبر پر رابطہ کر سکتے/سکتی ہیں ۔ **-051) 8445566)**

آپ اپنے حقوق کے بارےمیں جاننے یا اُن کی خلاف ورزی کی صورت میں ڈاکٹرمشتاق خان تنولی(جوکہ DHO،ہری پور-**0995** , **610997** اور ڈاکٹرارشدخان جوکہ DHO نوشہرہ ہیں 0923-580759 ان سے رابطہ کر سکتے /سکتی ہیں ۔

سوالات کے جوابات دینے اور تحقیق میں حصہ نہ لینے کی پیشکش:۔

آپ کی اس تحقیق میں شرکت مکمل طور پر رضاکارانہ ہے اگر آپ تحقیق میں حصہ نہ لینا چاہیں یا کسی بھی موقع پر تحقیق میں حصہ نہ لینا چاہیں تو آپ بغیر وجہ بتائے چھوڑ سکتے / سکتی ہیں۔

رازداری :۔

آپ کے جوابات مکمل طورپر رازداری میں رکھے جائیں گے اور صرف تحقیقی مقاصد کے لئے استعمال کئے جائیں گے ۔ شرح اموات کا اندازہ لگانے کی اس تحقیق میں آپ کی شرکت کا کوئی ذاتی حوالہ نہیں دیا جائے گا۔

ہم آپ کی رائے کو دوسرے جواب دہندہ لوگوں کی رائے کے ساتھ ملائیں گے ۔ آپ کی دی گئی معلومات کو ایک تالابند الماری میں رکھا جائے گا اور صرف تحقیقی ٹیم کی اس تک رسائی ہوگی۔

اعترافی بیان:۔

مجھے سوالات کرنے کا پورا موقع دیا گیا اور تمام سوالات کے تسلی بخش جوابات دیئے گے ۔ مجھے مزید یہ بھی سمجھایا گیا کہ میرے تمام معلومات راز میں رکھی جائیں گی اور یہ کہ میں کسی بھی وقت اس تحقیق سے الگ ہو سکتا/سکتی ہوں ۔ تحقیق سے علیحدگی صحت کی سہولت سے میرے علاج پر اثر انداز نہیں ہوگی۔ مجھے یہ بھی بتایا گیا کہ ہنگامی صورتحال میں کس سے رابطہ کرنا ہے۔ میں اس تحقیق میں رضاکارانہ طور پر شرکت کر رہا/رہی ہوں

جواب دہندہ کے دستخط:---------- تاریخ:----------

انٹرویو کرنے والے /والی کا بیان :۔

میں نے جواب دہندہ کو اس کی زبان میں تحقیق کے سارے مقاصد اور مراحل سے آگاہ کر دیا ہے اور ممکنہ خدشات اور فوائد کے بارے میں بھی بتا دیا ہے۔

انٹرویو کرنے والے /والی کے دستخط:---------- تاریخ:----------

SECTION-A: IDENTIFICATION

A1- Name of District	
1 – Haripur	2 – Nowshera
A2- Name of Tehsil	
11 - Haripur 12 - Ghazi	21 - Nowshera 22 – Pabbi 23 – Jahangira

A3- Name and code of Union Council __|__|__

A4- Name and code of village/PSU __|__|__

A5- Woman line number (From Form-C) __|__

A6-Type of network **(Circle all death reporting networks)**	LHW .....1 Religious Leader .....2 M / F Councilor .....3 Nikah Registrar .....4 CMW.....5

A7-Complete address of household

A8- Number of visits to complete the interview __|__

A9- Duration of interview __|__ (Minutes)

A10-Date of last visit for interview __|__:__|__:__|__|__|__ DD MM YYYY

A11-Name and code of interviewer __|__|__

A12-Result of interview	Complete..... 01	HH not found..... 04	Out of criteria (Age).....07
	Incomplete 02	Shifted 05	Out of criteria (Year).....08
	Refused..... 03	Duplicate 06	Others (Specify) 77

If A12 > 02 then end interview

SECTION-B: INFORMATION ABOUT THE RESPONDENT

Q.NO.	Questions and Filters	Coding Categories
B1 **(2A120)**	Name of verbal autopsy respondent: _____ انٹرویو دینے والی/ والے کا نام Complete address of respondent: انٹرویو دینے والی/ والے کا مکمل ایڈریس _____	
B2 **(2A110)**	What is your relationship to the deceased? آپ کا مرحومہ سے کیا رشتہ ہے؟	Husband ..... 01 Father/Mother ..... 02 Sibling ..... 03 Parent in Law ..... 04 Sibling in Law ..... 05 Neighbor ..... 06 Son/Daughter ..... 07 Son/Daughter in law ..... 08 Uncle ..... 09 Aunt ..... 10 Cousin ..... 11 Nephew ..... 12 Niece ..... 13 Other relative (specify) ..... 77 No relation 97
B3	Gender of the Respondent انٹرویو دینے والی/ والے کی جنس	Male ..... 1 Female 2
B4 **(2A115)**	Did you live with the deceased in the period leading to her death? جس وقت مرحومہ کی موت واقع ہوئی تو کیا آپ اس عرصے میں اس کے ساتھ رہتی/رہتے تھے؟	Yes ..... 1 No..... **(Go to B6)** 2
B5	Since how long you were living with the deceased? آپ کتنے عرصے سے مرحومہ کے ساتھ رہ رہی تھیں/تھے؟	(a) Weeks ..... __|__ (b) Months ..... __|__ (c) Years..... __|__ Don't know..... 88
B6	Were you present with deceased at the time of death کیا مرحومہ کی موت کے وقت آپ اس کے پاس موجود تھیں/ تھے؟	Yes ..... 1 No..... 2

SECTION-C: DECEASED WOMAN'S HOUSEHOLD CHARACTERISTICS

In order to get an idea of the socio-economic conditions of the deceased woman we shall ask a few questions related to her (deceased woman's) living conditions

مرحومہ کی سماجی اور معاشی حالات کا اندازہ لگانے کے لیے ہم اس کے روزمرہ کی زندگی سے متعلق کچھ سوالات کریں گے

Q.NO.	Questions and Filters	Coding Categories	
C1	What is the main source of drinking water of deceased's household. مرحومہ کے گھر میں پینے کے پانی کا اہم ذریعہ کیا ہے؟	Govt. supply (tap water inside)	01
		Govt. supply (communal)	02
		Motorized/Hand pump (inside)	03
		Motorized/Hand pump (outside)	04
		Well (inside)	05
		Well (outside)	06
		Tube-well	07
		River/Canal/Stream	08
		Pooled/Pond water	09
		Others **[Specify]**	77
C2	What kind of toilet facility do deceased's household members usually use? عموماً مرحومہ کے گھر والے بیت الخلاء کے لیے کس طرح کی سہولت استعمال کرتے ہیں؟	Flush to sewerage	01
		Flush connected to septic tank	02
		Flush connected to open drain	03
		Raised latrine	04
		Pit latrine	05
		In fields	06
		Others **[Specify]**	77
C3	What is the main type of fuel used for cooking in the household? گھر میں کھانا پکانے کے لیے ایندھن کے کون سے ذرائع استعمال ہوتے ہیں **(Please observe)**	Fire wood	01
		Kerosene oil	02
		Gas Cylinder	03
		Natural gas (Sui gas)	04
		Dung Dry	05
		Charcoal/Coal	06
		Others **[Specify]**	77
C4	What is the main material of the roof of the house? **(Please observe)** گھر کی چھت کس چیز کی بنی ہوئی ہے؟	Concrete	01
		Iron sheet	02
		Guarder and T-iron	03
		Wood/Bamboo and mud	04
		Other s**[Specify]**	77

Q.NO.	Questions and Filters	Coding Categories
C5	What is the main material of the floor of the house? گھر کا فرش کس چیز کا بنا ہوا ہے؟ **(Please observe)**	Earth/sand/mud ..... 01 Chips ..... 02 Ceramic tiles ..... 03 Marble ..... 04 Cement ..... 05 Bricks ..... 06 Others**[Specify]**..... 77
C6	What is the main material of the walls of the house? گھر کی دیواریں کس چیز کی بنی ہوئی ہیں؟ **(Please observe)**	Burnt bricks/Blocks..... 01 Mud bricks/Mud..... 02 Wood/Bamboo ..... 03 Stones ..... 04 Others **[Specify]**..... 77

1. Does the household of the deceased have the following: کیا مرحومہ کے گھر میں درج ذیل اشیاء موجود ہیں؟

	Household possessions	**Yes**	**No**
a	Wall Clock	1	2
b.	Chairs	1	2
c.	Bed	1	2
d.	Sofa	1	2
e.	Electricity	1	2
f.	Sewing Machine	1	2
g.	Camera	1	2
h.	Radio/tape recorder	1	2
i.	Television	1	2
j.	Refrigerator	1	2
k.	Land line telephone	1	2
l.	Mobile telephone	1	2
m.	Room cooler/ air conditioner	1	2
n.	Washing machine	1	2
o.	Cycle	1	2
p.	Motor cycle	1	2
q.	Jeep/ car	1	2
r.	Tractor	1	2
s.	Personal computer	1	2

SECTION-D: DECEASED WOMAN'S BACKGROUND CHARACTERISTICS

Now I would like to ask you some questions related to deceased woman's background characteristics

اب ہم مرحومہ سے متعلق کچھ ایسے سوالات کریں گے جو ہمیں اس کے پس منظر اور خصوصیات کے بارے میں معلومات فراہم کریں گے۔

Q.NO.	Questions and Filters	Coding Categories
D1 (1A100)	What was the name of the deceased woman? مرحومہ کا نام کیا تھا؟ _____	
D2 (1A200)	Is date of birth / year known? کیا آپ کو مرحومہ کی تاریخ پیدائش معلوم ہے؟	Yes..... 1 No ..... **(Go to D4)** 2
D3 (1A210)	When was the deceased born? مرحومہ کی پیدائش کب ہوئی تھی؟	__|__:__|__:__|__|__|__ DD MM YYYY
D4 (1A220)	Is date of death / year known? کیا اس کی موت کی تاریخ معلوم ہے؟	Yes..... 1 No ..... **(Go to D6)** 2
D5 (1A230)	When did she die? اس کی موت کب واقع ہوئی؟	__|__:__|__:__|__|__|__ DD MM YYYY
D6 (1A240)	How old was the deceased when she died? جب اس کی موت واقع ہوئی تو اس کی عمر کیا تھی؟	Age in years..... __|__
D7 (1A500)	What was her citizenship/nationality? اس کی شہریت/قومیت کیا تھی؟	Pakistani..... 1 Afghani..... 2 Others (Specify) 7
D8 (1A510)	What was her ethnicity? (mother tongue) اس کا تعلق زبان/لسانی لحاظ سے کس طبقے سے تھا؟	Punjabi ..... 01 Sindhi ..... 02 Balochi ..... 03 Pakhtun..... 04 Saraiki ..... 05 Hindko ..... 06 Others (Specify) 77
D9 (1A520)	What was her place of birth? وہ کہاں پیدا ہوئی تھی؟	a) Province ..... b) District ..... c) Tehsil..... d) UC .....
D10	At the time of death was she living in a nuclear or joint family? موت کے وقت وہ کس قسم کے خاندان میں رہتی تھی؟	In nuclear family ..... 1 In joint family..... 2
D11 (1A630)	What is /was the name of her mother? اس کی ماں کا نام کیا ہے/تھا؟	
D12 (1A620)	What is / was the name of her father? اس کے باپ کا کیا نام ہے/تھا؟	
D13	What is/ was the name of her husband? اس کے شوہر کا کیا نام ہے/تھا؟	

D14 **(1A640)**	Was she able to read and write? کیا وہ پڑھنا لکھنا جانتی تھی؟	Only read ..... 1 Both read and write ..... 2 None.....**(Go to D16)** ..... 3 Don't know 8
D15 **(1A650)**	What was her highest level of schooling? اس کی تعلیم کیا تھی؟	No formal education ..... 0 Primary ..... 1 Middle ..... 2 Matriculation ..... 3 Intermediate ..... 4 Higher ..... 5 Don't know 8
D16 **(1A670)**	What was her occupation, that is, what kind of work did she mainly do? اس کا پیشہ کیا تھا؟ یعنی وہ کس طرح کا کام کرتی تھی؟	Employed ..... 01 Unemployed ..... 02 Self-employed ..... 03 Not economically active ..... 04 House wife ..... 05 Student ..... 06 Others (specify) ..... 77 Don't know 88
D17 **(1A680)**	What is/ was the main occupation of her husband? اس کے خاوند کا پیشہ کیا ہے /تھا ؟	Agriculture/Livestock/Poultry ..... 01 Petty trader ..... 02 Labor (Daily wages) ..... 03 Government service ..... 04 Private service ..... 05 Own business ..... 06 Abroad ..... 07 Unemployed ..... 08 Skilled worker ..... 09 Retired ..... 10 Others (Specify) ..... 77 Don't know 88
D18	What is / was the monthly income of her husband? اس کے خاوند کی ماہانہ آمدن کیا ہے/ تھی ؟	Rupees..... __|__|__|__|__|__ Don't know 888888
D19	What is /was the level of schooling of her husband? اس کے خاوند کی تعلیم کتنی ہے / تھی ؟	No formal education ..... 1 Primary ..... 2 Middle ..... 3 Matriculation ..... 4 Higher ..... 5 Don't know 8

SECTION-E: BIRTH AND PREGNANCY INFORMATION

Now I would like to ask you some questions related deceased woman's pregnancies and births.

