Pakistan

Maternal Mortality Survey

2019

PAKISTAN
MATERNAL MORTALITY SURVEY

2019

National Institute of Population Studies
Islamabad, Pakistan

The DHS Program
ICF
Rockville, Maryland, USA

December 2020

Cover design: Mohsin Khan. Cover photos (from left to right): 'Quaid-e-Azam tomb' ©2020 by Muhammad Masood Khan; 'Quaid e Azam Residency' ©2020 by Zainullah Kakar; 'Minar-e-Pakistan' © 2020 by Muhammad Masood Khan; Bab-e-Khyber © 2020 by Muhammad Saqib; Faisal Masjid © 2020 by Zainullah Kakar.

Suggested citation:

National Institute of Population Studies (NIPS) [Pakistan] and ICF. 2020. *Pakistan Maternal Mortality Survey 2019*. Islamabad, Pakistan, and Rockville, Maryland, USA: NIPS and ICF.

CONTENTS

TABLES AND FIGURES

6   MATERNAL MORBIDITY..87

7   HEALTH CARE SEEKING BEHAVIOUR...97

APPENDIX A   SAMPLE DESIGN 111

FOREWORD

Maternal mortality information remains as one of the persistent gaps in health indicators worldwide. This constitutes a serious challenge in developing countries, as nearly 90% of all maternal deaths occur in low-income countries. Considering its importance, the United Nations adopted the maternal mortality ratio (MMR) as an indicator of maternal health and set targets of substantially reducing the MMR in the Millennium Development Goals (MDGs) as well as the Sustainable Development Goals (SDGs). This emphasis has resulted in a drop of around 40% in the MMR at the international level since 2000. To assess progress in relation to the SDG targets and the targets of specific country programmes, it is necessary to have access to accurate MMR data.

Since its inception 35 years ago, the National Institute of Population Studies (NIPS) has sought to provide evidence-based data for planning and implementation. The 2006-07 Pakistan Demographic and Health Survey (PDHS) included a direct estimate of maternal mortality for the first time in Pakistan. However, this vital information could not be obtained in either the 2012-13 PDHS or the 2017-18 PDHS, mainly as a result of challenges related to resources, sample sizes, and methodologies. NIPS was finally able to meet these challenges, launching the Pakistan Maternal Mortality Survey (PMMS) in collaboration with a Technical Advisory Committee (TAC) consisting of national and international experts.

The PMMS is the first exclusive survey in Pakistan with a nationally representative household sample carried out to collect comprehensive information on maternal health issues, maternal mortality, and specific causes of death among women in the country in accordance with international survey design, listing, fieldwork, and data processing and analysis standards. The survey also gathered information on care women received before, during, and following pregnancy and their utilisation of maternal health services. The information collected is intended to help policymakers and programme managers evaluate and design health sector policies, programmes, and strategies for improving maternal health in Pakistan. The key indicators report released in August 2019 shows that Pakistan has made progress in reducing the MMR, which decreased from 276 per 100,000 live births in 2006-07 to 186 in 2019. The availability of the PMMS data opens avenues for in-depth studies to understand the dynamics of MMR reductions in areas of high prevalence.

NIPS is indebted to ICF, the Pakistan Bureau of Statistics, the National Committee for Maternal and Neonatal Health, and Dr. Tauseef Ahmed, the principal investigator, for making this survey possible. The PMMS core team, including officers from NIPS and the project staff, implemented the survey. Special appreciation is extended for the support provided by the Ministry of National Health Services, Regulations and Coordination, DFID, UNFPA, USAID, and the Bill and Melinda Gates Foundation.

Pervaiz Ahmed Junejo
Executive Director,
National Institute of Population Studies,
Ministry of National Health Services,
Regulations and Coordination,
Islamabad

ACKNOWLEDGEMENTS

technical experts from ICF who contributed to the survey. The support provided by ICF experts made it possible to undertake the survey in accordance with international requirements.

Ms. Azra Aziz
Director (Research and Survey)
Team Leader, PMMS

Aysha Sheraz, PhD
Senior Fellow
Deputy Project Director, PMMS

Tauseef Ahmed, PhD
Principal Investigator, PMMS

2019 PAKISTAN MATERNAL MORTALITY SURVEY TECHNICAL ADVISORY COMMITTEE

Mr. Pervaiz Ahmed Junejo, Executive Director, National Institute of Population Studies	Chairman
Mr. Muhammad Ali Shahzada, Additional Secretary, MNHSR&C	Member
Dr. Assad Hafeez, Director General, MNHSR&C	Member
Dr. Hassan Mohtashami, former Country Representative, UNFPA	Member
Dr. Zeba A. Sathar, Country Director, Population Council	Member
Dr. Sadiqa Jaffery, President, NCMNCH	Member
Dr. Farid Midhet, Team Leader, DAFPAK, The Palladium Group	Member
Mr. Tauseef Ahmed, PhD, Principal Investigator, PMMS	Member
Dr. Durr-e-Nayab, Joint Director, PIDE	Member
Dr. Nasir Sarfraz, Health Advisor, DFID	Member
Mr. Andy Murray, Statistics Adviser and Team Leader, DFID	Member
Dr. Muhammad Ahmed Isa, Senior Technical Advisor, USAID	Member
Dr. Yasmeen Sabeeh Qazi, Sr. Country Advisor, The David and Lucile Packard Foundation	Member
Dr. Nabeela Ali, Chief of Party, JSI Research & Training Institute, Inc.	Member
Ms. Rabia Awan, Director (Sample & Design), Pakistan Bureau of Statistics	Member
Dr. Azra Ahsan, Vice President and Technical Consultant, (NCMNH)	Member
Dr. Zulfiqar Bhutta, Prof./Director, Women and Child Health Centre of Excellence, AKU	Member
Dr. Nasira Tasneem, Professor/Consultant, MCH Center, PIMS	Member
Mr. Muqaddar Shah, Program Analyst (Population and Development), UNFPA	Member
Dr. Saba Shuja, Nutrition Officer, UNICEF	Member
Dr. Lamia Mahmood, Medical Officer, WHO	Member
Syed Mubashir Ali, Freelance Consultant	Member
Dr. G.M. Arif, Principal Investigator, PDHS, National Institute of Population Studies	Member
Dr. Najma Javed, Senior Medical Officer, PHRC	Member
Mrs. Azra Aziz, Director (Research and Survey), National Institute of Population Studies	Member
Dr. Aysha Sheraz, Senior Fellow, National Institute of Population Studies	Member

CONTRIBUTORS TO THE REPORT

National Institute of Population Studies

Mr. Pervaiz Ahmed Junejo, Executive Director

Ms. Azra Aziz, Director (Research and Survey)

Dr. Aysha Sheraz, Senior Fellow/DPD

Ms. Saima Mukhtar, Senior Fellow

Mr. Ali Anwar Buriro, Fellow

Ms. Rabia Zafar, Fellow

Ms. Rizwana Timsal, Research Associate

Mr. Muhammad Arif, Accounts Officer/DDO

External Contributors

Dr. Farid Midhet, Team Leader, DAFPAK, The Palladium Group

Mr. Tauseef Ahmed, PhD, Principal Investigator, PMMS

Mr. Muhammad Ali Raza, DPM, NIPS

Dr. Azra Ahsan, Vice President and Technical Consultant, NCMNH

Dr. Sarah Saleem, Professor, Head Population and Reproductive Health Section, Department of Community Health Sciences, Aga Khan University

Dr. Ejaz Ahmed Khan, Associate Professor, HSA

Dr. Shahzad Ali Khan, Professor, Head of Department of Public Health, Health Services Academy

Dr. Jasim Anwar, Federal Consultant, CRVS/UN-ESCAP

ACRONYMS AND ABBREVIATIONS

AIDS   acquired immunodeficiency syndrome
AJK   Azad Jammu and Kashmir
ANC   antenatal care
ASMR   age-specific mortality rate

BHU   basic health unit

CAFE   computer-assisted field editing
CBR   crude birth rate
CI   confidence interval
CSPro   Census and Survey Processing System

DFID   Department for International Development
DHS   Demographic and Health Survey

EB   enumeration block
EmONC   emergency obstetric and newborn care

FATA   Federally Administered Tribal Areas

GB   Gilgit Baltistan
GFR   general fertility rate
GoP   Government of Pakistan

ICD   International Classification of Diseases
ICT   Islamabad Capital Territory
IFSS   internet file streaming system
IT   information technology

LHV   lady health visitor
LHW   lady health worker
LPG   liquid petroleum gas

MCH   maternal and child health
MDGs   Millennium Development Goals
MMR   maternal mortality ratio
MNCH   maternal, neonatal, and child health
MNH   maternal and newborn health
MoNHSRC   Ministry of National Health Services, Regulations and Coordination

NADRA   National Database and Registration Authority
NCMNH   National Committee for Maternal and Neonatal Health
NGO   nongovernmental organisation
NIH   National Institutes of Health
NIPS   National Institute of Population Studies

PBS	Pakistan Bureau of Statistics
PDHS	Pakistan Demographic and Health Survey
PGPHC	Pakistan General Population and Housing Census
PHC	primary health care
PMMS	Pakistan Maternal Mortality Survey
PNC	postnatal care
PPS	probability proportional to size
PRMR	pregnancy-related mortality ratio
PSU	primary sampling unit
SDGs	Sustainable Development Goals
TB	tuberculosis
TFR	total fertility rate
TT	tetanus toxoid
UN	United Nations
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
VA	verbal autopsy
VAQ	Verbal Autopsy Questionnaire
VIP	ventilated improved pit
WHO	World Health Organization

READING AND UNDERSTANDING TABLES FROM THE 2019 PAKISTAN MATERNAL MORTALITY SURVEY (PMMS)

The 2019 Pakistan Maternal Mortality Survey final report is based on approximately 60 tables of data. For quick reference, they are located at the end of each chapter and can be accessed through links in the pertinent text (electronic version). This reader-friendly version features about 40 figures that clearly highlight subnational patterns and background characteristics. The text highlights key points in bullets and to clearly identify indicator definitions in boxes.

While the text and figures featured in each chapter highlight some of the most important findings from the tables, not every finding can be discussed or displayed graphically. For this reason, PMMS data users should be comfortable reading and interpreting tables.

The following pages provide an introduction to the organisation of PMMS tables, the presentation of background characteristics, and a brief summary of sampling and understanding denominators. In addition, this section provides some exercises for users as they practice their new skills in interpreting PMMS tables.

Example 1: Antenatal Care
A Question Asked of Survey Respondents

1

2

3

| Background characteristic | Antenatal care provider | | | | | | No ANC | Total | Percentage receiving antenatal care from a skilled provider[1] | Number of women |
	Obste-trician/ specialist	Doctor	Nurse/mid-wife/lady health visitor	Community midwives	Dai/TBA	Other				
Age at birth										
<20	35.3	41.9	13.5	0.4	1.2	0.7	7.1	100.0	91.0	447
20-34	47.9	32.5	11.2	0.2	0.8	0.4	7.1	100.0	91.7	3,690
35-49	41.0	31.6	15.0	0.5	0.5	0.7	10.7	100.0	88.1	620
Birth order										
1	49.4	36.2	11.0	0.0	0.0	0.1	3.3	100.0	96.7	1,014
2-3	49.3	31.0	10.3	0.3	0.7	0.3	8.1	100.0	90.9	1,845
4-5	43.9	33.4	12.4	0.2	1.6	1.0	7.4	100.0	90.0	1,183
6+	34.6	34.4	16.5	0.5	0.6	0.8	12.6	100.0	85.9	714
Residence										
Urban	57.0	31.5	6.8	0.1	0.6	0.5	3.5	100.0	95.4	1,559
Rural	40.3	34.1	14.4	0.3	0.9	0.5	9.6	100.0	89.1	3,197
Education										
No education	35.8	34.7	14.6	0.4	1.3	0.8	12.4	100.0	85.5	2,439
Primary	45.5	34.1	15.0	0.3	0.0	0.2	4.9	100.0	94.9	833
Middle	55.4	33.5	8.3	0.0	0.3	0.3	2.2	100.0	97.2	408
Secondary	59.7	32.5	6.1	0.0	0.7	0.0	1.0	100.0	98.3	499
Higher	69.5	26.0	3.8	0.0	0.0	0.0	0.7	100.0	99.3	577
Wealth quintile										
Lowest	33.2	29.1	16.7	0.0	2.1	1.0	17.9	100.0	79.0	1,023
Second	31.2	36.9	18.1	0.9	0.8	0.4	11.7	100.0	87.1	954
Middle	43.3	39.3	11.2	0.3	0.3	0.7	4.8	100.0	94.1	965
Fourth	56.6	33.0	8.4	0.0	0.0	0.2	1.8	100.0	98.0	975
Highest	68.0	27.2	4.0	0.0	0.6	0.0	0.2	100.0	99.2	839
Region										
Punjab[2]	54.2	27.1	14.7	0.3	0.8	0.4	2.5	100.0	96.4	2,426
Sindh	41.7	40.5	6.8	0.0	0.9	0.7	9.3	100.0	89.0	1,067
Khyber Pakhtunkhwa[3]	31.2	41.0 12.4		0.5	0.1	0.6	14.3	100.0	85.0	988
Balochistan	39.8	30.7	5.1	0.2	2.3	0.0	21.9	100.0	75.8	275
Total[4]	45.8	33.2	11.9	0.2	0.8	0.5	7.6	100.0	91.2	4,756
Azad Jammu and Kashmir	68.3	24.7	4.0	0.1	0.2	0.4	2.2	100.0	97.1	647
Urban	69.9	25.6	1.0	0.5	0.7	0.8	1.5	100.0	97.0	90
Rural	68.0	24.6	4.5	0.0	0.2	0.4	2.4	100.0	97.1	557
Gilgit Baltistan	38.3	44.7	2.5	0.0	0.6	0.1	13.8	100.0	85.5	572

4

5

6

Step 1: Read the title and subtitle, highlighted in orange in the table above. They tell you the topic and the specific population group being described. In this case, the table is about ever-married women age 15-49 who had a live birth in 3 years before the survey by type of antenatal care provider. All eligible ever-married female respondents age 15-49 were asked these questions.

Step 2: Scan the column headings—highlighted in green in Example 1. They describe how the information is categorised. In this table, the first six columns of data show the percent distribution of ever-married women who received ANC by different types of providers – obstetrician/specialist, doctor, nurse/midwife/lady health visitor, community midwife, Dai/traditional birth attendant (TBA), and other. The seventh column shows ever-married women who received no ANC, while the eight column totals 100%, indicating that the first 7 columns are a percent distribution, and that all ever-married women with a live birth in the 3 years before the survey are captured in one of these 7 columns. The ninth column shows

the percentage of ever-married women who received ANC from a skilled provider (the sum of the obstetrician/specialist, doctor, nurse/midwife/lady health visitor, and community midwife columns). The last column lists the number of ever-married women age 15-49 interviewed in the survey.

Step 3: Scan the row headings—the first vertical column highlighted in blue in Example 1. These show the different ways the data are divided into categories based on population characteristics. In this case, the table presents the percent distribution of ever-married women who received ANC by age at birth, birth order, urban-rural residence, level of education, wealth quintile, and region. Most of the tables in the PMMS report will be divided into these same categories.

Step 4: Look at the row at the bottom of the table highlighted in red. These percentages represent the totals (excluding Azad Jammu and Kashmir and Gilgit Baltistan) of all ever-married women age 15-49 who received ANC by type of provider. In this case, 45.8% * of ever-married women age 15-49 with a live birth in the 3 years before the survey received ANC from an obstetrician/specialist, 33.2% from a doctor, 11.9% from a nurse/midwife/lady health visitor, and 0.2% from a community midwife. Overall, 91.2% of ever-married women received ANC from a skilled provider – the sum of the totals in the first four columns.

Step 5: Scan the last four rows highlighted in grey in Example 1. While the 2019 PMMS collected data in Azad Jammu and Kashmir (AJK) and Gilgit Baltistan (GB), those data are not included in the national total or the background characteristics. The data for these regions are presented separately in the last four rows. For more information on sampling, see Example 3.