اب ہم مرحومہ خاتون کے حمل اور پیدائشوں سے متعلق سولات کریں گے

Q.NO.	Questions and Filters	Coding Categories
E1 (1A600)	What was her marital status at the time of death? موت کے وقت اس کی ازدواجی حیثیت کیا تھی؟	Never married…**(Go to section-F)** ..... 1 Married ..... 2 Widow ..... 3 Divorced ..... 4 Separated 5
E2 (1A610)	What was the date of marriage or year? اس کی شادی کی تاریخ کیا تھی؟	__|__:__|__:__|__|__|__ DD MM YYYY Don't know 88:88:8888
E3	How old was the deceased when she got married? جب اس کی شادی ہوئی تو اس وقت اس کی عمر کیا تھی؟	Age in years ..... __|__ Don't know 88
E4	Did she get pregnant in her lifetime? کیا وہ اپنی پوری زندگی میں حاملہ ہوئی تھی؟	Yes ..... 1 No……**(Go to section-F)** 2
E5	How many times did she get pregnant in her lifetime? وہ کتنی بار حاملہ ہوئی تھی؟	Number of pregnancies ..... __|__ First pregnancy 96
E6 (3C230)	How many live births did she have in her lifetime? اس نے کتنے زندہ بچوں کو پیدا کیا؟ **(If no live birth write "00")**	(a) Total ..... __|__ (b) Son(s) ..... __|__ (c) Daughter(s) ..... __|__ Don't know 88
E7	How many of her pregnancies resulted in spontaneous and induced abortion(s)? اس کے کتنے حمل کا نتیجہ ارادی یا غیر ارادی اسقاط حمل کی صورت میں نکلا؟ **(If no abortion write "00")**	(a) Total abortion(s) ..... __|__ (b) Spontaneous abortion(s) ..... __|__ (c) Induced abortion(s) ..... __|__ Don't know 88
E8	How many stillbirths did she have in her lifetime? اس نے کتنے مردہ بچوں کو پیدا کیا؟ **(If no stillbirth write "00")**	(a) Total ..... __|__ (b) Son(s) ..... __|__ (c) Daughter(s) ..... __|__ Don't know 88
E9	How many of her children are living now? اس وقت اس کے کتنے بچے زندہ ہیں؟ **(If no living child write "00")**	(a) Total ..... __|__ (b) Son(s) ..... __|__ (c) Daughter(s) ..... __|__ Don't know 88

Pregnancy History

E10	E11	E12	E13	E14	E15	E16
SNO	List all pregnancies حمل کی فہرست (Start from last pregnancy)	Duration of pregnancy in months حمل کا دورانیہ [مہینوں میں] Less than 1 month = 00 Don't know = 88	Outcome of pregnancy حمل کا نتیجہ 1. Live birth 2. Still birth 3. Spontaneous abortion 4. Induced abortion 5. Multiple births **(Write code below)** (If still birth, spontaneous or induced abortion **GO to next pregnancy**)	Is child still alive کیا بچہ ابھی زندہ ہے؟ 1. Yes 2. No **(Write code below)**	Gender of child بچے کی جنس 1. Boy 2. Girl **(Write code below)**	Age of child in days, or months (If died age at death) بچوں کی عمریں [اگر فوت ہوگئے ہیں تو موت کے وقت عمر] [دن/مہینے] Don't know = 88
1	Last	__|__				D: __|__ M: __|__ Y: ___|___
2	2nd last	__|__				D: __|__ M: __|__ Y: ___|___
3	3rd last	__|__				D: __|__ M: __|__ Y: ___|___
4	4th last	__|__				D: __|__ M: __|__ Y: ___|___
5	5th last	__|__				D: __|__ M: __|__ Y: ___|___
6	6th last	__|__				D: __|__ M: __|__ Y: ___|___
7	7th last	__|__				D: __|__ M: __|__ Y: ___|___
8	8th last	__|__				D: __|__ M: __|__ Y: ___|___
9	9th last	__|__				D: __|__ M: __|__ Y: ___|___
10	10th last	__|__				D: __|__ M: __|__ Y: ___|___
11	11th last	__|__				D: __|__ M: __|__ Y: ___|___
12	12th last	__|__				D: __|__ M: __|__ Y: ___|___
13	13th last	__|__				D: __|__ M: __|__ Y: ___|___
14	14th last	__|__				D: __|__ M: __|__ Y: ___|___
15	15th last	__|__				D: __|__ M: __|__ Y: ___|___
16	16th last	__|__				D: __|__ M: __|__ Y: ___|___

SECTION-F: INFORMATION RELATED TO PLACE OF DEATH

موت کی جگہ سے متعلق معلومات

Q.NO.	Questions and Filters	Coding Categories
F1 (1A550)	Where did death occur (location)? اس کی موت کہاں واقع ہوئی؟ [جگہ]	a) Province ..... __|__ b) District ..... __|__ c) Tehsil ..... __|__ d) UC ..... __|__
F2 (1A560)	What was the place of death? اس کی موت کی جگہ کیا تھی؟	Husband's home .....1 Mother/Father's home .....2 Neighbor/Relative's home .....3 At health facility .....**(Go to F4)** .....4 On way to health facility .....**(Go to F5)**.....5 Others (Specify).....7
F3	If she died at home, who provided the treatment? اگر وہ گھر پر فوت ہوئی تو اس کو علاج کس نے مہیا کیا؟	No one .....00 Doctor .....01 LHV/Nurse.....02 LHW .....03 TBA/Dai .....04 CMW .....05 Hakeem/Homeopath .....06 Relative/Friend .....07 Others (Specify) 77
F4	If she died within a health facility, what was the name and address of the health facility? اگر وہ کسی صحت کی سہولت پر فوت ہوئی تو اس صحت کی سہولت کس سطح کی تھی؟ **Write address of facility here** نام اور ایڈریس یہاں لکھیں _____ _____	DHQ.....01 THQ.....02 RHC .....03 BHU .....04 Teaching Hospital .....05 Private hospital .....06 Private clinic.....07 Others (Specify) 77
F5	What was the state of pregnancy at the time of her death? اس کی موت کن دنوں میں واقع ہوئی؟	During pregnancy..... 1 During delivery..... 2 Within 42 days of delivery ..... 3 After 42 days but less than 1 year 4
F6	In the final days before death, did she travel to a hospital or health facility? موت کے آخری ایام میں، کیا مرحومہ نے کسی ہسپتال یا صحت کے مرکز سے رجوع کیا؟یعنی وہ وہاں گئی تھی؟	Yes..... 1 No..... **(Go to G1)** ..... 2 Don't know..... **(Go to G1)** 8

Q.NO.	Questions and Filters	Coding Categories		
F7	If yes how many facilities did she visit before reaching final faciliy where she died? اگر ہاں تو صحت کی کتنی سہولیات پر مرحومہ کا لیکے جایا گیا؟	Number of facilities .....__|__ Don't know 88		
F8	What was the level of Treatment /Contact facility علاج کے لیے کس سطح کے صحت کے مرکز پر لے جایا گیا؟	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	DHQ	01	01	01
	THQ	02	02	02
	RHC	03	03	03
	BHU	04	04	04
	Teaching Hospital	05	05	05
	Other Govt. Hospital	06	06	06
	Private Hospital	07	07	07
	Private Clinic	08	08	08
	Others (Specify)	77	77	77
	Don't know	88	88	88
F9	Who provided treatment at the contact /referral facility ریفرل والی سہولت پر کس نے علاج فراہم کیا؟	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	Gynecologist	01	01	01
	Doctor	02	02	02
	Nurse	03	03	03
	Lady Health Visitor (LHV)	04	04	04
	Lady Health Worker (LHW)	05	05	05
	Traditional Birth Attendant (TBA)	06	06	06
	Dispenser	07	07	07
	Female Health Technician (FHT)	08	08	08
	Male Health Technician (MHT)	09	09	09
	Others (Specify)	77	77	77
	Don't know	88	88	88
F10	What was the reason for shifting from health facilities? صحت کے مرکز سے رجوع یا ریفرل کی بنیادی وجہ کیا تھی؟	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	Facility was not equipped	01	01	01
	No facility for surgery	02	02	02
	No blood transfusion facility	03	03	03
	Lack of equipment and consumables	04	04	04
	Routine Check-up	05	05	05
	Booked case	06	06	06
	Delivery	07	07	07
	C- Section	08	08	08
	Abnormal lie/ Presentation	09	09	09
	High BP	10	10	10
	Anemia	11	11	11
	Fits	12	12	12
	Unconsciousness	13	13	13
	Others (Specify)	77	77	77
	Don't know	88	88	88

Q.NO.	Questions and Filters	Coding Categories		
F11	What was the time taken to reach the facility (From home to 1st, 1st to 2nd, 2nd to 3rd facility)	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	ہسپتال تک پہنچنے کے لیے کتنا وقت لگا تھا؟ Minutes	__|__	__|__	__|__
	[پہلے ، دوسرے، تیسرے مرکز صحت پر] Hours	__|__	__|__	__|__
	Don't know	88	88	88
F12	What was the duration of stay (At each facility) علاج کی غرض سے ہر صحت کے مرکز میں کتنی دیر رہے [ہر سہولت پر]	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	Minutes	__|__	__|__	__|__
	Hours	__|__	__|__	__|__
	Don't know	88	88	88
F13 **(4A130)**	Were there any problems in the following with the way she was treated in the hospital or health facility? جس ہسپتال یا صحت کی سہولت پر خاتون کا علاج ہوا وہاں پر کون کون سے مسائل پیش آئے؟	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	(1) None	00	00	00
	(2) Admission	01	01	01
	(3) Medical treatment	02	02	02
	(4) Medication **(4A140)**	03	03	03
	(5) Diagnostic/ Laboratory Tests **(4A140)**	04	04	04
	(6) Blood transfusion	05	05	05
	(7) Procedures	06	06	06
	(8) Provider's attitude	07	07	07
	(9) Respect shown to her	08	08	08
	(10) Maintenance of dignity	09	09	09
	(11) Staff was not available	10	10	10
	(12) Others (Specify)	77	77	77
	(13) Don't know	88	88	88
F14	Where did the death occur مرحومہ کی موت کہاں واقع ہوئی؟	(a) 1st Contact	(b) 2nd Contact	(c) 3rd Contact
	At referral facility	1	1	1
	On the way to referral facility	2	2	2
	At home	3	3	3
F15	At the time of final illness who was involved in decision making for treatment? موت کے آخری ایام میں علاج معالجے کا فیصلہ کرنے میں کون کون شامل تھا؟ **(Multiple responses are allowed)**	Patient herself.....01 Husband.....02 Father.....03 Mother.....04 Father in law .....05 Mother in law .....06 Brother.....07 Sister .....08 Brother in law 09		

Q.NO.	Questions and Filters	Coding Categories
		Sister in law.....10 Others (specify).....77 Don't know.....88
F16	After acute symptoms developed, Was the decision taken Immediately? کیا فیصلہ فوری کیا گیا؟	Yes.....**(Go to F18)** ..... 1 No..... ..... 2 Don't know 8
F17	How long was the delay in making decision? فیصلہ کرنے میں کتنی دیر لگی تھی؟	(a) Minutes ..... __|_ _ (b) Hours ..... __|_ _ (c) Days ..... __|_ _ Don't know 88
F18	What were the reasons for the delay? فیصلہ میں دیر ہونے کی کیا وجوہات تھیں؟ **(Multiple responses are allowed)**	Deceased woman refused to go to hospital .. 01 Health facility was too far ..... 02 No transport was available ..... 03 No money was available ..... 04 Husband was away ..... 05 Husband didn't agree ..... 06 Elder woman / TBA didn't agree..... 07 Others (Specify) ..... 77 Don't know 88
F19	Was it difficult to find the funds to send the woman for treatment? کیا خاتون کو علاج کے لیے رقم جمع کرنے میں کوئی مسئلہ درپیش تھا؟	Yes..... 1 No ..... 2 Don't know 8
F20	At the time of final illness after leaving home, what type of transport did she use to reach the health facility? گھر سے نکلنے کے بعد صحت کی سہولت تک پہنچنے کے لیے کس قسم کی ٹرانسپورٹ کا استعمال کیا گیا؟	On foot..... 01 Bus/Van..... 02 Ambulance ..... 03 Car/Jeep/Taxi..... 04 Motorcycle..... 05 Cycle..... 06 Tanga ..... 07 Trolley ..... 08 Animal cart..... 09 Rickshaw ..... 10 Others (Specify) 77
F21	Were you satisfied with the way she was treated? مرحومہ کا جس طرح علاج کیا گیا، تو کیا آپ اس سے مطمئن ہیں؟	Yes..... 1 No ..... 2 Don't know 8

Q.NO.	Questions and Filters	Coding Categories
F22 **(4A170)**	In the final illness before death, was traditional medicine used? بیماری کے آخری ایام میں کیا اسے کوئی گھریلو دوا دی گئی؟	Yes..... 1 No ..... 2 Don't know 8
F23 **(4A190)**	Over the course of illness, did the total costs of care and treatment prohibit other household payments? علاج معالجے کے اخراجات کی وجہ سے گھر کا کوئی دوسرا خرچہ متاثر ہوا؟	Yes..... 1 No ..... 2 Don't know 8

SECTION-G: CONTEXT AND HISTORY OF PREVIOUS KNOWN MEDICAL CONDITIONS

I would like to ask you some questions concerning the context and previously known medical conditions the deceased had; prior to death she was diagnosed with name of disease?