Step 6: To find out what percentage of ever-married women with higher education received ANC from a nurse/midwife/lady health visitor, draw two imaginary lines, as shown on the table. This shows that 3.8% of ever-married women age 15-49 with higher education received ANC from a nurse/midwife/lady health visitor. By looking at patterns by background characteristics, we can see how ANC coverage varies across Pakistan.

*For the purpose of this document data are presented exactly as they appear in the table including decimal places. However, the text in the remainder of this report rounds data to the nearest whole percentage point.

Practice: Use the table in Example 1 to answer the following questions:

a) What percentage of ever-married women in Pakistan did not receive ANC for their most recent birth?
b) Compare ever-married women in urban areas to ever-married women in rural areas—which group is more likely to receive ANC from a nurse/midwife/lady health visitor?
c) What are the lowest and highest percentages (range) of ever-married women who received no ANC by region (excluding AJK and GB))?
d) Is there a clear relationship in ANC from an obstetrician/specialist by education level?
e) Is there a clear relationship in ANC from a skilled provider by wealth quintile?

Answers:

a) 7.6%

b) Ever-married women in rural areas: 14.4% of ever-married women in rural areas received ANC from a nurse/midwife/lady health visitor, compared to 6.8% of urban women.

c) Ever-married women who did not receive ANC ranges from a low of 2.5% in Punjab to a high of 21.9% in Balochistan.

d) Yes. ANC from an obstetrician specialist increases as a woman's level of education increases; 35.8% of ever-married women with no education received ANC from an obstetrician/specialist, compared to 69.5% of women with higher education.

e) Yes. ANC from a skilled provider increases with household wealth, from 79.0% of ever-married women in the poorest households to 99.2% of ever-married women in the wealthiest households.

Example 2: Maternal Mortality
Direct Estimates of Maternal Mortality Rates and Ratios

Table 3.9 Maternal mortality   **1**

Direct estimates of maternal mortality rates and ratios for the 3 years preceding the survey, by 5-year age groups, residence, and region, Pakistan MMS 2019

Background characteristic **3**	Percentage of female deaths that are maternal	Number of maternal deaths[1]	Weighted number of woman years[2]	Maternal mortality rate[3] **2**	Maternal mortality ratio[4]
Age					
15-19	13.0	12	117,365	0.10	194
20-24	17.4	19	100,449	0.19	99
25-29	23.4	24	90,591	0.26	115
30-34	29.1	30	68,283	0.44	263
35-39	20.5	31	61,286	0.50	481
40-44	2.7	4	44,828	0.08	286
45-49	0.6	1	41,395	0.03	331
Residence					
Urban	11.4	32	199,897	0.16	158
Rural	14.5	88	324,300	0.27	199
Region					
Punjab[5]	10.5	52	278,770	0.19	157
Sindh	15.7	33	117,149	0.28	224
Khyber Pakhtunkhwa[6]	15.8	23	99,292	0.23	165
Balochistan	29.2	13	28,987	0.45	298
Total 15-49[7] **4**	13.5	120	524,197	0.23[a]	186[a]
Azad Jammu and Kashmir	6.4	9	81,048	0.11	104
Gilgit Baltistan	15.8	12	56,225	0.22	157

[1] A maternal death is defined as the death of a woman while pregnant or during childbirth or within 42 days after delivery, for which there was a verbal autopsy that classified deaths as being either a direct or indirect maternal death
[2] Woman-years lived in that age group during the 36 months before the survey. For example, for the age group 15-19, it is calculated by taking ½ of the number of women age 15, plus 1½ times the number age 16, plus 2½ times the number age 17, plus 3 times the number age 18, plus 3 times the number age 19, plus 2½ times the number age 20, plus 1½ times the number age 21, plus ½ times the number age 22, plus 1½ times the number of deaths to women 15-49 in the previous 36 months.
[3] Expressed per 1,000 woman-years of exposure
[4] Expressed per 100,000 live births; calculated as the age-adjusted maternal mortality rate times 100 divided by the age-adjusted general fertility rate
[5] Punjab includes ICT
[6] Khyber Pakhtunkhwa includes the merged districts of former FATA
[7] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan
[a] Age-adjusted rate

Step 1: Read the title and subtitle. In this case, the table is about direct estimates of maternal mortality rates and ratios for the three-year period before the survey.

Step 2: Scan the column headings—highlighted in green. The first column presents the percentage of female deaths that are maternal. The second column shows the number of maternal death cases. For the definition of a maternal death, see footnote 1 at the bottom of the table. A maternal death is defined as the death of a woman while pregnant or during childbirth or within 42 days after delivery, for which there was a verbal autopsy that classified deaths as either a direct or indirect maternal death. The third column shows the weighted number of woman-years or woman-years lived in that age group during the 36 months before the survey (footnote 2). The fourth column shows the maternal mortality rate, and the final column includes the maternal mortality ratio (MMR). The maternal mortality rate is expressed per 1,000 woman-years of exposure (footnote 3), while the maternal mortality ratio is expressed per 100,000 live births (footnote 4).

What is the difference between the maternal mortality rate and maternal mortality ratio (MMR)? While the numerator is the same in both indicators (maternal deaths shown in column 2), the MMR uses live births as the denominator and the maternal mortality rate uses the person-years lived by women age 15-49 during the 3 year period before the survey (weighted number of woman-years shown in column 3). To learn more

about how estimates of maternal mortality are calculated, see Chapter 3, section 5, Estimates of Pregnancy-related and Maternal Mortality. To learn about how The DHS Program calculates pregnancy-related and maternal mortality ratios, watch a [tutorial video series](#) on The DHS Program's YouTube channel.

Step 3: Scan the row headings—the first vertical column highlighted in blue. The table presents maternal mortality indicators by five-year age groups, urban-rural residence, and region.

Step 4: The row near the bottom of the table highlighted in red displays the totals for Pakistan (excluding AJK and GB).

- What percentage of female deaths are maternal deaths? It's 13.5%.

- How many maternal deaths were identified by the 2019 PMMS? 120 maternal deaths were included in the survey.

- What is the maternal mortality rate? The rate of mortality associated with pregnancy and childbearing is 0.23 maternal deaths per 1,000 woman-years.

- What is the MMR in Pakistan? The MMR is 186 maternal deaths per 100,000 live births.

Step 5: By looking at patterns by background characteristics, we can see how maternal mortality varies across Pakistan.

- Which age group has the highest maternal mortality ratio (MMR)? The MMR is highest in among women age 35-39 at 331 deaths per 100,000 live births.

- Is MMR higher in urban areas or rural areas? MMR is higher in rural areas at 199 deaths per 100,000 live births, compared to 158 deaths per 100,000 live births in urban areas.

- What is the range in MMR by region (excluding AJK and GB)? MMR is lowest in Punjab at 157 deaths per 100,000 live births and highest in Balochistan at 298 deaths per 100,000 live births.

Example 3: Understanding Sampling Weights in PMMS Tables

A sample is a group of people who have been selected for a survey. In the PMMS, the sample is designed to represent the national population age 15-49. In addition to national data, most countries want to collect and report data on smaller geographical or administrative areas. However, doing so requires a large enough sample size in each area. For the 2019 PMMS, the survey sample is representative at the national level; for urban and rural areas separately; for four provinces including Punjab (combined with Islamabad Capital Territory), Sindh, Khyber Pakhtunkhwa (combined with FATA), and Balochistan; and for two regions including Azad Jammu and Kashmir (AJK) and Gilgit Baltistan (GB).

To generate statistics that are representative of Pakistan (excluding AJK and GB) and the 4 regions, the number of ever-married women surveyed in each region should contribute to the size of the total (excluding AJK and GB) sample in proportion to the size of the region. However, if some regions have small populations, then a sample allocated in proportion to each region's population may not include sufficient women from each region for analysis. To solve this problem, regions with small populations are oversampled. For example, let's say that you have enough money to interview 11,859 women and want to produce results that are

Table 2.10 Background characteristics of respondents			
Percent distribution of ever-married women age 15-49 by selected background characteristics, Pakistan MMS 2019			
	Pakistan		
Background characteristic	**3** Weighted percent	**2** Weighted number	**1** Unweighted number
Region			
Punjab[1]	53.2	6,308	4,387
Sindh	22.7	2,697	2,857
Khyber Pakhtunkhwa[2]	19.2	2,271	2,836
Balochistan	4.9	582	1,779
Total[3]	100.0	11,859	11,859

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

representative of Pakistan (excluding AJK and GB) and its 4 regions (as in Table 2.10). However, the total population of Pakistan (excluding AJK and GB) is not evenly distributed among the regions: some regions, such as Punjab, are heavily populated while others, such as Balochistan are not. Thus, Balochistan must be oversampled.

A sampling statistician determines how many ever-married women should be interviewed in each region in order to get reliable statistics. The **blue column (1)** in the table at the right shows the actual number of ever-married women interviewed in each region. Within the regions, the number of women interviewed ranges from 1,779 in Balochistan to 4,387 in Punjab. The number of interviews is sufficient to get reliable results in each region.

With this distribution of interviews, some regions are over-represented, and some regions are underrepresented. For example, the population in Punjab is about 53% of the population in Pakistan (excluding AJK and GB), while Balochistan's population contributes only 5% of the population in Pakistan (excluding AJK and GB). But as the blue column shows, the number of ever-married women interviewed in Punjab accounts for only about 37% of the total sample of ever-married women interviewed (4,387 / 11,859) and the number of ever-married women interviewed in Balochistan accounts for 15% of women interviewed (1,779 / 11,859). This unweighted distribution of ever-married women does not accurately represent the population.

In order to get statistics that are representative of Pakistan (excluding AJK and GB), the distribution of the ever-married women in the sample needs to be weighted (or mathematically adjusted) such that it resembles the true distribution in Pakistan (excluding AJK and GB). Ever-married women from a small region, like Balochistan, should only contribute a small amount to the national total. Ever-married women from a large region, like Punjab, should contribute much more. Therefore, DHS statisticians mathematically calculate a "weight" which is used to adjust the number of ever-married women from each region so that each region's contribution to the total is proportional to the actual population of the region. The numbers in the **purple column (2)** represent the "weighted" values. The weighted values can be smaller or larger than the unweighted values at the regional level. The total national sample size (excluding AJK and GB) of 11,859 ever-married women has not changed after weighting, but the distribution of the

ever-married women in the regions has been changed to represent their contribution to the total population size.

How do statisticians weight each category? They take into account the probability that a woman was selected in the sample. If you were to compare the **green column (3)** to the actual population distribution of Pakistan (excluding AJK and GB), you would see that ever-married women in each region are contributing to the total sample with the same weight that they contribute to the population of Pakistan (excluding AJK and GB). The weighted number of ever-married women in the survey now accurately represents the proportion of ever-married women who live in Punjab and the proportion of ever-married women who live in Balochistan.

With sampling and weighting, it is possible to interview enough ever-married women to provide reliable statistics at national (excluding AJK and GB) and regional levels. In general, only the weighted numbers are shown in each of the PMMS tables, so don't be surprised if these numbers seem low: they may actually represent a larger number of ever-married women interviewed.

INTRODUCTION AND SURVEY METHODOLOGY

1

T he 2019 Pakistan Maternal Mortality Survey (PMMS) is the first exclusive nationwide survey on maternal mortality implemented by the National Institute of Population Studies (NIPS) of the Ministry of National Health Services, Regulations and Coordination. Data collection took place from 20 January 2019 to 30 September 2019. ICF provided technical assistance through The DHS Program, which is funded by the United States Agency for International Development (USAID) and offers financial support and technical assistance for population and health surveys in countries worldwide. Other agencies and organisations that facilitated the successful implementation of the survey through technical or financial support were USAID, the United Nations Population Fund (UNFPA), the Department for International Development (DFID), and the Bill and Melinda Gates Foundation.

Pakistan was a signatory to the United Nations Millennium Development Goals (MDGs) in 2000 and has focused on Goal 5 (improving maternal health), which set a target for significantly reducing the maternal mortality ratio (MMR) to 140 deaths per 100,000 live births by 2015 by increasing the proportion of births attended by skilled birth attendants and achieving universal access to reproductive health care. The MDG progress assessment showed that Pakistan was on track for Goal 5 but was not close to achieving the set target in 2015 (Government of Pakistan 2013). Pakistan has recently endorsed the UN's Sustainable Development Goals (SDGs), making a commitment to reducing the MMR to less than 70 per 100,000 live births by 2030 (SDG 3.1) through increased skilled birth attendance, access to modern contraception, and expanded coverage of community health workers as an essential component of universal health coverage.

Pursuing the MDG and SDG targets, Pakistan launched a series of initiatives during the past decade and made good progress in safe motherhood (as shown in the results of the 2012-13 PDHS [Pakistan Demographic and Health Survey] and the 2017-18 PDHS). Indirect estimates of the MMR through modelling have shown a substantial decline from 276 per 100,000 live births in the 2006-07 PDHS to 170 (Government of Pakistan 2019). The programmatic initiatives undertaken by the provincial departments of health include the following[1]: enhanced scope of basic health units to provide around-the-clock basic emergency obstetric and newborn care (EmONC) services, provision of ambulance services for transferring patients at the time of labour (household to basic EmONC and further to a comprehensive EmONC hospital if required), improved knowledge among lady health workers (LHWs) with respect to appropriate referrals (through multiple training opportunities), and a general increase in the number of secondary care hospitals, leading to growth in their utilisation.

The information collected through the Pakistan Maternal Mortality Survey is intended to assist policymakers and programme managers in evaluating and designing programmes and strategies for further improving the health of the country's population. The hope is that this information will enhance the pace towards achieving the goal set for reducing maternal mortality to 70 per 100,000 live births by 2030.

1.1 SURVEY OBJECTIVES

The primary objective of the 2019 PMMS is to provide up-to-date estimates of basic demographic and health indicators. Specifically, the survey was designed and carried out with the purpose of assessing where Pakistan stands on maternal health indicators and how well the country is moving toward these targets. Overall aims of the 2019 PMMS were as follows:

---

[1] Community midwives probably have a minor effect on the MMR as their share of normal deliveries remained at less than 5% of public sector deliveries in 2008-2015 and has been less than 3% in 2016 and subsequent years.

- To estimate national and regional levels of maternal mortality for the 3 years preceding the survey and determine whether the MMR has declined substantially since 2006-07

- To identify medical causes of maternal deaths and the biological and sociodemographic risk factors associated with maternal mortality

- To assess the impact of maternal and newborn health services, including antenatal and postnatal care and skilled birth attendance, on prevention of maternal mortality and morbidity

- To estimate the prevalence and determinants of common obstetric complications and morbidities among women of reproductive age during the 3 years preceding the survey

1.2 SAMPLE DESIGN

The 2019 PMMS used a multistage and multiphase cluster sampling methodology based on updated sampling frames derived from the 6th Population and Housing Census, which was conducted in 2017 by the Pakistan Bureau of Statistics (PBS). The sampling universe consisted of urban and rural areas of the four provinces of Pakistan (Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan), Azad Jammu and Kashmir (AJK), Gilgit Baltistan (GB), Federally Administered Tribal Areas (FATA), and the Islamabad Capital Territory (ICT). A total of 153,560 households (81,400 rural and 72,160 urban) were selected using a two-stage and two-phase stratified systematic sampling approach. The survey was designed to provide representative results for most of the survey indicators in 11 domains: four provinces (by urban and rural areas with Islamabad combined with Punjab and FATA combined with Khyber Pakhtunkhwa), Azad Jammu and Kashmir (urban and rural), and Gilgit Baltistan (see **Figure 1.1**). Restricted military and protected areas were excluded from the sample.