اب میں آپ سے مرحومہ کی طبی حالات سے متعلق سوالات کروں گی، ہر بیماری کو پڑھیں ، اس کے بارے میں پوچھیں اور اگر جواب ہاں میں ہو تو اس کے عرصے [ہفتوں، مہینوں] کے بارے میں پوچھیں کہ موت سے کتنا عرصہ پہلے اس بیماری کی تشخیص ہوئی تھی؟

S.No.	Disease	Yes ..... No ..... Don't Know
G1 **(3A100)**	Tuberculosis تپ دق	1 .....2 8
G2 **(3A110)**	HIV/AIDS ایچ آئی وی ایڈز	1 .....2 8
G3 **(3A120)**	Positive test for Malaria ملیریا کا پازیٹیو ٹیسٹ	1 .....2 8
G4 **(3A130)**	Negative test for Malaria ملیریا کا نیگٹیو ٹیسٹ	1 .....2 8
G5 **(3A140)**	Measles خسرہ	1 .....2 8
G6 **(3A150)**	High Blood Pressure بلند فشار خون / ہائی بلڈ پریشر	1 .....2 8
G7 **(3A160)**	Heart Disease دل کی بیماری	1 .....2 8
G8 **(3A170)**	Diabetes شوگر	1 .....2 8
G9 **(3A180)**	Asthma دمہ	1 .....2 8
G10 **(3A190)**	Epilepsy مرگی	1 .....2 8
G11 **(3A200)**	Cancer سرطان/کینسر	1 .....2 8
G12 **(3A210)**	Chronic Obstructive Pulmonary Disease	1 .....2 8

	پھیپڑوں کی پرانی بیماری	
G13 **(3A220)**	Dementia دماغی بیماری	1 .....2 8
G14 **(3A230)**	Depression ذہنی دباو	1 .....2 8
G15 **(3A240)**	Stroke فالج	1 .....2 8
G16 **(3A250)**	Sickle Cell disease خون کے سرخ خلیوں کی بیماری	1 .....2 8
G17 **(3A260)**	Kidney disease گردوں کی بیماری	1 .....2 8
G18 **(3A270)**	Liver disease / Jaundice جگر کی بیماری / یرقان	1 .....2 8

SECTION-H: HISTROY OF DEATH DUE TO INJURY/ACCIDENTS/VIOLENCE

I would like to ask you some questions concerning the context and previously known medical conditions the deceased had; injuries and accidents that the deceased suffered; and signs and symptoms that the deceased had/showed when she was ill. Some of these questions may not appear to be directly related to her death.

اب میں آپ سے مرحومہ کی طبی حالات سے متعلق سوالات کروں گی، جیسا کہ کوئی زخم ، حادثہ وغیرہ ہوا ہو، جس میں مرحومہ کو کوئی نقصان پہنچا ہو؛ اور کوئی علامات ظاہر ہوئی ہو جب وہ بیمار تھی۔ اس میں سے بہت سارے سوالات ایسے ہونگے جن کا تعلق براہ راست مرحومہ کی موت سے نہیں ہوگا۔

Q.NO.	Questions and Filters	Coding Categories
H1 (3A300)	For how long was she ill before she died? مرنے سے پہلے کتنے عرصے سے وہ بیمار تھی؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ (c) Number of months ..... __|__ Don't know 88
H2 (3E100)	Did she suffer from any injury or accident that led to her death? کیا اس کو کوئی ایسا زخم آیا یا ایساحادثہ ہوا، جس کی وجہ سے اس کی موت واقع ہوئی؟	Yes .....1 No.....**(Go to H4)**.....2 Don't know.....**(Go to H4)**.....8
H3	What kind of injury/accident was it? اس زخم یا/ حادثے کی نوعیت کیا تھی؟	Road traffic accident .....01 Fall .....02 Drowning.....03 Poisoning.....04 Burns .....05 Violence/assault/homicide/abuse .....06 Natural calamity.....07 Fire arm .....08 Stab/Cut/ Pierce.....09 Hurt by animal.....10 Other (Specify) .....77 Don't know.....88
H4	Did she suffer from any plant/animal/insect bite or sting that led to her death? کیا اس کی موت کسی پودے/جانور/ کیڑے کے کاٹنے یا ڈنگ مارنے کی وجہ سے ہوئی؟	Yes .....1 No.....**(Go to H6)**.....2 Don't know.....**(Go to H6)**.....8
H5	What type of animal/insect was it? وہ کس قسم کا جانور/کیڑا تھا؟	Dog .....1 Snake.....2 Scorpion .....3 Other (Specify) 7
H6 (3E700)	Do you think that she committed suicide? کیا آپ کے خیال میں اس نے خودکشی کی؟	Yes .....1 No.....**(Go to H7)**.....2 Don't know.....**(Go to H7)**.....8
H7 (3A310)	Did she die suddenly? کیا اس کا اچانک انتقال ہوگیا؟	Yes .....1 No.....**(Go to H8)**.....2 Don't know.....**(Go to H8)**.....8
H8 (Q1305)	Did someone else hurt her? کیا کسی اور نے اسے تکلیف پہنچائی یا مارا؟	Yes .....1 No.....2 Don't know.....8

SECTION-I: SYMPTOMS AND SIGNS ASSOCIATED WITH PREGNANCY

حمل سے متعلق علامات

Q.NO.	Questions and Filters	Coding Categories
I1 **(3C110)**	Was she pregnant at the time of death? کیا وہ موت کے وقت حاملہ تھی؟	Yes ..... 1 No ..... 2 Don't know 8
I2 **(3C130)**	Did she die within 6 weeks of termination of pregnancy? کیاوہ حمل کے ضائع ہونے کے بعد چھ ہفتوں کے اندر فوت ہوگئیں تھیں؟	Yes..... 1 No ..... 2 Don't know 8
I3 **(3C210)**	Did she die during labor, but undelivered? کیا وہ دوران زچگی فوت ہوگئی اور کسی بچے کو پیدا نہیں کیا؟	Yes..... 1 No ..... 2 Don't know. 8
I4 **(3C200)**	Did she die within 24 hours after delivery? کیا وہ بچے کی پیدائش کے چوبیس گھنٹوں کے اندر اندر فوت ہوگئی تھی؟	Yes..... 1 No ..... 2 Don't know 8
I5 **(3C120)**	Did she die after 42 days and within 42 days of giving birth? کیا وہ بچے کی پیدائش کے بیالیس دنوں کے دوران فوت ہوگئی تھی؟	Yes..... 1 No..... 2 Don't know 8
I6	Did She die within one year of giving birth? کیا بچے کی پیدائش کے ایک سال کے اندر اس کی وفات ہوگئی تھی؟	Yes..... 1 No ..... 2 Don't know 8
I7 **(3C250)**	Did she die during or after a multiple pregnancy? کیا وہ دو یا اس سے زیادہ بچوں کی پیدائش کے دوران یا اس کے بعد فوت ہوئی؟	Yes..... 1 No ..... 2 Don't know 8
I8	At the time of death what was the duration of this pregnancy in weeks? ہفتوں کے اعتبار سے اس کی زچگی کی مدت کتنی تھی؟	Weeks ..... __|__ Don't know 88
I9 **(3C240)**	Did she have any previous C-section? کیا اس کا بچے کی پیدائش کے سلسلے میں کبھی پہلے بڑا آپریشن ہوا تھا؟	Yes..... 1 No.....**(Go to I12)**..... 2 Don't know.....**(Go to I12)**..... 8
I10	What was the number of the previous C-Sections? اس کے کتنے بڑے آپریشن ہو چکے تھے؟	# of previous C-Sections..... __|__
I11	What were the reasons for previous C-Section? بڑے آپریشن کی کیا وجہ تھی؟	High blood pressure..... 1 Bleeding ..... 2 Size of baby..... 3 Breach position ..... 4 Others (Specify) 7
I12 **(3C400)**	Did she give birth in a health facility? کیا اس نے بچے کو کسی صحت کی سہولت پر جنم دیا؟	Yes..... 1 No.....**(Go to I14)**..... 2 Don't know.....**(Go to I14)**..... 8

Q.NO.	Questions and Filters	Coding Categories
I13	What was the type of facility? وہ صحت کی سہولت /ہسپتال کس سطح کا تھا ؟	Teaching Hospital..... 01 DHQ..... 02 THQ..... 03 RHC..... 04 BHU..... 05 Private hospital..... 06 Private clinic..... 07 Others (Specify)..... 77
I14 **(3C410)**	Did she give birth at home? کیا اس کے بچے کی پیدائش گھر پر ہوئی؟	Yes..... 1 No.....**(Go to I16)**..... 2 Don't know.....**(Go to I16)**..... 8
I15	What were the reasons for delivering at home? گھر پر زچگی کروانے کی کیا وجوہات تھیں؟ **(Multiple responses allowed)**	No funds..... 1 Tradition/custom..... 2 Elder women didn't agree..... 3 Health facility was far away..... 4 Others (Specify)..... 7
I16 **(3C420)**	Did she give birth elsewhere, e.g. on the way to a facility? کیا اس کے بچے کی پیدائش کہیں اور ہوئی، مثال کے طور پر صحت کی سہولت پر جاتے ہوئے راستے میں ؟	Yes..... 1 No..... 2 Don't know..... 8
I17 **(3C430)**	Did she receive professional assistance for the delivery? کیا بچے کی پیدائش کے دوران اس کو پیشہ وارانہ طبی معاونت فراہم کی گئی؟	Yes..... 1 No.....**(Go to I19)**..... 2 Don't know.....**(Go to I19)**..... 8
I18	If yes, by whom اگر ہاں ، تو کس نے فراہم کی؟ **[After asking this question GO to I20]**	Gynecologist..... 01 Doctor..... 02 LHV..... 03 Nurse..... 04 CMW..... 05 Others (Specify)..... 77
I19	If no, by whom اگر نہیں تو پھر کس نے کی؟	L H W..... 1 TBA/Dai..... 2 Friend/Relative..... 3 Others (Specify)..... 7
I20 **(3C450)**	Did she have a normal vaginal delivery? کیا اس کے ہاں بچے کی نارمل پیدائش ہوئی؟	Yes..... 1 No..... 2 Don't know..... 8
I21 **(3C460)**	Did she have an assisted delivery, with forceps/vacuum? کیا اس کے بچے کی ڈلیوری اوزار [فورسیپس/ویکیوم] کی مدد سے ہوئی؟	Yes..... 1 No..... 2 Don't know..... 8
I22 **(3C470)**	Was it a delivery with caesarean section? کیا اس کے ہاں بچے کی پیدائش بڑے آپریشن کے ذریعے ہوئی؟	Yes..... 1 No..... 2 Don't know..... 8

Q.NO.	Questions and Filters	Coding Categories
I23 (3C440)	Did she have an operation to remove her uterus shortly before death? کیا موت سے پہلے بچہ دانی کو باہر نکالنے کے لیے اس کا کوئی آپریشن ہوا تھا ؟	Yes ..... 1 No ..... 2 Don't know 8
I24	What was the outcome of the Pregnancy? اس حمل کا نتیجہ کیا نکلا تھا؟	Live birth ..... 01 Still birth ..... 02 Miscarriage ..... 03 Induced abortion ..... 04 Undelivered ..... 05 Multiple births ..... 06 Don't know 88
I25	Time interval between onset of pain and delivery (in hours) درد شروع ہوجانے اور ڈلیوری کے درمیان کتنا دورانیہ تھا؟	Hours ..... __|__ Don't know 88
126	What, if anything, was done to help the baby come out? کیا کچھ ایسا کیا گیا کہ بچے کوباہر نکالا جائے؟ **(Multiple responses are allowed)**	Nothing ..... 00 External pressure ..... 01 I/V drip ..... 02 Put hand/fingers ..... 03 Forceps ..... 04 Vacuum ..... 05 Episiotomy ..... 06 Cesarean section ..... 07 Others (Specify) ..... 77 Don't know 88
I27 (3C360)	Was the placenta completely delivered? کیا آنول کو مکمل طور پر باہر نکال لیا گیا تھا؟	Yes ..... 1 No ..... 2 Don't know 8
I28	Did she have difficulty in delivering the placenta? کیا آنول کو باہر نکلنے میں کوئی تکلیف پیش آئی تھی؟	Yes ..... 1 No ..... 2 Don't know 8
I29 (3C365)	Did she deliver or try to deliver an abnormally positioned (e.g breech, arm) baby? کیا اس نے غیر معمولی پوزیشن والے بچے کو پیدا کرنے کی کوشش تھی؟	Yes ..... 1 No ..... 2 Don't know 8
I30 (3C370)	Was she in labor for unusually long (more than 24 hours)? کیا اس کی زچگی کا دورانیہ چوبیس گھنٹے سے زیادہ تھا؟	Yes ..... 1 No ..... 2 Don't know 8
I31	What was the duration of the Labor in Hours? زچگی کے درد کا دورانیہ کتنا تھا؟	Yes ..... 1 No ..... 2 Don't know 8
I32 (3C480)	Was the baby born more than one month early? کیا بچہ ایک ماہ سے زیادہ پہلے پیدا ہوگیا تھا؟	Yes ..... 1 No ..... 2 Don't know 8

Q.NO.	Questions and Filters	Coding Categories
I33 (3C260)	During pregnancy, did she suffer from high blood pressure? دوران حمل کیا خاتون کو ہائی بلڈ پریشر تھا؟	Yes..... 1 No.....**(Go to i35)**..... 2 Don't know.....**(Go to i35)**..... 8
I34	Did she receive treatment for high blood pressure? کیا اس نے بلڈ پریشر کا علاج کروایا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I35 (3C270)	Did she have foul smelling vaginal discharge during pregnancy or after delivery? کیا حمل یا ڈلیوری کے دوران اس کی انہدام نہانی سے بدبو دار مادے کا اخراج ہو تا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I36 (3C290)	During the last 3 months of pregnancy, did she suffer from blurred vision? حمل کے آخری تین ماہ کے دوران کیا اس کو دھندلا نظر آتا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I37 (3C280)	During the last 3 months of pregnancy, did she suffer from convulsions? حمل کے آخری تین ماہ کے دوران کیا اس کو جھٹکے یا پٹھوں میں اکڑاو ہو تا تھا؟	Yes..... 1 No.....**(Go to i44)**..... 2 Don't know.....**(Go to i44)**..... 8
I38	For how many days did she have convulsion? اس کو کتنے دنوں سے جھٹکے لگ رہے تھے؟	Number of days ..... __|__ Don't know 8
I39	What was the number of convulsions she had in a day? وفات سے پہلے اس کو دن میں کتنے جھٹکے لگتے تھے؟	Number of convulsion ..... __|__ Don't know 88
I40	During convulsions did her entire body or only part of the body convulse? جھٹکوں کے دوران اس کا پورا جسم متاثر ہو تا تھا یا جسم کے کچھ حصے؟	Part ..... 1 Entire Body ..... 2 Don't know 8
I41	After convulsion did she become unconscious? جھٹکوں کے بعد کیا وہ بے ہوش ہو جاتی تھی؟	Yes..... 1 No ..... 2 Don't know 8
I42	Did she have fever during the convulsions? کیا اسے جھٹکوں کے دوران بخار ہو تا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I43	During convulsion did she have difficulty opening her mouth? کیا جھٹکوں کے دوران اس کو اپنا منہ کھولنے میں دشواری محسوس ہوتی تھی؟	Yes..... 1 No ..... 2 Don't know 8
I44	Did she have swollen hands or face anytime during her pregnancy? کیا حمل کے دوارن اس کے ہاتھوں یا منہ پر سوجن ہوئی تھی؟	Yes..... 1 No ..... 2 Don't know 8
I45 (3C310)	Was there any excessive vaginal bleeding during pregnancy? کیا حمل کے دوران اس کا بہت زیادہ خون آیا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I46 (3C320)	Was there vaginal bleeding during the first 6 months of pregnancy? کیا حمل کے پہلے چھ ماہ کے دوران اس کا بہت زیادہ خون آیا تھا؟	Yes..... 1 No ..... 2 Don't know 8