The sampled households were randomly selected from 1,396 primary sampling units (PSUs) (740 rural and 656 urban) after a complete household listing. In each PSU, 110 randomly selected households were administered the various questionnaires included in the survey. All 110 households in each PSU were asked about births and deaths during the previous 3 years, including deaths among women of reproductive age (15-49 years). Households that reported at least one death of a woman of reproductive age were then visited, and detailed verbal autopsies were conducted to determine the causes and circumstances of these deaths to help identify maternal deaths. In the second phase, 10 households in each PSU were randomly selected from the 110 households selected in the first phase to gather detailed information on women of reproductive age. All eligible ever-married women age 15-49 residing in these 10 households were interviewed to gather detailed information, including a complete pregnancy history. A detailed description of the sample design is provided in Appendix A.

Figure 1.1 Pakistan Maternal Mortality Survey sample design

```
                        ┌──────────────────┐
                        │   1,396 (PSUs)   │
                        └────────┬─────────┘
                                 │
                                 ▼
   ┌──────────┐         ┌──────────────────┐         ┌──────────┐
   │  Rural   │◄────────│ Total Households │────────►│  Urban   │
   │  81,400  │         │     153,560      │         │  72,160  │
   └──────────┘         └──────────────────┘         └──────────┘


 ┌────────────────┐     ┌──────────────────┐     ┌────────────────┐
 │ 100 Households │◄────│  From each PSU   │────►│ 10 Households  │
 │  selected for  │     └──────────────────┘     │      for       │
 │     Short      │                               │     Long       │
 │ Questionnaire  │                               │ Questionnaire  │
 └───────┬────────┘                               └───────┬────────┘
         │                                                │
         ▼                                                ▼
 ┌────────────────┐                               ┌────────────────┐
 │ Identify Deceased│                             │ Identify Eligible │
 │     Women       │                              │        &        │
 │                 │                              │  Deceased Women │
 └────────────────┘                               └────────────────┘
```
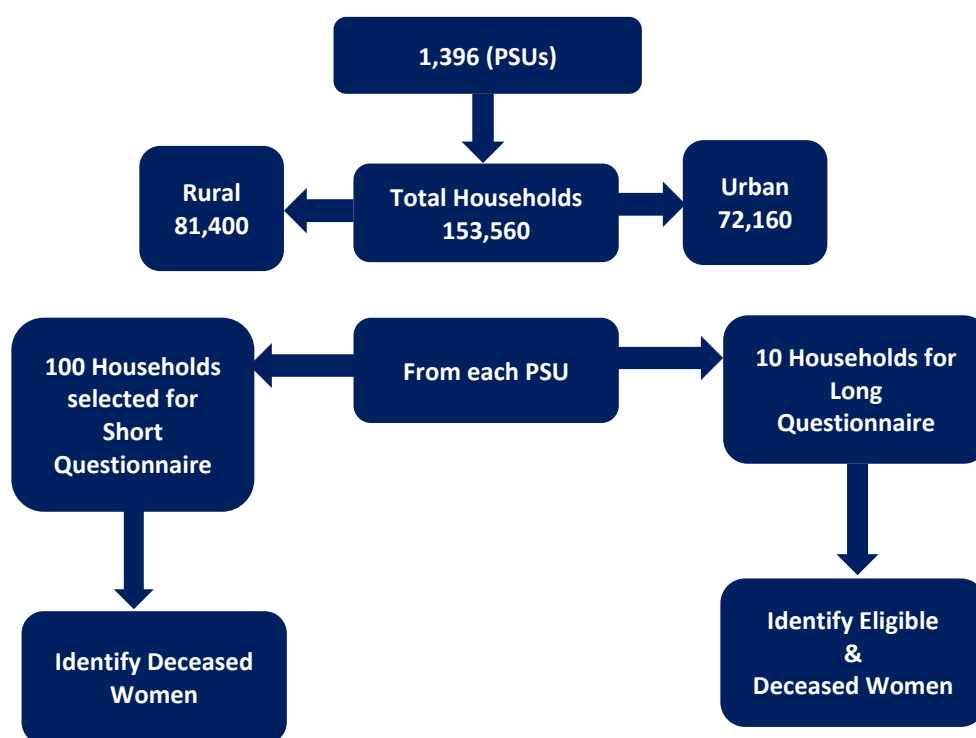
1.3   QUESTIONNAIRES

Six questionnaires were used in the 2019 PMMS: the Short Household Questionnaire, the Long Household Questionnaire, the Woman's Questionnaire, the Verbal Autopsy Questionnaire, the Community Questionnaire, and the Fieldworker Questionnaire. A Technical Advisory Committee was established to solicit comments on the questionnaires from various stakeholders, including representatives of government ministries and agencies, nongovernmental organisations, and international donors. The survey protocol was reviewed and approved by the National Bioethics Committee, the Pakistan Health Research Council, and the ICF Institutional Review Board. After being finalised in English, the questionnaires were translated into Urdu and Sindhi. The 2019 PMMS used paper-based questionnaires for data collection, while computer-assisted field editing (CAFE) was used to edit questionnaires in the field.

The Short and Long Household Questionnaires listed all usual household members and visitors who stayed in the selected households the night preceding the interview. Basic demographic information was collected on each person listed, including age, sex, marital status, education, and relationship to head of household. These demographic data were used to identify women who were eligible for an individual interview. The Household Questionnaires also collected information on births and deaths in the household in the 3 years preceding the survey date so that female deaths in the household could be identified and verbal autopsies conducted. In addition, the Long Household Questionnaire collected information on the environmental circumstances of the household, characteristics of the household's dwelling unit (source of drinking water, type of toilet facilities, and materials used for flooring, external walls, and roofing), and household ownership of assets and various durable goods.

The Woman's Questionnaire was used to collect information from all eligible ever-married women age 15-49. These women were asked questions on the following topics:

- Background characteristics (including age and education)
- Pregnancy history
- Use of family planning methods
- Antenatal, delivery, and postnatal care

- Maternal morbidity
- Health service utilisation

The Verbal Autopsy Questionnaire was based on the 2016 World Health Organization (WHO) standardised instrument and was primarily adapted from the 2006-07 PDHS for consistency. The questionnaire was finalised after incorporating key inputs from ICF's health experts in accordance with WHO International Classification of Diseases (ICD-10) guidance, and information was recorded on the circumstances surrounding the event that led to the death, the cause of death, and the health services sought. The questionnaire included both structured (precoded) and unstructured (open-ended) questions that were answered by the member of the household who knew the most about the woman's last illness and the circumstances of her death.

The Community Questionnaire was administered during the fieldwork to collect information on basic infrastructure in the survey clusters and access to health facilities and services. The Community Questionnaire was implemented in rural clusters only. Community representatives who provided information for the questionnaire included, among others, village leaders, counsellors, religious leaders, local teachers, lady health visitors, and lady health workers. The Community Questionnaire was based on the instrument that has been used in PDHS surveys.

The Fieldworker Questionnaire recorded background information from the interviewers that will serve as a tool in conducting analyses of data quality. Each interviewer completed a self-administered Fieldworker Questionnaire after the final selection of interviewers and before the fieldworkers entered the field. No personal identifiers are attached to the 2019 PMMS fieldworkers' data files.

1.3.1 Development of Section 5 (Maternal Morbidity) of the Woman's Questionnaire

A separate section on maternal morbidity was included in the Woman's Questionnaire in which different types of questions were added to collect information from eligible women, including information on their last pregnancy. Most of the questions related to maternal morbidity were included to obtain data on any problems or illnesses and complications women faced or may have suffered during their last pregnancy. Specific questions were added about abortions or miscarriages, labour pains, delivery complications, postnatal care, treatment received, and use of medicines. Also, questions were added about use of tobacco during pregnancy.

To determine maternal health conditions among women, separate information was gathered from them on their experience of having a fever or fever-related symptoms during their last pregnancy or postpartum period (42 days after delivery). Additional questions were asked about fits or seizures, excessive bleeding during pregnancy (before and after delivery or abortion/miscarriage), jaundice, tetanus toxoid injections, use of misoprostol tablets, and so forth. Women were also asked about their utilisation of health service outlets.

1.4 PRETEST

Thirty enumerators, eight members of the core project team, and two data processing personnel from NIPS participated in the training to pretest the PMMS protocol; this training was held from 19 November to 6 December 2018. Most participants had previous experience carrying out PDHS surveys and other household surveys. The data processing staff participated in the pretest so that they could familiarise themselves with the survey instruments. ICF provided technical support for the training.

Along with discussions on the technical aspects of the survey, the pretest training was designed to train the trainers for the main survey training. The training focused on key components such as age probing, interviewing techniques, and procedures for completing the survey questionnaires. The participants worked in groups using various training techniques, for example interactive question-and-answer sessions, case studies, and role plays. Along with the enumerators, the trainers administered the questionnaires in the

field, provided feedback on the content and language of the questionnaires, and learned the various training techniques.

As noted, the questionnaires were translated into Urdu and Sindhi, and the fieldwork for the pretest was carried out in those two languages. Questionnaires were pretested in nonsampled clusters in Islamabad and Rawalpindi. The Verbal Autopsy Questionnaire was pretested using real cases from Lahore, Sukkur, Islamabad, and Peshawar after necessary information from the registers of district hospitals had been collected and family members had been interviewed. Following the fieldwork, a debriefing session was held with the pretest field staff, and modifications to the questionnaires were made based on lessons drawn from the exercise.

1.5   TRAINING OF FIELD STAFF

Training of household listers and mappers (67 two-member teams) was organised in the first week of December 2018 to prepare them for identifying the exact locations of PSUs and to show them how to prepare household listings and maps. Training included 15 field supervisors who monitored the household listing operation and undertook a validation of 5% of the listings. The main training for the field staff was held from 17 December 2018 to 6 January 2019 in Islamabad. Separate training was arranged for interviewers selected to conduct verbal autopsies. The participants in the main training included 158 enumerators, selected through a strict process (including a 10% surplus of candidates to account for attrition and quality control staff). Prior to the training, NIPS staff visited the provincial headquarters to screen, interview, and select participants. Applicants came from different parts of Pakistan and represented major language groups within the country. Most of the candidates had previous fieldwork experience, and some had experience gained through PDHS surveys.

The training sessions included discussions of concepts, procedures, and methodologies for conducting the survey. Participants were guided through the questionnaires. In-class exercises were carried out in recognition that involving participants in the training process allows them to have a better understanding of the training content. Various techniques were used to facilitate the training, including role-playing on completing the household schedule, age probing in pairs, consistency checking for age and date of birth, correcting errors in pregnancy history tables, and training field editors on using the CAFE system. Special training was organised for interviewers who were selected to administer Verbal Autopsy Questionnaires. Participants in the training were evaluated through classwork, in-class exercises, quizzes, observation during training, and a final test given to all trainees.

1.6   FIELDWORK

A comprehensive household listing of all sampled PSUs was conducted in December 2018 to January 2019 to identify sampled households to be visited. Data collection took place from 20 January to 30 September 2019 in all provinces and regions other than Balochistan and Gilgit Baltistan, where fieldwork was completed in October 2019. Forty-one teams consisting of a supervisor, a field editor, and four interviewers were deployed for data collection. All data entry was conducted by the field editors at the end of each day's fieldwork.

Fieldwork monitoring was an integral part of the 2019 PMMS, and several rounds of monitoring were carried out by the core team members and the provincial coordinators. The monitors were provided with guidelines for overseeing the fieldwork. Quality Control Teams and Field Editors focused on various quality of data matters in all regions. The quality and progress of data collection were also monitored through weekly field check tables that were generated from completed interviews received at the NIPS central office, and regular feedback was sent out to the teams and monitors.

1.7   Quality Control

Data quality was a priority of the survey and was ensured through the engagement of 10 quality control teams (each comprising one female and one male evaluator), a proactive information technology (IT) team, and senior management personnel who provided oversight. Quality control teams validated 5% of the Household and Woman's Questionnaires. The NIPS core team members monitored the field teams during the data collection phase to support them in conducting successful interviews by using structured questionnaires with set procedures of skipping, probing, and understanding the selection of households; using field control sheets; assigning households to female interviewers; checking the field editing of the questionnaires; and observing the supervisors' efforts to contact PBS regional offices for help in identifying sample areas or with any issues regarding listing and mapping. The core team remained focused on such areas as observing field team coordination, ensuring efficient use of field time, maintaining the condition of vehicles, and checking logbooks.

1.7.1   Verification of Verbal Autopsy Questionnaires

The 2019 PMMS data collection process involved a heightened effort to ensure the quality of responses, especially in PSUs with high non-response rates in general or the unavailability of a close relative to allow completion of the verbal autopsy. Furthermore, special attention was given to households in which inconsistencies in reported data were detected during secondary editing, particularly inconsistencies related to female deaths. An exercise involving verification of household responses was conducted using the following methodology. First, PSUs with high non-response rates or inconsistencies in the death section were selected. Second, a randomly selected 20% of households per PSU were visited (and the Short or Long Household Questionnaire re-administered) to cross-check the household roster and the completeness of data on births and deaths for the past 3 years. Third, if a female death was found in the household, a team member undertook a verbal autopsy. Finally, a team member completed any incomplete Verbal Autopsy Questionnaires. Teams also visited households to verify and reinterview or ask verbatim related questions to ensure the completeness of events surrounding female deaths. Verification teams were given blank household questionnaires to be completed during the verification process to cover the selected clusters. A total of 181 clusters were covered during the verification process. In all of the verification revisits, different teams and quality control teams were assigned to conduct the interviews.

1.8   DATA PROCESSING

The processing of the 2019 PMMS data began simultaneously with the fieldwork. As soon as data collection was completed in each cluster, all electronic data files were transferred via the Internet File Streaming System (IFSS) to the NIPS central office in Islamabad. These data files were registered and checked for inconsistencies, incompleteness, and outliers. A double entry procedure was adopted by NIPS to ensure data accuracy. The field teams were alerted about any inconsistencies and errors. Secondary editing of completed questionnaires, which involved resolving inconsistencies and coding open-ended questions, was carried out in the central office. The survey core team members assisted with secondary editing, and the NIPS data processing manager coordinated the work at the central office. Data entry and editing were carried out using the CSPro software package. The concurrent processing of the data offered a distinct advantage because it maximised the likelihood of the data being error-free and accurate.

Assessment of Verbal Autopsy Questionnaires

The Verbal Autopsy Questionnaires were reviewed and coded based on ICD-10 categories to determine causes of death. NIPS organised a workshop on ICD-10 coding from 29 July to 2 August 2019 to provide an orientation for experts and reviewers from Pakistan's National Committee for Maternal and Neonatal Health (NCMNH). The workshop was supported by ICF.

NCMNH provided technical assistance to identify causes and determinants of maternal deaths based on a review of Verbal Autopsy Questionnaires and to assign causes of death. The Verbal Autopsy Questionnaires were reviewed by six panels of experts; each panel included two obstetricians and one general physician based at NCMNH. For each female death, reviewers used prescribed forms to identify the category of the death. Categories were as follows: direct obstetric death, indirect obstetric death, probable obstetric death, coincidental obstetric death, late maternal death, non-obstetric death, and undecided category of death. As part of quality assurance, each Verbal Autopsy Questionnaire was independently reviewed and assigned a cause (or causes) of death by two experts from the panel and validated by the third expert. In cases in which the findings of the two experts were discordant, the questionnaire was re-reviewed by the lead expert for final assignment of the category and cause of death. Cause of death coding was carried out by separate trained personnel.

To help the reviewers summarise and comprehend the complex data, a checklist was prepared to list the main signs and symptoms of the fatal illness and thus facilitate assignment of a cause of death. A condition was regarded as the main cause of death if it was entered in each of the three cause of death forms as an immediate, underlying, possible, or associated cause of death. The timing of death in relation to pregnancy, delivery, or the postpartum period was categorised as follows: (1) death during pregnancy (before any signs of labour or abortion), (2) death during or less than 24 hours after delivery, (3) death during or less than 24 hours after abortion or miscarriage, (4) death more than 24 hours but less than 42 days after delivery, (5) death more than 24 hours but less than 42 days after abortion/miscarriage, (6) death more than 42 days but less than 1 year after delivery or abortion/miscarriage, (7) cannot be determined (insufficient information), (8) not applicable (not a pregnancy-related death), and (9) delay in seeking treatment (all three types of delay). The main cause of death (immediate and underlying), possible cause(s) of death (immediate and underlying), associated cause(s) of death (if any), delays in receiving treatment during a fatal illness, and the reviewer's assessment of the quality of the data were determined.