Q.NO.	Questions and Filters	Coding Categories
I47 **(3C330)**	Was there vaginal bleeding during the last 3 months of pregnancy but before labor started? حمل کے آخری تین ماہ کے دوران اس کی اندام نہانی سے خون آیا تھا؟ [مگر درد شروع ہونے سے پہلے]	Yes..... 1 No ..... 2 Don't know 8
I48 **(3C340)**	Was there excessive vaginal bleeding during labor? کیا دوران زچگی اس کا بہت زیادہ خون بہہ گیا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I49	Was there excessive vaginal bleeding after delivery? کیا زچگی کے بعد اس کا بہت زیادہ خون بہہ گیا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I50	The quantity of blood was more than a cup? خون کی مقدار ایک کپ سے زیادہ تھی؟	Yes..... 1 No ..... 2 Don't know 8
I51	Was there constant trickling of blood? کیا خون مسلسل بہہ رہا تھا ؟	Yes..... 1 No ..... 2 Don't know 8
I52	Was she bleeding when she was being taken to health facility? جب اس کو صحت کی سہولت پر لے جایا جارہا تھا تو کیا اس دوران بھی اس کا خون بہہ رہا تھا؟	Yes..... 1 No ..... 2 Don't know 8
I53	Was she in pain while bleeding? کیا خون آنے کے دوران اس کو درد ہو تا تھا؟	Yes..... 1 No ..... 2 Don't know 8

SECTION-J: SYMPTOMS NOTED DURING THE FINAL ILLNESS

بیماری کے آخری ایام میں مشاہدہ کی جانے والی علامات

Q.NO.	Questions and Filters	Coding Categories
J1 (3B100)	Did she have a fever? موت سے پہلے کیا اس کو بخار تھا؟	Yes.....1 No.....**(Go to J3)** .....2 Don't know.....**(Go to J3)** 8
J2 (3B110)	For how long did she have a fever? اس کو کتنے عرصے سے بخار تھا؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J3 (3B120)	Did she have night sweats? کیا اس کو رات کو پسینے آتے تھے؟	Yes.....1 No .....2 Don't know 8
J4 (3B130)	Did she have a cough? کیا اس کو کھانسی تھی؟	Yes.....1 No.....**(Go to J8)** .....2 Don't know.....**(Go to J8)** 8
J5 (3B140)	For how long did she have a cough? اس کو کب سے کھانسی تھی؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J6 (3B150)	Was the cough productive with sputum? کیا اس کو کھانسی کے ساتھ بلغم بھی آتا تھا؟	Yes.....1 No .....2 Don't know 8
J7 (3B160)	Did she cough out blood? کیا اس کو کھانسی کے ساتھ خون آتا تھا؟	Yes.....1 No .....2 Don't know 8
J8 (3B180)	Did she have any breathing problem? کیا اس کو سانس کا کوئی مسئلہ درپیش تھا؟	Yes.....1 No.....**(Go to J15)** .....2 Don't know.....**(Go to J15)** 8
J9 (3B190)	Did she have fast breathing? کیا وہ تیز سانس لیتی تھی؟	Yes.....1 No.....**(Go to J11)** .....2 Don't know.....**(Go to J11)** 8
J10 (3B200)	For how long did she have fast breathing? وہ کب سے تیز سانس لے رہی تھی؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J11 (3B210)	Did she have breathlessness? کیا اس کا سانس اکھڑتا تھا؟	Yes.....1 No.....**(Go to J13)**.....2 Don't know.....**(Go to J13)** 8

Q.NO.	Questions and Filters	Coding Categories
J12 (3B220)	For how long did she have breathlessness? اس کا سانس کب سے اکھڑتا تھا؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J13 (3B230)	Was she unable to carry out daily routine activities due to breathlessness? کیا سانس کے اکھڑنے کی وجہ سے اس کو گھر کے کام کاج کرنے میں دشواری پیش آتی تھی؟	Yes.....1 No .....2 Don't know 8
J14 (3B240)	Was she breathless while lying flat? کیا سیدھے لیٹنے سے اس کو سانس لینے میں دشواری پیش آتی تھی؟	Yes.....1 No .....2 Don't know 8
J15 (3B260)	Did she have noisy breathing (grunting or wheezing)? کیا سانس لیتے وقت دشواری کی وجہ سے کوئی آواز آتی تھی؟ **(DEMONSTRATE)**	Yes.....1 No .....2 Don't know 8
J16 (3B270)	Did she have severe chest pain? کیا اس کی چھاتی میں شدید درد ہوتا تھا؟	Yes.....1 No .....2 Don't know 8
J17 (3B280)	Did she have diarrhea? کیا اس کو اسہال تھے؟	Yes.....1 No.....**(Go to J19)**.....2 Don't know.....**(Go to J19)** 8
J18 (3B290)	For how long did she have diarrhea? اس کو کب سے اسہال تھے ؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J19 (3B300)	At any time during the final illness was there blood in the stools? کیا موت کے آخری ایام میں اس کے پاخانے میں خون آتا تھا؟	Yes.....1 No .....2 Don't know 8
J20 (3B310)	Did she vomit? کیا اسے قے آئی تھی؟	Yes.....1 No.....**(Go to J22)**.....2 Don't know.....**(Go to J22)**.....8
J21 (3B320)	Did she vomit "coffee grounds" or bright red/blood? کیا اس کی قے کا رنگ بھورا یا ہلکا سرخ یا اس میں خون تھا؟	Yes.....1 No .....2 Don't know 8
J22 (3B330)	Did she have any abdominal problem? کیا اس کے پیٹ میں کوئی مسئلہ تھا؟	Yes.....1 No.....**(Go to J25)**.....2 Don't know.....**(Go to J25)**.....8
J23 (3B340)	Did she have severe abdominal pain? کیااس کے پیٹ میں شدید درد تھا؟	Yes.....1 No.....**(Go to J25)**.....2 Don't know.....**(Go to J25)**.....8

J24 **(3B350)**	For how long before death did she have severe abdominal pain? موت سے کتنے دن پہلے اس کے پیٹ میں شدید درد تھا؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J25 **(3B360)**	Did she have more than usual protruding abdomen? کیا اس کا پیٹ ضرورت سے زیادہ آگے کی طرف نکلا ہوا تھا؟	Yes.....1 No.....**(Go to J27)**.....2 Don't know.....**(Go to J27)**.....8
J26 **(3B370)**	For how long did she have a more than usual protruding abdomen? اس کا پیٹ کب سے ضرورت سے زیادہ بڑھا ہوا تھا؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J27 **(3B380)**	Did she have any lump inside the abdomen? کیا اس کے پیٹ کے اندر گلٹیاں تھیں؟	Yes.....1 No.....**(Go to J29)** .....2 Don't know.....**(Go to J29)** 8
J28 **(3B390)**	For how long did she have the lump inside the abdomen? اس کے پیٹ کے اندر کب سے گلٹیاں تھیں؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J29 **(3B400)**	Did she have a severe headache? کیا اس کے سر میں شدید درد ہوتا تھا؟	Yes.....1 No .....2 Don't know 8
J30 **(3B405)**	Did she have a stiff or painful neck? کیا اس کی گردن اکڑ گئی تھی، یا اس میں درد تھا؟	Yes.....1 No.....**(Go to J32)** ..... Don't know.....**(Go to J32)** 8
J31 **(3B410)**	For how long did she have a stiff or painful neck? اس کی گردن کب سے اکڑی ہوئی تھی، یا اس میں کب سے درد تھا؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J32 **(3B420)**	Did she have mental confusion? کیا وہ ذہنی طور پر گھبراہٹ کا شکار رہتی تھی؟	Yes.....1 No.....**(Go to J34)**.....2 Don't know.....**(Go to J34)** 8
J33 **(3B430)**	For how long did she have mental confusion? اسے گھبراہٹ کب سے تھی؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J34 **(3B440)**	Was she unconscious for more than 24 hours just before death? کیا موت سے پہلے چوبیس گھنٹوں کے دوران وہ بے ہوش ہوئی تھی؟	Yes.....1 No.....**(Go to J36)**.....2 Don't know.....**(Go to J36)** 8

J35 **(3B450)**	Did the unconsciousness start suddenly, quickly (at least within a single day)? کیا وہ اچانک بے ہوش ہوجاتی تھی؟	Yes.....1 No .....2 Don't know 8
J36 **(3B490)**	Did she have any urine problems? کیا اسے چھوٹے پیشاب کا کوئی مسئلہ تھا؟	Yes.....1 No.....**(Go to J40)** .....2 Don't know.....**(Go to J40)** 8
J37 **(3B500)**	Did she pass no urine at all? کیا اسے چھوٹا پیشاب بالکل نہیں آتا تھا؟	Yes.....1 No .....2 Don't know 8
J38 **(3B510)**	Did she go to urinate more often than usual? کیا وہ چھوٹے پیشاپ کے لیے بار بار جاتی تھی؟	Yes.....1 No .....2 Don't know 8
J39 **(3B520)**	During the final illness did she ever pass blood in the urine? بیماری کے آخری ایام میں اس کے چھوٹے پیشاب میں کبھی خون آیا؟	Yes.....1 No .....2 Don't know 8
J40 **(3B530)**	Did she have any skin problems? کیا اس کو جلد کا کوئی مسئلہ تھا؟	Yes.....1 No .....2 Don't know 8
J41 **(3B540)**	Did she have any ulcers, abscess or sores anywhere except the feet? کیا پاوں کے علاوہ کہیں اس کو کوئی زخم یا السر تھا؟	Yes.....1 No .....2 Don't know 8
J42 **(3B550)**	Did she have any ulcers, abscess or sores on the feet that were not also on other parts of the body? کیا اس کے پاوں پر کوئی زخم یا السر تھا جو کہ جسم کے کسی اور حصے پر نہیں تھا؟	Yes.....1 No .....2 Don't know 8
J43 **(3B560)**	During the illness that led to death, did s/he have any skin rash? بیماری اور موت کے آخری ایام میں اس کی جلد پر کوئی دھبے تھے؟	Yes.....1 No.....**(Go to J45)** .....2 Don't know.....**(Go to J45)** 8
J44 **(3B570)**	For how long did she have the skin rash? اس کی جلد پر کب سے دھبے تھے؟	(a) Number of days ..... __|__ (b) Number of weeks ..... __|__ Don't know 88
J45 **(3B580)**	Did she have measles rash? کیااس کے جسم پر خسرے کے دھبے/نشان تھے؟	Yes.....1 No .....2 Don't know 8
J46 **(3B590)**	Did she ever have shingles/herpes zoster? کیا اس کو جلد کی کوئی ایسی بیماری تھی جس میں سوزش اور دھبے ہوں؟	Yes.....1 No .....2 Don't know 8
J47 **(3B600)**	Did she have bleeding from the nose, mouth, or anus? کیا اس کے ناک، منہ یا پیشاب کی جگہ سے خون آتا تھا؟	Yes.....1 No .....2 Don't know 8

J48 **(3B610)**	Did she have weight loss? کیا اس کا وزن کم ہوگیا تھا؟	Yes.....1 No .....2 Don't know 8
J49 **(3B620)**	Was she severely thin or wasted? کیا وہ شدید کمزور ہوگئی تھی؟	Yes.....1 No .....2 Don't know 8
J50 **(3B630)**	Did she have mouth sores or white patches in the mouth or on the tongue? کیا اس کے منہ میں سوجن تھی یا منہ اور زبان پر سفید رنگ کے داغ تھے؟	Yes.....1 No .....2 Don't know 8
J51 **(3B640)**	Did she have stiffness of the whole body or was unable to open the mouth? کیا اس کے پورے جسم میں اکڑاو آجاتا تھا اور وہ اپنا منہ نہیں کھول سکتی تھی؟	Yes.....1 No .....2 Don't know 8
J52 **(3B650)**	Did she have swelling (puffiness) of the face? کیا اس کے چہرے پر سوجن تھی؟	Yes.....1 No .....2 Don't know 8
J53 **(3B660)**	Did she have both feet swollen? کیا اس کے دونوں پاوں میں سوجن تھی؟	Yes.....1 No .....2 Don't know 8
J54 **(3B670)**	Did she have any lumps? کیاں اس کو کوئی گلٹیاں تھیں؟	Yes.....1 No.....**(Go to J59)**.....2 Don't know.....**(Go to J59)** 8
J55 **(3B680)**	Did she have any lumps or lesions in the mouth? کیا اس کے منہ میں گلٹیاں یا زخم کے نشان تھے؟	Yes.....1 No .....2 Don't know 8
J56 **(3B690)**	Did she have any lumps on the neck? کیا اس کی گردن پر کوئی گلٹی تھی؟	Yes.....1 No .....2 Don't know 8
J57 **(3B700)**	Did she have any lumps on the armpit? کیا اس کے بغل میں گلٹیاں تھیں؟	Yes.....1 No .....2 Don't know 8
J58 **(3B710)**	Did she have any lumpon the groin? کیا اس کے دونوں ٹانگوں کے درمیان گلٹیاں تھیں؟	Yes.....1 No .....2 Don't know 8
J59 **(3B730)**	Did she have paralysis of one side of the body? کیا اس کے جسم کا ایک حصہ مفلوج تھا؟	Yes.....1 No .....2 Don't know 8
J60 **(3B740)**	Did she have difficulty or pain while swallowing liquids? کیا اس کو کوئی پینے کی چیز نگلنے میں دشواری پیش آتی تھی؟	Yes.....1 No .....2 Don't know 8
J61 **(3B750)**	Did she have yellow discoloration of the eyes? کیا اس کی آنکھوں میں پیلا پن تھا؟	Yes.....1 No .....2 Don't know 8

J62 **(3B770)**	Did she look pale (thinning/lack of blood) or have pale palms, eyes or nail beds? کیا وہ کمزور دکھائی دیتی تھی یعنی اسے خون کی کمی وغیرہ تھی ؟	Yes.....1 No .....2 Don't know 8
J63 **(3B780)**	Did she have sunken eyes? کیا اس کی آنکھیں اندر کے جانب دھنسی ہوئی تھی؟	Yes.....1 No .....2 Don't know 8
J64 **(3B790)**	Did she drink a lot more water than usual? کیا وہ معمول سے زیادہ پانی پیتی تھی؟	Yes.....1 No .....2 Don't know 8
J65 **(3F110)**	Did she smoke tobacco or any other intoxicant? (Cigarette, Hukka, Naswar, Paan, Gutka, etc.)? کیا وہ تمباکو نوشی یا کوئی نشہ وغیرہ کرتی تھی؟	Yes.....1 No .....2 Don't know 8
J66 **(Q1306)**	Did she ever use any family planning method? کیا اس نے کبھی کوئی خاندانی منصوبہ بندی کا طریقہ استعمال کیا؟	Yes.....1 No .....2 Don't know 8
J67 **(3B720)**	Did she have an ulcer or swelling in the breast? کیا اس کی چھاتی پر کوئی زخم یا سوجن تھی؟	Yes .....1 No ..... 2 Don't know 8
J68 **(3B800)**	Did she have excessive vaginal bleeding in between menstrual periods? کیا ماہواری کے دوران اس کو بہت زیادہ خون آتا تھا؟	Yes .....1 No ..... 2 Don't know 8
J69 **(3B810)**	Did her vaginal bleeding stop naturally during menopause? کیا اس کی ماہواری قدررتی طور پر رک گئی تھی؟	Yes .....1 No ..... 2 Don't know 8
J70 **(3B820)**	Did she have vaginal bleeding after menopause? کیا ماہواری کے قدرتی طور پر رک جانے کے بعد اس کو خون آیا؟	Yes .....1 No ..... 2 Don't know 8

SECTION-K: TREATMENT AND HEALTH SERVICE USE FOR THE FINAL ILLNESS

بیماری کے آخری ایام میں صحت کی سہولیات سے استفادہ حاصل کرنا اور اس کا علاج کروانا

Q.NO.	Questions and Filters	Coding Categories
K1 (3G110)	Did she receive any treatment for the illness that led to death? کیا اس نے بیماری کا علاج کروایا تھا، جس کی وجہ سے اس کی موت واقع ہوئی؟	Yes..... 1 No.....**(Go to Section L)**..... 2 Don't know.....**(Go to Section L)**..... 8
K2 (3G130)	Did she receive (or needed) intravenous fluids (drip) treatment? بیماری کے آخری ایام میں کیا اس کو کبھی گلوکوز کی بوٹل یعنی ڈرپ لگی تھی؟	Yes..... 1 No ..... 2 Don't know 8
K3 (3G140)	Did she receive (or needed) a blood transfusion? بیماری کے آخری ایام میں کیا کبھی اس کو خون لگا تھا؟	Yes..... 1 No ..... 2 Don't know 8
K4 (3G150)	Did she receive (or needed) treatment/food through a tube passed through the nose? بیماری کے آخری ایام میں کیا اس کو کبھی ناک کی نالی کے ذریعے خوراک دی گئی تھی؟	Yes..... 1 No ..... 2 Don't know 8
K5 (3G160)	Did she receive (or needed) injectable (IV or IM) antibiotics? بیماری کے آخری ایام میں کیا اس کو کبھی اینٹی بائیو ٹیک کے ٹیکے لگے تھے؟	Yes..... 1 No ..... 2 Don't know 8
K6 (3G170)	Did she have (or needed) an operation for the illness? کیا اس کا بیماری کے سلسلے میں کوئی آپریشن ہوا تھا، یا آپریشن ہونا ضروری تھا؟	Yes..... 1 No ..... 2 Don't know 8
K7 (3G180)	Did she have the operation within 1 month before death? کیا موت سے ایک ماہ پہلے اس کا آپریشن ہوا تھا؟	Yes..... 1 No ..... 2 Don't know 8
K8 (3G190)	Was she discharged from the hospital very ill? کیا ہسپتال سے اس کو بہت زیادہ بیماری کی حالت میں ڈسچارج کیا گیا تھا؟	Yes..... 1 No ..... 2 Don't know 8

SECTION-L: HEALTH CARE INCLUDING ANTENATAL CARE BEFORE DEATH DURING MOST RECENT PREGNANCY/DELIVERY

(Both Delivered Alive or Stillbirth)

موت سے پہلے حمل کے سلسلے میں چیک اپ ۔ حال ہی میں ہونے والے حمل یا ڈلیوری سے متعلق معلومات[مردہ اور زندہ دونوں بچے]

Q.NO.	Questions and Filters	Coding Categories
L1	Did she receive antenatal care for her most recent pregnancy? کیا اس نے حالیہ حمل کے دوران طبی معائنہ کروایا؟	Yes.....**(Go to L3)**.....1 No..... 2 Don't know.....**(Go to L22)** 8
L2	If no what were the reasons for not seeking ANC? دوران حمل خدمات نہ حاصل کرنے کی کیا وجوہات تھیں؟ **(Multiple responses are allowed)**	Lack of awareness..... 01 Not easy to reach..... 02 Lack of funds..... 03 Lack of attendee ..... 04 Family problems..... 05 Others (Specify) 77
	After asking L2 ---- Go to L22	
L3	Where did she go for antenatal care for this most recent pregnancy? موجودہ حمل کی دیکھ بھال کے لیے وہ کہاں جاتی تھی؟ **(Multiple responses are allowed)**	Private Clinic/ Hospital..... 01 Government Hospital..... 02 LHW House ..... 03 Community health center ..... 04 TBA..... 05 Others (specify)..... 77
L4	Did she see any of the following for antenatal care for this most recent pregnancy? حالیہ حمل کے دوران چیک اپ کے سلسلے میں کیا اس نے درج زیل میں سے کسی سے بھی ملاقات کی تھی؟ **(Multiple responses are allowed)**	Doctor/OB/GYN ..... 1 Nurse/LHV..... 2 LHW..... 3 TBA..... 4 Others (Specify) 7
L5	How many antenatal visits in total during the entire duration of the pregnancy? دوران حمل چیک اپ کے لیے کتنی دفعہ گئی تھی ؟	Number of visits.....__|__ Don't know..... 88
L6	How many months pregnant was she when she had her first antenatal care visit? جب دوران حمل اس نے چیک اپ کے لیے رجوع کیا تو اس کے حمل کا کون سا مہینہ چل رہا تھا؟	Month of pregnancy .....__|__ Don't know..... 88
L7	How many months pregnant was she when she had her last antenatal care visit? اس کا حمل کتنے ماہ کا تھا جب وہ چیک اپ کے لیے آخری بار گئی؟	Month of pregnancy .....__|__ Don't know..... 88
L9	During the antenatal visit was she told that she had high blood pressure anytime during her pregnancy? کیا حمل کے دوران کسی بھی وقت اس کا بلڈ پریشر زیادہ ہوا تھا؟	Yes..... 1 No..... 2 Don't know..... 8

L10	Was she given treatment for high blood pressure? کیا ہائی بلڈ پریشر کا علاج ہوا تھا؟	Yes..... 1 No ..... 2 Don't know 8
L11	If yes what was the treatment? اگر ہاں تو کیا علاج ہوا تھا؟	----------
L12	Did she consume any Iron/ Folic acid tablets? کیا اس نے کسی قسم کی آئرن/فولک ایسڈ/طاقت کی گولیاں کھائی تھیں؟	Yes..... 1 No.....**(Go to L14)** ..... 2 Don't know.....**(Go to L14)** 8
L13	How many tablets did she consume in a day? حمل کے دوران ٹوٹل کتنی گولیاں کھائی تھی؟	Number of tablets .....__|__ Don't Know 88
L14	Was she advised to deliver her baby in a health facility? کیا اسے تاکید کی گئی تھی کہ وہ اپنے بچے کی پیدائش صحت کی سہولت پر کروائے؟	Yes..... 1 No.....**(Go to L16)** ..... 2 Don't know.....**(Go to L16)** 8
L15	Why was she advised to deliver in a health facility? صحت کی سہولت پر بچے کی پیدائش کا مشورہ کیوں دیا گیا تھا؟	Bad history of previous delivery .....1 Sick in this pregnancy .....2 High risk delivery.....3 Other (Specify).....7 Don't know 8
L16 **(3G100)**	Was she vaccinated for tetanus? کیا اسے تشنج کے ٹیکے لگے تھے؟	Yes.....1 No.....**(Go to 18)** .....2 Don't know.....**(Go to 18)** 8
L17	If yes how many doses did she received? اگر ہاں تو کتنی بار اس کو تشنج کے ٹیکے لگے تھے؟	Number of doses .....__|__ Don't Know 88
L18	Did she get the urine test? کیا اس نے چھوٹے پیشاب کے ٹیسٹ کروائے تھے؟	Yes.....1 No .....2 Don't know 8
L19	Did she get Hepatitis B and C test? کیا اس نے ہیپاٹائٹس بی اور سی کے ٹیسٹ کروائے تھے؟	Yes.....1 No .....2 Don't know 8
L20	Did she get the Hemoglobin test? کیا اس نے ہیموگلوبن کا ٹیسٹ کروایا تھا؟	Yes.....1 No .....2 Don't know 8

L21	Whether the family members were aware of the danger signs of pregnancy? کیا خاندان کے دیگر افراد حمل کی خطرناک علامات سے واقف تھے؟ **(Multiple responses allowed)**	Bleeding ..... 01 Edema hand and face..... 02 Blurring of vision ..... 03 Severe headache..... 04 Persistent vomiting ..... 05 Epigastric pain..... 06 Tiredness and palpitation ..... 07 Jaundice during antenatal period ... 08 Loss of foetal movements..... 09 Fever following abortion/ delivery . 10 Other..... 77
L22	Did she receive the Postnatal care? کیا بچے کی پیدائش کے بعد اس کی دیکھ بھال کی گئی تھی؟	Yes.....1 No.....**(Go to L26)** .....2 Don't know.....**(Go to L26)** 8
L23	How many times she had Postnatal checkups? بچے کی پیدائش کے بعد اس کا کتنی دفعہ چیک اپ ہوا تھا؟	1 checkup ..... 1 2-3 Checkups..... 2 >3 Checkups ..... 3 Don't know..... 8
L24	When were postpartum care services provided? بعد از زچگی /چھلے کے دوران کب اس کا معائنہ کیا گیا؟	First 24 hours .....1 72 hours postpartum (Day 1 - 3).....2 First week postpartum (Day 1 - 7).....3 6 weeks postpartum .....4 Others (Specify).....7
L25	Where was postpartum care services provided? بعد از زچگی /چھلے کے دوران کہاں پر اس کو خدمات فراہم کی گئیں؟ **(Multiple responses are allowed)**	Private Clinic/ Hospital..... 01 Government hospital ..... 02 LHW House..... 03 Community health center ..... 04 TBA..... 05 Others (specify)..... 77
L26	Were there any problems during the post partum period? بچے کی پیدائش کے بعد مرحومہ کو کوئی مسائل درپیش آئے تھے؟	Yes..... 1 No.....**(Go to Section M)** .... 2 Don't know.....**(Go to Section M)** 8

L27	What were the problems? وہ مسائل کیا تھے؟ **(Multiple responses are allowed)**	Severe bleeding..... 01 Fever ..... 02 Foul smelling discharge..... 03 Unconsciousness..... 05 Visual disturbance..... 06 Fits ..... 07 High BP ..... 08 Bleeding from multiple sites ..... 09 Abnormal behavior ..... 10 Abdominal Pain ..... 11 Vomiting..... 12 Severe anemia..... 13 High BP ..... 14 Non healing of Perineal and abdominal stiches 15
L28	Did she seek treatment? کیا اس نے ان مسائل کا علاج کروایا تھا؟	Yes..... 1 No.....**(Go to section-M)** ..... 2 Don't know.....**(Go to section-M)**..... 8
L29	What happened during postnatal checkup? بعد از زچگی اس کے معائنے کے دوران کیا ہوا تھا؟	BP Check ..... 1 Fever check ..... 2 Blood tests ..... 3 Physical examination 4

SECTION-M: Newborn

M1	What was the sex of the baby? بچے کی جنس کیا تھی؟	Boy ..... 1 Girl 2
M2	What was the weight of the baby? بچے کا وزن کتنا تھا؟	Weight in KGs..... __|__ Don't know 88
M3	Was the child born in a health facility? کیا بچہ صحت کی سہولت/ہسپتال میں پیدا ہوا تھا	Yes.....1 No.....**(Go to M5)**.....2 Don't know.....**(Go to M5)** 8
M4	What was the type of health facility? اس صحت کی سہولت کی سطح کیا تھی؟	Teaching hospital .....01 DHQ.....02 THQ .....03 RHC .....04 BHU .....05 Private Clinic .....06 Private hospital .....07 Others (Specify) 77