1.9   RESPONSE RATES

Table 1.1 shows the response rates for the 2019 Pakistan Maternal Mortality Survey. In the four provinces, the sample contained a total of 116,169 households. All households were visited by the field teams, and 110,483 households were found to be occupied. Of these households, 108,766 were successfully interviewed, yielding a household response rate of 98%. The subsample selected for the Long Household Questionnaire comprised 11,080 households, and interviews were carried out in 10,479 of these households. A total of 12,217 ever-married women age 15-49 were eligible to be interviewed based on the Long Household Questionnaire, and 11,859 of these women were successfully interviewed (a response rate of 97%).

In Azad Jammu and Kashmir, 16,755 households were occupied, and interviews were successfully carried out in 16,588 of these households (99%). A total of 1,707 ever-married women were eligible for individual interviews, of whom 1,666 were successfully interviewed (98%). In Gilgit Baltistan, 11,005 households were occupied, and interviews were conducted in 10,872 households (99%). A total of 1,219 ever-married women were eligible for interviews, of whom 1,178 were successfully interviewed (97%).

A total of 944 verbal autopsy interviews were conducted in Pakistan overall, 150 in Azad Jammu and Kashmir, and 88 in Gilgit Baltistan. The Verbal Autopsy Questionnaire was used in almost all of the interviews, and response rates were nearly 100%.

Number of households, number of interviews, and response rates, according to residence (unweighted), Pakistan MMS 2019

Result	Pakistan			Azad Jammu and Kashmir			Gilgit Baltistan		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Household interviews (total)									
Households selected	57,510	58,659	116,169	8,558	8,952	17,510	3,293	8,460	11,753
Households occupied	54,649	55,834	110,483	8,159	8,596	16,755	3,071	7,934	11,005
Households interviewed	53,510	55,256	108,766	8,064	8,524	16,588	3,061	7,811	10,872
Household response rate[1]	97.9	99.0	98.4	98.8	99.2	99.0	99.7	98.4	98.8
Household interviews (short questionnaire)									
Households selected	52,120	52,969	105,089	7,758	8,102	15,860	2,993	7,620	10,613
Households occupied	49,495	50,344	99,839	7,396	7,781	15,177	2,789	7,135	9,924
Households interviewed	48,474	49,813	98,287	7,307	7,721	15,028	2,779	7,025	9,804
Household response rate[1]	97.9	98.9	98.4	98.8	99.2	99.0	99.6	98.5	98.8
Household interviews (long questionnaire)									
Households selected	5,390	5,690	11,080	800	850	1,650	300	840	1,140
Households occupied	5,154	5,490	10,644	763	815	1,578	282	799	1,081
Households interviewed	5,036	5,443	10,479	757	803	1,560	282	786	1,068
Household response rate[1]	97.7	99.1	98.4	99.2	98.5	98.9	100.0	98.4	98.8
Interviews with ever-married women									
Number of eligible women	5,747	6,470	12,217	803	904	1,707	317	902	1,219
Number of eligible women interviewed	5,540	6,319	11,859	777	889	1,666	309	869	1,178
Eligible women response rate[2]	96.4	97.7	97.1	96.8	98.3	97.6	97.5	96.3	96.6
Verbal autopsy interviews									
Number of verbal autopsies/ deceased women selected	416	528	944	67	83	150	18	70	88
Number of verbal autopsy interviews	412	528	940	67	82	149	18	70	88
Eligible verbal autopsy response rate[3]	99.0	100.0	99.6	100.0	98.8	99.3	100.0	100.0	100.0

[1] Households interviewed/households occupied
[2] Women interviewed/eligible women
[3] Verbal autopsies selected/verbal autopsies conducted

HOUSEHOLD POPULATION, HOUSEHOLD AND RESPONDENTS' CHARACTERISTICS

2

Key Findings

- *Population age distribution:* 40% of the household population is less than age 15 and 4% is age 65 or above.

- *Household composition:* The average household size is 6.7 persons; 74% of households have more than 4 persons.

- *Drinking water:* 97% of households have an improved drinking water source.

- *Sanitation:* 79% of households have an improved sanitation facility, and 67% use a basic sanitation service (an improved facility that is not shared with other households).

- *Education:* 52% of women overall and 91% of women in the lowest wealth quintile have no education.

Information on the socioeconomic characteristics of the household population in the 2019 PMMS provides a context to interpret demographic and health indicators and can furnish an approximate indication of the representativeness of the survey. In addition, this information sheds light on the living conditions of the population.

This chapter presents information on sources of household drinking water, treatment of drinking water, sanitation, exposure to smoke inside the home, wealth status, household population and composition, educational attainment, availability of services in rural areas, and background characteristics of respondents.

2.1 HOUSEHOLD POPULATION AND COMPOSITION

Household
A person or group of related or unrelated persons who live together in the same dwelling unit(s), who acknowledge one adult male or female as the head of the household, who share the same housekeeping arrangements, and who are considered a single unit.

De facto population
All persons who stayed in the selected households the night before the interview (whether usual residents or visitors).

The distribution of the population by age, sex, and residence is a primary demographic classification. It also provides information on trends in population growth based on the size of age brackets, including dependency groups. The de facto survey population (those who stayed in the surveyed households the night before the survey) is 728,135. The sex ratio (number of males per 100 females) is 100 (**Table 2.1**). Forty percent of the population is under age 15 and 4% is age 65 and above, with the bulk of the population in the 15-64 age brackets (**Figure 2.1**). The pattern essentially depicts a high fertility rate with slight recent declines.

Figure 2.1 Population pyramid

Percent distribution of the household population

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

The age dependency ratio (the sum of the population under age 15 and the population age 65 and over relative to the working-age population age 15-64) is 0.77.
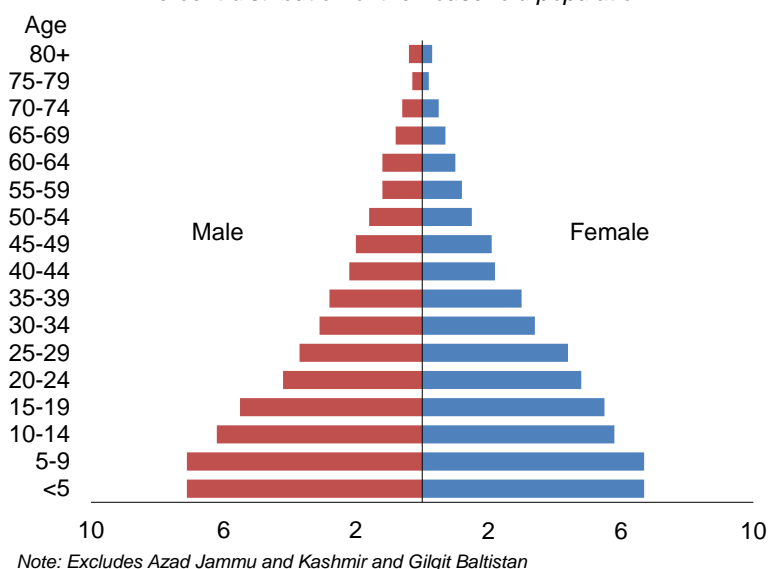
When categorised by different age groups, it is interesting to note that 46% of the total population falls in the 0-17 group, whereas the adult population (age 18 or above) is 54% of the total. The adolescent population age 10-19 accounts for 23% of the total population, and the young adult population age 15-24 accounts for 20%.

Table 2.2 shows the distribution of the population by region. In Khyber Pakhtunkhwa and Balochistan, 15% of the population is under age 5, whereas in Punjab and Sindh 13% is under age 5. The percentages are similar in Azad Jammu and Kashmir (13%) and Gilgit Baltistan (15%). The high percentage of children under age 5 in all regions indicates a high fertility rate.