M5	Was the child born at home? کیا بچہ گھر پر پیدا ہوا تھا؟	Yes.....**(Go to M7)**.....1 No .....2 Don't know.....**(Go to M7)** 8
M6	Was the child born somewhere else (e.g. on the way to a health facility)? کیا بچہ کسی اور جگہ پر پیدا ہوا تھا[مثال کے طور پر صحت کی سہولت پر سفر کے دوران] ؟	Yes.....1 No .....2 Don't know 8
M7	Was the baby born 24 hours or more after the water broke? کیا بچہ پانی کی تھیلی پھٹنے کے 24 گھنٹوں کے بعد پیدا ہوا تھا؟	Yes.....1 No .....2 Don't know 8
M8	What was the gestational age of the baby at birth? بچے کی پیدائش کی وقت حمل کا دورانیہ کتنا تھا؟	Before 37 weeks .....1 37-42 weeks.....2 After 42 weeks 3
M9	Was baby born by normal vaginal delivery? کیا بچے کی پیدائش نارمل طریقے سے ہوئی تھی؟	Yes.....1 No .....2 Don't know 8
M10	Was baby born with forceps/vacuum? کیا بچے کی پیدائش کے لے فورسیپ یا اوزار کی مدد لی گئی تھی؟	Yes.....1 No .....2 Don't know 8
M11	Was baby delivered by caesarean section? کیا بچہ بڑے آپریشن کے ذریعے پیدا ہوا تھا؟	Yes.....1 No .....2 Don't know 8
M12	Was the umbilical cord wrapped several times (more than once) around the neck of the child at birth? کیا ناڑو بچے کی گردن پر لپٹا ہوا تھا؟	Yes.....1 No .....2 Don't know 8
M13	Did the baby cry immediately after birth? کیا بچہ پیدائش کے فورا بعد رویا تھا؟	Yes.....1 No .....2 Don't know 8
M14	Was the baby given assistance to breathe at birth? کیا بچے کو پیدائش کے وقت سانس لینے کے لیے مدد فراہم کی گئی تھی؟	Yes.....1 No .....2 Don't know 8
M15	Did the baby need hospitalization? کیا بچے کو علاج وغیرہ کی ضرورت تھی؟	Yes.....1 No .....**(Go to Section N)**.....2 Don't know.....**(Go to Section N)** 8
M16	For how many days baby remained hospitalized? بچہ کتنے عرصے تک ہسپتال میں زیر علاج رہا؟	Number of days ..... __|__ Don't know 88

M17	Why the baby need hospitalization? بچے کو علاج کی کیوں ضرورت تھی؟ **(Multiple responses are allowed)**	Fever .....01 Fits.....02 Feeding problems .....03 Excessive cry .....04 Breathing problems .....05 Yellow Skin .....06 Hypothermia .....07 Heart Problems .....08 Others (Specify) 77
M18	Was the baby discharged from hospital کیا بچے کو ہسپتال سے ڈسچارج کیا گیا تھا؟	Yes.....**(Go to Section N)**.....1 No .....2 Don't know 8
M19	Did the baby die at hospital کیا بچہ ہسپتال میں مر گیا تھا؟	Yes.....1 No .....2 Don't know 8

انٹرویو لینے والی کے لئے ہدایات:۔

برائے مہربانی جہاں تک ممکن ہو گہرائی میں جا کر (تفصیل سے) ان حالات کے بارے میں جو مرحومہ کو مرنے سے پہلے پیش آئیں، وہ معلومات لینے کی کوشش کریں ؟

صحت کے مسائل کا آغاز :۔

برائے مہربانی سے تفصیل سے جوابات دیں؟

- حمل کے کون سے مرحلے میں مرحومہ کو صحت کی خرابی کے مسائل پیش آئے ؟
- صحت کی خرابی کے وہ کون سے مسائل تھے؟
- یہ کیسے پتہ چلا کہ اسے یہ مسائل درپیش ہیں؟
- ان مسائل کا کس کو پتہ چلا (مرحومہ خود، شوہر کو ، اس کے خاندان کے لوگوں کو ، اس کے سسرال والوں کو ، دوستوں کو)

علاج حاصل کرنے کے لیے فیصلہ سازی :۔

- صحت کی خرابی کے مسائل معلوم ہونے پر علاج کے لئے جانے میں کس نے پہل کی؟
- علاج حاصل کرنے میں اسکا اپنا، شوہر کا ، سسرال والوں کا، خاندان کے افراد کا ، دوستوں کا اور سہولت مہیا کرنے والے کا کیا کردار تھا؟
- خاندان والے افراد کے درمیاں مرحومہ کو علاج کے لئے لے جانے میں باہمی مشاورت کس درجے کی تھی؟ اگر اختلاف تھا تو اس کی کیا وجوہات تھیں؟
- آخر میں کس نے فیصلہ کیا کہ علاج کی سہولت حاصل کی جائے اور یہ فیصلہ کرنے میں کتنا وقت لگا؟
- کیا آپ کے خیال میں فیصلہ کرنے میں تاخیر برتی گئی؟
- اگر ہاں تو تاخیر کے کیا عوامل تھے؟

- آپ کے خیال میں ان عوامل کا مرحومہ کی موت میں کتنا کردار تھا؟

TRANSPORTING TO HEALTH FACILITIES.

محکمہ صحت تک رسائی

- سہولت حاصل کرنے کے فیصلے کے بعد ذرائع آمد ورفت کا انتظام کیسے کیا گیا؟
- کیا انہیں ذرائع آمد ورفت کا ایک سے زیادہ دفعہ انتظام کرنا پڑا، یعنی مرحومہ کو ایک طبعی سہولت سے دوسری سہولت میں منتقل کرنے کےدوران ہر دفعہ استعمال کئے جانے والے ذرائع آمد ورفت کون سے تھے؟
- کیا انہیں ذرائع آمد رفت کا انتظام کرنے میں کوئی مسئلہ ہوا؟
- کیا آپ سمجھتے ہیں کہ ذرائع آمد ورفت کا انتظام کرنے میں تاخیر کی گئی؟
- اگر ہاں تو وہ کیا عوامل تھے جن کی وجہ سے فیصلہ کرنے میں تاخیر ہوئی؟(گاڑی کا انتظام، کرائے کی رقم کا انتظام)
- آپ کے خیال میں وہ تمام عوامل مرحومہ کی موت کا کیسے سبب بنے یا آپ کے خیال میں ان تمام عوامل کا مرحومہ کی موت میں کتنا کردار ہے؟

طبعی سہولتوں پر دی جانے والی خدمات:۔

- پہلی طبعی سہولت پہنچنے پر (سرکاری/غیر سرکاری سہولت) اس کا کیسے استقبال کیا گیاکیسے خدمات دی گئی اور کیسا برتاو کیا گیا؟
- کیا ہوا ادھر اور مہیا کی جانے والی سہولیات کیسی تھیں ؟ انکا معیار کیسا تھا؟
- اوزار اور فراہمی (آکسیجن)
- آپریشن تھیٹر فعال
- خدمات دینے والے کا رویہ
- خدمات دینے والے کی مہارت

- کیا مریضہ کو ایک طبعی سہولت سے دوسری میں منتقل کرنے میں ، سہولت فراہم کرنے والے اور خاندان کے افراد کی باہمی مشاور ت شامل تھی یا صرف ان میں سے کسی ایک کا فیصلہ تھا؟
- آپ کے خیال میں منتقل [ریفرل] کرنے سے پیچیدگی ہوئی ؟
- آپ کیا سمجھتے ہیں منتقل [ریفرل] کرنے کا فیصلہ بر وقت کیا گیا؟
- آپ کے خیال میں سہولیات حاصل کرنے میں تاخیر کی گئی؟
- اگر ہاں تو وہ کون سے عوامل تھے جن کی وجہ سے سہولت میں دیر ہوئی ؟
- آپ کیا سمجھتے ہیں مر حومہ کی موت میں ان عوامل کا کتنا عمل دخل تھا؟

انٹرویو دینے والے کی تجاویز اور سفارشات:۔

- کیا آپ کے خیال میں ان نتائج کو تبدیل کیا جاسکتا تھا یا موت کو روکا جا سکتا تھا؟
- دوران زچگی وحمل ماں کی دیکھ بھال کو بہتر بنانے کے لئے تجاویز؟

SECTION-O: DEATH REGISTERATION AND CERTIFICATION

موت کی رجسٹریشن اور سرٹیفیکیٹ

Q.NO.	Questions and Filters	Coding Categories
O1 **(1A700)**	Was the death registered? کیا یہ موت رجسٹرڈ تھی؟	Yes..... 1 No.....**(Go to O5)**..... 2
O2 **(1A710)**	Death registration number موت کا رجسٹریشن نمبر	
O3 **(1A720)**	Date of registration رجسٹریشن کی تاریخ	__|__:__|__:__|__|__|__| DD MM YYYY Don't know 88:88:8888
O4 **(1A730)**	Place where the death is registered: وہ جگہ جہاں موت کی رجسٹریشن کی گئی	a) Province ..... __|__ b) District ..... __|__ c) Tehsil ..... __|__
O5 **(1A740)**	What was the reason for not registering the death? موت کو رجسٹر نہ کرانے کی کیا وجہ تھی؟	

Would it be all right if we come back to talk to you again after some time

اگر ہم دوبارہ آپ کے پاس بات چیت کرنے کے لیے آئیں تو کیا آپ سے بات چیت ہو سکے گی؟

Yes.....1

No 2

Thank you very much for the information you provided and the time you spared for me.

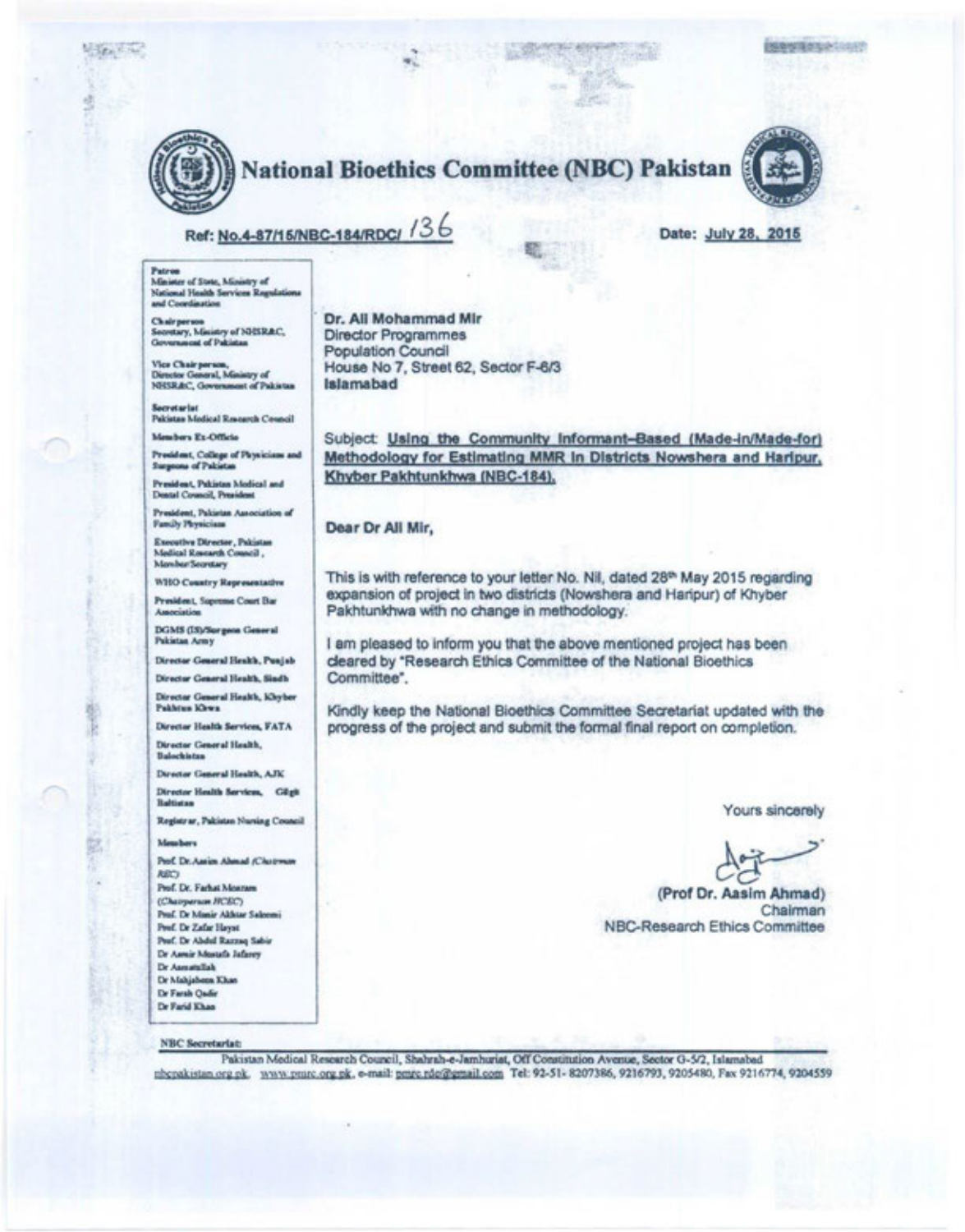
آپ کی طرف سے معلومات فراہم کرنے اور ہمارے لیے وقت نکالنے کا بہت شکریہ

SUPERVISOR'S OBSERVATIONS

سپروائزر کے مشاہدات/ملاحظات

NAME OF THE SUPERVISOR:_____DATE:_____

9.3 Ethical Approval from National Bioethics Committee of Pakistan and the Institutional Review Board of the Population Council, New York



National Bioethics Committee (NBC) Pakistan

Ref: No.4-87/15/NBC-184/RDC/ 136

Date: July 28, 2015

Patron
Minister of State, Ministry of National Health Services Regulations and Coordination

Chairperson
Secretary, Ministry of NHSR&C, Government of Pakistan

Vice Chairperson,
Director General, Ministry of NHSR&C, Government of Pakistan

Secretariat
Pakistan Medical Research Council

Members Ex-Officio

President, College of Physicians and Surgeons of Pakistan

President, Pakistan Medical and Dental Council, President

President, Pakistan Association of Family Physicians

Executive Director, Pakistan Medical Research Council, Member/Secretary

WHO Country Representative

President, Supreme Court Bar Association

DGMS (IS)/Surgeon General Pakistan Army

Director General Health, Punjab

Director General Health, Sindh

Director General Health, Khyber Pakhtun Khwa

Director Health Services, FATA

Director General Health, Balochistan

Director General Health, AJK

Director Health Services, Gilgit Baltistan

Registrar, Pakistan Nursing Council

Members

Prof. Dr. Aasim Ahmad (Chairman NBC)
Prof. Dr. Farhat Moazam (Chairperson HCEC)
Prof. Dr Munir Akhtar Saleemi
Prof. Dr Zafar Ilayat
Prof. Dr Abdul Razzaq Sabir
Dr Aamir Mustafa Jafarey
Dr Asmatullah
Dr Mahjabeen Khan
Dr Farah Qadir
Dr Farid Khan

Dr. Ali Mohammad Mir
Director Programmes
Population Council
House No 7, Street 62, Sector F-6/3
Islamabad

Subject: Using the Community Informant-Based (Made-in/Made-for) Methodology for Estimating MMR in Districts Nowshera and Haripur, Khyber Pakhtunkhwa (NBC-184).

Dear Dr Ali Mir,

This is with reference to your letter No. Nil, dated 28th May 2015 regarding expansion of project in two districts (Nowshera and Haripur) of Khyber Pakhtunkhwa with no change in methodology.

I am pleased to inform you that the above mentioned project has been cleared by "Research Ethics Committee of the National Bioethics Committee".

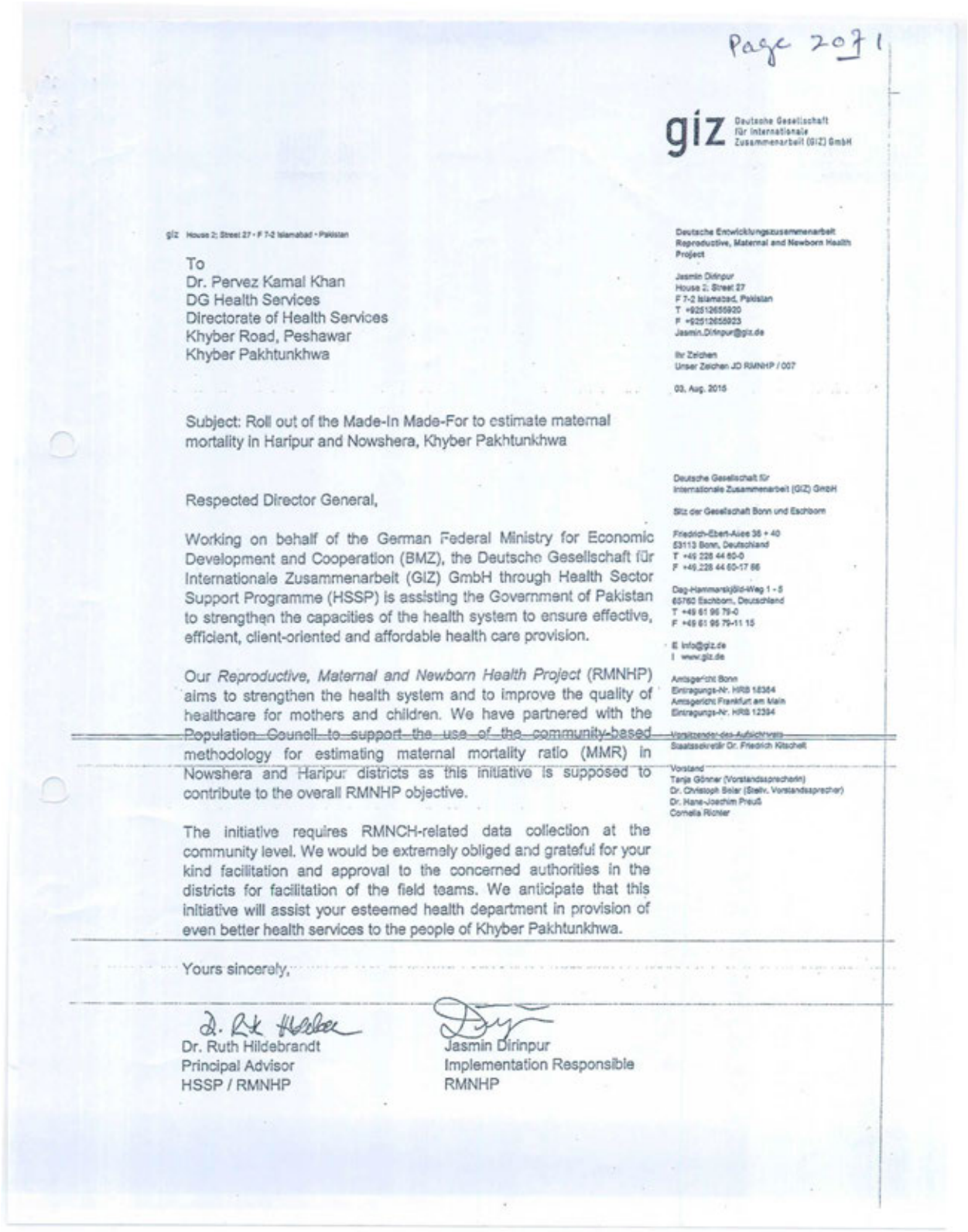
Kindly keep the National Bioethics Committee Secretariat updated with the progress of the project and submit the formal final report on completion.

Yours sincerely

(Prof Dr. Aasim Ahmad)
Chairman
NBC-Research Ethics Committee

NBC Secretariat:
Pakistan Medical Research Council, Shahrah-e-Jamhuriat, Off Constitution Avenue, Sector G-5/2, Islamabad
nbcpakistan.org.pk, www.pmrc.org.pk, e-mail: pmrc.nbc@gmail.com Tel: 92-51- 8207386, 9216793, 9205480, Fax 9216774, 9204559

9.4 Study Support Letters



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giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

giz House 2; Street 27 • F 7-2 Islamabad • Pakistan

To
Dr. Pervez Kamal Khan
DG Health Services
Directorate of Health Services
Khyber Road, Peshawar
Khyber Pakhtunkhwa

Deutsche Entwicklungszusammenarbeit
Reproductive, Maternal and Newborn Health Project

Jasmin Dirinpur
House 2; Street 27
F 7-2 Islamabad, Pakistan
T +92512655920
F +92512655923
Jasmin.Dirinpur@giz.de

Ihr Zeichen
Unser Zeichen JD RMNHP / 007

03, Aug. 2015

Subject: Roll out of the Made-In Made-For to estimate maternal mortality in Haripur and Nowshera, Khyber Pakhtunkhwa

Respected Director General,

Working on behalf of the German Federal Ministry for Economic Development and Cooperation (BMZ), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH through Health Sector Support Programme (HSSP) is assisting the Government of Pakistan to strengthen the capacities of the health system to ensure effective, efficient, client-oriented and affordable health care provision.

Our *Reproductive, Maternal and Newborn Health Project* (RMNHP) aims to strengthen the health system and to improve the quality of healthcare for mothers and children. We have partnered with the Population Council to support the use of the community-based methodology for estimating maternal mortality ratio (MMR) in Nowshera and Haripur districts as this initiative is supposed to contribute to the overall RMNHP objective.

The initiative requires RMNCH-related data collection at the community level. We would be extremely obliged and grateful for your kind facilitation and approval to the concerned authorities in the districts for facilitation of the field teams. We anticipate that this initiative will assist your esteemed health department in provision of even better health services to the people of Khyber Pakhtunkhwa.

Yours sincerely,

Dr. Ruth Hildebrandt
Principal Advisor
HSSP / RMNHP

Jasmin Dirinpur
Implementation Responsible
RMNHP

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Sitz der Gesellschaft Bonn und Eschborn

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53113 Bonn, Deutschland
T +49 228 44 60-0
F +49 228 44 60-17 66

Dag-Hammarskjöld-Weg 1 - 5
65760 Eschborn, Deutschland
T +49 61 96 79-0
F +49 61 96 79-11 15

E info@giz.de
I www.giz.de

Amtsgericht Bonn
Eintragungs-Nr. HRB 18384
Amtsgericht Frankfurt am Main
Eintragungs-Nr. HRB 12394

Vorsitzender des Aufsichtsrats
Staatssekretär Dr. Friedrich Kitschelt

Vorstand
Tanja Gönner (Vorstandssprecherin)
Dr. Christoph Beier (Stellv. Vorstandssprecher)
Dr. Hans-Joachim Preuß
Cornelia Richter

OFFICE OF THE DEPUTY COMMISSIONER HARIPUR,
No. 11457-63 /PS/DC (H).
Dated: September 7, 2015.

To,

Dr. Ali Mohammad Mir,
Director Programmes and Research,
Population Council Islamabad.

SUBJECT:- **REQUEST FOR USING THE COMMUNITY INFRMANT BASED (MADE-IN / MADE-FOR) METHODOLOGY FOR ESTIMATING MMR IN DISTRICT HARIPUR.**

Memo;

With reference to your request dated 31.08.2015 for grant of permission to conduct MMR study in District Haripur, it is to inform you that this office will extend full support in connection with subject study, however, it is desired that all the stakeholders including A.C Haripur, DHO Haripur, M.S DHQ Haripur, DSM Haripur, AD LG Haripur and the representatives of District Government Haripur may be taken onboard. The day-to-day activities relating to the subject study may be shared with this office.

Deputy Commissioner
Haripur.
DEPUTY COMMISSIONER
HARIPUR

Copy to the:-

1. D.G Health, Khyber Pakhtunkhwa, Peshawar.
2. D.G Local Government, Khyber Pakhtunkhwa, Peshawar.
3. A.C Haripur.
4. M.S Haripur.
5. DHO Haripur.
6. DSM Haripur.

Deputy Commissioner
Haripur.

Office of The Deputy Commissioner, Haripur.
Phone No. 0995- 613391, 613349, Fax – 615412
No.1 (2)/2015/AE/DC (H)
Dated: 30 / 09 /2015

Office Order.

The Population Council, Islamabad office will conduct interview to hire Filed Staff for MMR (Maternal Mortality Ratio) Study in District Haripur in the office of District Health Officer, Haripur on 01.10.2015.

Mr. Atta-ur-Rehman Abbasi, Accounts Officer is hereby deputed to participate in the Interview Panel / Selection Committee on behalf of DC Office.

Deputy Commissioner,
Haripur.

Copy to the:-

1. District Health Officer, Haripur.
2. Director Programmes & Research, Population Council, Islamabad.
   (House No.7, St No.62, F-6/3, Islamabad, Ph: 0518445566, Fax: 051-2821401)
3. Accounts Officer O/O DC Haripur.

Deputy Commissioner,
Haripur.

OFFICE OF THE ASSISTANT DIRECTOR
LOCAL GOVERNMENT & RURAL DEVELOPMENT
DEPARTMENT NOWSHERA

No. 1965-69 /AD/LG&RDD/NSR Dated Nowshera 17/9/2015

To

All the Secretaries,
Village Councils/Neighborhood Councils,
Nowshera

Subject: - **REQUESTING SUPPORT LETTER FOR A RESEARCH STUDY ON "MEASURING PROVINCIAL ESTIAMTES FOR MATERNAL MOTILITY RATIO IN NOWSHERA DISTRICT OF KHYBER PAKHTUNKHWA/REPRODUCTIVE, MATERNAL AND NEW BORN HEALTH PROJECT".**

Memo:

The Director General, Local Govt: and Rural Development Department Khyber Pakhtunkhwa vide his letter No. Director(LG)3-23/Project File/2013/3635 dated 24-08-2015 has informed that a team of population council (An NGO) will visited your offices on account of data collection/survey on maternal motility in the jurisdiction of each Village Council/Neighborhood Council.

Therefore, you are all directed to extend your possible co-operation to the visiting team under the rules/accordingly.

Assistant Director
Local Govt: & Rural Dev: Department
Nowshera

Endst: No and Date Even:

Copy of the above is forwarded to:-

1. The Director General, Local Govt: and Rural Development Department Khyber Pakhtunkhwa.
2. The Director General, Health Services, Khyber Pakhtunkhwa.
3. The Deputy Commissioner, Nowshera.
4. The Director Program, Population Council Islamabad.

For information with reference to above please.

Assistant Director
Local Govt: & Rural Dev: Department
Nowshera

DIRECTORATE
GENERAL HEALTH SERVICES
KHYBER PAKHTUNKHWA
PESHAWAR

No. 3467-74/DHS
Dated 21/08/2015

To

The Deputy Commissioner,
Nowshera / Haripur
Khyber Pakhtunkhwa,

Subject: **Cooperation in KAP-Survey in Nowshera & Haripur District KP.**

In line with the Provincial Acceleration Operational Plan for Child and Maternal Health 2012-2015 Khyber Pakhtunkhwa, the Integrated Development Strategy 2014-18 for improved Health Services Delivery the Department of Health Khyber Pakhtunkhwa in collaboration with Health Sector Support Programme (HSSP) GIZ is implementing Reproductive, Maternal and Newborn Health Project (RMNHP) in two districts of KP-Haripur and Nowshera, on behalf of the German Ministry for Economic Cooperation and Development.

Reference is made to the requested received from the principal advisor HSSP and RMNHP Islamabad on 03.08.2015 to undertake the field survey on the subject matter (copy attached)

You are requested to take necessary action and extend maximum cooperation and help with the research team.

21/8/15

Director General Health Service,
Khyber Pakhtunkhwa, Peshawar.

Cc:

1. The Director Health Services, Khyber Pakhtunkhwa.
2. District Health Officer (Nowshera / Haripur).
3. Dr. Ruth Hildebrandt, Principal Advisor, GIZ Health Sector Support Programme Pakistan.
4. Dr. Ayesha Khan, Research and Development Solutions.
5. PS to Secretary Home and Tribal Affairs Khyber Pakhtunkhwa.
6. PS to Secretary Health Khyber Pakhtunkhwa.

OFFICE OF THE DIRECTOR GENERAL
LOCAL GOVERNMENT & RURAL DEVELOPMENT
DEPARTMENT KHYBER PAKHTUNKHWA

No. Director (LG) 3-23/Project File/2013/3635
Dated Peshawar, the 24th August 2015

The Assistant Directors,
LG&RDD, Nowshera & Haripur

Subject: - **REQUESTING SUPPORT LETTER FOR A RESEARCH STUDY ON "MEASURING PROVINCIAL ESTIMATES FOR MATERNAL MOTILITY RATIO IN NOWSHERA AND HARIPUR DISTRICT OF KHYBER PAKHTUNKHWA / REPRODUCTIVE, MATERNAL AND NEW BORN HEALTH PROJECT"**

I am directed to refer to subject noted above and to inform that a team of population council (an NGO) will visited at your office on account of data collection / survey on maternal mortality in your respective district and to request you to extend your support to the visiting team subject to approval from the Deputy Commissioner of the concerned district.

Deputy Director (Admin)
LG&RDD

Cc.

1. Dr. Ali Muhammad Mir Director Programme Population Council
2. PA to Director General LG&RDD, Khyber Pakhtunkhwa.

Deputy Director (Admin)
LG&RDD

Office Tel: 091-9223563: Fax: 091-5270460: e-mail: dir.a.lg@kp.gov.pk

DIRECTORATE
GENERAL HEALTH SERVICES
KHYBER PAKHTUNKHWA
PESHAWAR

All communications should be addressed to the Director General Health Services Peshawar and not to any official by name.

E-Mail Address: dghskhyk2014@gmail.com
Office Ph# 091-9210260
Exchange# 091-9210187, 9210196

No. 3475-82/DHS
Dated 21/08/2015

To

The Deputy Commissioner,
Nowshera / Haripur
Khyber Pakhtunkhwa,

Subject: **COOPERATION IN ROLL OUT OF THE MADE-IN MADE-FOR TO ESTIMATE MATERNAL MORTALITY IN NOWSHERA & HARIPUR DISTRICT KP.**

In line with the Provincial Acceleration Operational Plan for Child and Maternal Health 2012-2015 Khyber Pakhtunkhwa, the Integrated Development Strategy 2014-18 for improved Health Services Delivery the Department of Health Khyber Pakhtunkhwa in collaboration with Health Sector Support Programme (HSSP) GIZ is implementing Reproductive, Maternal and Newborn Health Project (RMNHP) in two districts of KP-Haripur and Nowshera, on behalf of the German Ministry for Economic Cooperation and Development.

Reference is made to the requested received from the principal advisor HSSP and RMNHP Islamabad on 03.08.2015 to undertake the field survey on the subject matter (copy attached)

You are requested to take necessary action and extend maximum cooperation and help with the research team.

Director General Health Service,
Khyber Pakhtunkhwa, Peshawar.

Cc:

1. The Director Health Services, Khyber Pakhtunkhwa.
2. District Health Officer (Nowshera / Haripur).
3. Dr. Ruth Hildebrandt, Principal Advisor, GIZ Health Sector Support Programme Pakistan.
4. Dr. Ali Mir, Director Programme and Research Population Council, Islamabad.
5. PS to Secretary Home and Tribal Affairs Khyber Pakhtunkhwa.
6. PS to Secretary Health Khyber Pakhtunkhwa.

9.5 Dates of Trainings and Field Activities

MMR STUDY ACTIVITY SHEDULE					
Sr	DISTRICT NAME	TRAINING		FIELD WORK	
		START	END	START	END
1	Haripur	12-102015	21-10-2015	22-10-2015	15-12-2015
2	Nowshera	28-102015	08-11-2015	09-11-2015	11-01-2016

9.6 Pictures of Trainings in Six Districts

9.7 List of Health Department Staff Who Were Trained

HARIPUR

Name	Designation	Address
Dr. Imran	MNCH Coordinator	DHO Office Haripur
Dr. Tamraiz	Medical officer	DHO Office Haripur
Ms. SharafuNissa	ADC, LHW Program	National program office, Haripur

NOWSHERA

Name	Designation	Address
Dr Quasim	ADHO	DHO Office Nowshera
Mr. Zahid	Data Officer	National program office, Nowshera
Naeed Kausar	ADC	National program office, Nowshera

9.8 Pictures of Field Activities

9.9 Healthcare Structure in Pakistan

Primary Care facilities:

These include MCH Centres (MCHC), Basic Health Units (BHUs) and Rural Health Centres (RHCs). There is at least one primary health care centre present in each Union Council catering to population ranging from ten to twenty five thousand people. MCHCs and BHUs are to operate from 8 am to 3 pm, except on Sundays, while RHCs are to provide 24-hour services. MCH centres are being managed by LHVs and provide basic antenatal care, normal delivery, post-natal and family planning services, and treatment of minor ailments to women and children.

In 2005, the Federal Government launched a country-wide program, known as the People's Primary Health care Initiative PPHI (formerly known as President's Primary Healthcare Initiative) for improving the service delivery at First Level Care Facilities (FLCFs). The purpose of this initiative was to strengthen the curative and preventive services provided in FLCFs, by handing over the management and finances of running the BHUs to the Rural Support Programs (RSPs) in their respective provinces. The objective of the initiative was to re-organize and re-structure the management of all the BHUs in the district with a central role for community-based support groups.

BHUs have a staff of 10 people consisting of a male doctor, a LHV or a FHT, a Male Medical Technician or/and a dispenser and other support staff. They are required to offer first level curative care, MCH services including obstetric first aid, family planning and preventive services through doctors and paramedics.

RHCs provide more extensive outpatient services and some inpatient services, usually limited to short-term observation and treatment of patients who are not expected to require transfer to a higher level facility. They serve a catchment population of about 50,000 to 100,000 people, with about 30 staff including 2 male medical officers, 1 female medical officer, 1 dental surgeon and a number of paramedics. They typically have 10 to 20 beds, an x-ray machine, a laboratory and minor surgery facilities. RHCs are mandated to provide Basic Emergency Obstetric Care.

Referral level facilities:

These include Tehsil Headquarters (THQ – sub district units) and District Headquarters (DHQ) Hospitals that are located at respective levels and offer first line referral services. Tehsil Headquarters Hospitals (THQH) serves a catchment population of about 100,000 to 300,000 people. They typically have 40-60 beds and appropriate support services including x-ray, laboratory and surgery facilities. The staff includes at least three specialists: an obstetrician and gynaecologist, a paediatrician and a general surgeon. District Headquarters Hospitals (DHQH) serve a catchment population of about 1 to 2 million people and typically have about 100-150 beds. There are at least 8 specialists including an obstetrician and an anaesthetist. These hospitals provide Comprehensive EmOC services.

Tertiary care facilities:

The teaching hospitals in Pakistan provide tertiary as well as sub-specialty care. These hospitals mainly provide curative services and to a limited extent some preventive services.

9.10 Indicators for Measuring Maternal Mortality

A number of different indicators have been developed for the measurement of maternal mortality. The most commonly used indicator is the maternal mortality ratio (MM Ratio), which refers to the number of maternal deaths per live birth, multiplied by a conventional factor of 100,000:

MM Ratio = Number of maternal deaths * 100,000

Number of live births

The MM Ratio was designed to express obstetric risk. In fact, the MM Ratio may overestimate obstetric risk by excluding from the denominator pregnancies which do not terminate in a live birth.

The MM Ratio is frequently, though erroneously, referred to as the maternal mortality rate (MM Rate). The MM Rate is an indicator of the risk of maternal death among women of reproductive age. The MM Rate is usually multiplied by a factor of 1,000.

9.11 Demographic Description of All Study Districts

District Haripur

Haripur district consists of two tehsils namely Haripur and Ghazi with 44 union councils: 15 are Urban and 29 Rural. The estimated population of Haripur district was 986000 mid of 2014 out of which 12 % live in urban areas while the remaining 88 % are residing in rural areas. The population is spread over an area of 1,725 square kilometers. Hindko is main language of the district. However, in some part of the district, Pashto, Khohistani and Khowar languages are also spoken. Literacy rate is 82.1 % for males and 60.3 % for females.

Haripur district consisting of one district headquarter hospital, one tehsil head quarter hospitals, 6 RHCs, 42 BHUs, 10 civil dispensaries, 2 MCH centres and 6 other public sectors hospitals of various levels and capacities

Geographically, the district borders Abbottabad District to the north east, Mansehra District in the north-east, the Punjab to the south east, the Buner to the north-west and Swabi to the west. The Federal Capital of Islamabad is also adjacent to the district in the south.

District Nowshera

Nowshera district was a part of Afghanistan as Nowkhaar Province till it was annexed into British India via the Durand Line Agreement. The total population of the district is 1394,000 with the population density of 500 per kilometer square. 26 % population of the district is urban. District is spread over an area 1748 square kilometers.

The district consists of 3 tehsils (Nowshera, Nizampur and Pubbi) with 48 union councils. The main Language is Pushto followed by Jandali and Majhi dialects of Punjabi Language which is spoken in areas of Nowshera Kalan, Akora Khattak, Shaidu, Jehangira and several other villages situated along the Grand Trunk Road. The district has 57 % literacy rate of persons above 10 years of age: 75 % for males and 41.5 % for females. The Human development index of district Nowshera falls in medium ranking (0.655) among the all districts of Pakistan.

Health: Nowshera district has one district headquarter hospital, two tehsil head quarter hospitals, 7 RHCs, 32 BHUs, 16 civil dispensaries, 4 MCH centers and 5 other public sectors hospitals of various levels and capacities. There is one TB clinic in Nowshera. There are two Combined Military Hospitals in the district i.e. Combined Military Hospital - Nowshera and Cantonment and Combined Military Hospital - Risalpur Cantonment.

It is bordered by Peshawar District to the West, Mardan District to the North, Charsadda District to the North West, Swabi District to the North East, Kohat District to the South, Orakzai Agency to the South West & Attock District to the East.

Table 1: Estimated population of Haripur and Nowshera Districts: (mid-year estimated population -2014)

District	Male	Female	Total
Haripur	492,000	494,000	986,000
Nowshera	727,000	668,000	1,394,000

Table 2: Development indicators of KP according to PDHS 2012-13

Indicator	Haripur	Nowshera	KPK
Infant mortality rate	….	….	58
Under-five mortality rate	….	….	70
Use of contraception (any method)	….	….	28.1
Any modern method	….	….	19.5
Any traditional method	….	….	8.6
TFR			3.9
Antenatal care by SBA	….	….	60.6
Assistance during delivery by SBA	….	….	48.3
Postnatal care	….	….	39.3

Table 3: Development indicators of Haripur and Nowshera districts according to MICS survey 2008

Indicator	Haripur	Nowshera	KPK
Infant mortality rate	….	….	76
Under-five mortality rate	….	….	100
Maternal mortality ratio* **	**….**	**….**	**275**
Use of contraception (any method)	40.1	46.8	38.6
Any modern method	28.9	20.6	23.6
Any traditional method	11.2	26.2	15.0
TFR			**5.16**
Urban	….	….	3.52
Rural	….	….	5.53
Antenatal care by SBA	61.7	63.9	46.5
Assistance during delivery by SBA	48.6	55.5	41.1
Postnatal care	20.5	14.9	13.0

*** *PDHS 2006-07*

Table 4: Development indicators of Haripur and Nowshera districts according to PSLMS 2012-13

Indicator	Haripur	Nowshera	KPK
Literacy, 10 & above, Overall	70	57	52
Literacy, 10 & above, Female	60.3	41.5	34.7
Literacy, 10 & above, Male	82.1	75.0	71.2
Literacy, 15-49, Female	67.4	46.5	35.7
Pregnant Women That Have Received Tetanus Toxoid Injection	82.4	70.6	64.8
Antenatal care by SBA (Skilled Birth Attendant)	81.8	76.7	58.8
Assistance during delivery by SBA (Skilled Birth Attendant)	60.5	50.4	50.2
Institutional deliveries	56.6	49.0	45.5

9.12 Terms of Reference for Technical Advisory Group

A Technical Advisory Group was formed and notified by the Director General Health, KP. The Technical Advisory Group (TAG) provided support and guidance during the conceptualization and implementation of the study.

More specifically the Duties and Responsibilities of the group were to:

- Provide technical advice on the study design and tools
- Facilitate in the implementation of the research by issuing letters informing key stakeholders about the purpose of the study and in obtaining necessary permissions for undertaking the field work
- Periodically (every two months), assess progress based on predefined metrics
- Recommend alternative technical solutions for issues arising during the implementation of the study
- Make recommendations regarding the appropriate sources of data for calculating the denominator population
- Support the study findings and assist in gaining credibility and ownership for the study

Membership:

Representatives of Government, Research Organizations, Academic Institutions and Development Partners

Frequency of Meetings:

The Technical Advisory Group met twice or by exception where significant issues arise.

Methods of Communication:

In addition to the pre-planned group meetings, the Chair of the Technical Advisory Group and the Project Manager was available for one-to-one communication with other Group members and other stakeholders as and when required.