The percentage of children age 5-9 is highest in Balochistan (17%) and lowest in Azad Jammu and Kashmir (12%). This may be an indicator of family size preference in these regions. Thirteen percent of children in Balochistan and Khyber Pakhtunkhwa are age 10-14, which is slightly higher than the percentage is Sindh (12%) and Punjab (11%). The percentage of the population age 65 or older is highest in Azad Jammu and Kashmir (6%) and lowest in Balochistan and Sindh (3% each).

Balochistan has the highest percentage of the population age 0-14 (46%), while the highest percentage of the population age 15-64 (58%) is in Punjab and Sindh.

In general, Pakistani households are large, with an average household size of 6.7 persons (**Table 2.3**). Mean household sizes are 6.1 and 7.6 persons, respectively, in Azad Jammu and Kashmir and Gilgit Baltistan. Pakistani households are predominantly headed by men (91%). Ten percent of households in rural areas are headed by women, compared with 8% in urban areas. By far the highest percentage of households that are headed by women is in Azad Jammu and Kashmir (23%)

Trends: The population distribution has varied slightly over the past 14 years. The percentage of the population less than age 15 was 41% in the 2006-07 PDHS (a survey of comparable design) and 40% in 2019. The size of the adolescent population has decreased slightly since 2006-07 (from 25% to 23%), while there has been a slight increase in the size of the population age 15-64 (from 55% to 57%). The sex ratio in 2019 was 100, compared with 102 in 2006-07.

Patterns by background characteristics

- The proportion of the population age 0-17 is higher in rural areas (48%) than in urban areas (42%).

- The average household size is larger in rural (6.9) than urban (6.3) areas.

2.2   DRINKING WATER SOURCES AND TREATMENT

> **Improved sources of drinking water**
> Include piped water, public taps, standpipes, tube wells, boreholes, protected dug wells and springs, rainwater, filtration plants, water delivered via a tanker truck or a cart with a small tank, and bottled water.
> *Sample:* Households

Improved sources of drinking water are essential for the health of the population and provide safeguards against contamination. In Pakistan, 97% of households use an improved source of drinking water (**Table 2.4.1 and Figure 2.2**). A tube well or borehole (51%) is the predominant source of drinking water, followed by piped water (23%). Among other improved sources, filtered drinking water is used by 9% of households. A tube well or borehole is the most common source in rural areas (63%), followed by piped water (17%). Thirty-three percent of urban households use piped water, and 31% use a tube well or borehole. Seventy-four percent of households have drinking water on their premises, while 5% of households spend more than 30 minutes to obtain drinking water.

Figure 2.2 **Household drinking water by residence**

Percent distribution of households by source of drinking water
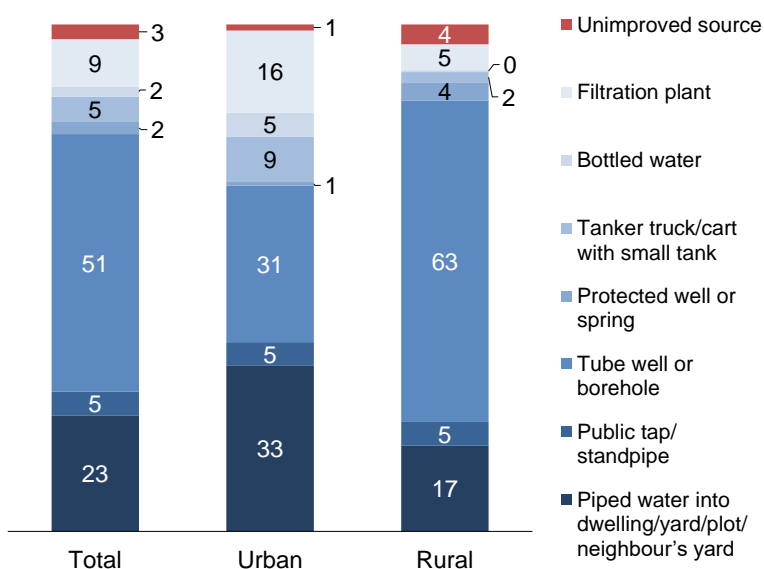
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Only 6% of households follow appropriate water treatment practices prior to drinking water. Appropriate treatment practices are followed more often in urban areas (12%) than in rural areas (2%) (**Table 2.4.2**).

2.3   SANITATION

> **Improved toilet facilities**
> Flush/pour flush toilets that flush water and waste to a piped sewer system, septic tank, pit latrine, or unknown destination; ventilated improved pit (VIP) latrines; pit latrines with slabs; or composting toilets.
> **Sample:** Households

Target 6.2 of the Sustainable Development Goals is to provide adequate and equitable sanitation for all. This target is tracked with the indicator of safely managed sanitation services or use of an improved type of sanitation facility that is not shared with other households (United Nations 2018). Improved sanitation facilities help to prevent communicable diseases such as cholera and typhoid. Overall, 79% of households (69% in rural areas and 95% in urban areas) use improved sanitation facilities (**Figure 2.3**). Five percent of households have an unimproved sanitation facility, and 16% have no toilet facility (25% in rural areas and 1% in urban areas) (**Table 2.5**).

Among households having an improved toilet facility, the facility is almost always in the household dwelling (96% in urban areas and 91% in rural areas). In only 1% of households is the facility elsewhere.

Figure 2.3 Household toilet facilities by residence

Percent distribution of households by type of toilet facilities
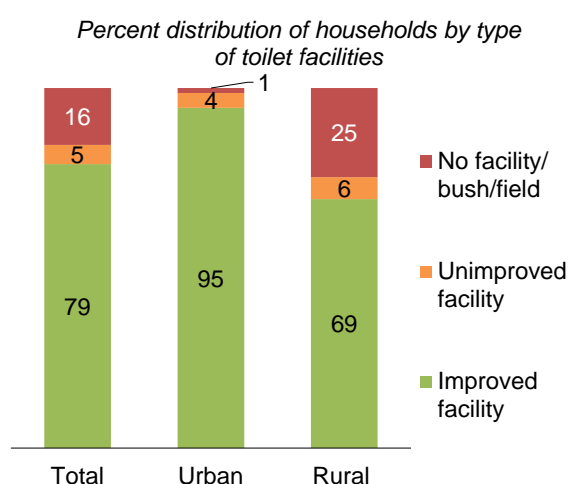
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

> **Basic sanitation service**
> Use of improved facilities that are not shared with other households.
> **Sample:** De jure population

> **Limited sanitation service**
> Use of improved facilities shared by two or more households.
> **Sample:** De jure population

Overall, 69% of de jure household members have basic sanitation service, while 10% have limited service (**Table 2.5**).

2.4   HOUSEHOLD CHARACTERISTICS

The survey collected data on access to electricity, flooring materials, the number of rooms used for sleeping, and other household characteristics. A vast majority (94%) of the households in Pakistan (99% in urban areas and 91% in rural areas) have access to electricity (**Table 2.6**).

In Pakistan, most households use cement (40%) or earth/sand (35%) as materials for flooring. Earth and sand are more commonly used in rural households (51%), and cement is most common in urban households (56%). Nine percent of all households have marble flooring. Forty percent of households have only one room for sleeping, 39% have two rooms for sleeping, and 21% have three or more rooms for sleeping.

Ninety-three percent of households have a place for cooking within the dwelling. Liquefied petroleum gas (LPG) or natural gas is the most common cooking fuel (49% of households). Use of this fuel varies

dramatically from urban households (86%) to rural households (26%). Overall, 53% of residents use solid fuel for cooking (e.g., wood, agricultural crops, or animal dung), while 47% rely on clean fuel (mostly LPG or natural gas).

2.5   HOUSEHOLD WEALTH

Household Durable Goods

The survey collected information on household possessions, means of transportation, and farm animals (**Table 2.7**). Mobile phones and televisions are the most common information and communication devices used in Pakistan. Almost all households (95%) have at least one mobile phone, and 4% have land-line phones (6% in urban areas and 2% in rural areas). More than 6 in 10 households (62%) in Pakistan own a television (84% in urban areas and 48% in rural areas). Three percent of urban households and 6% of rural households own a radio. As expected, ownership of farm animals is more common among rural (59%) than urban (14%) households.

Overall, 64% of urban households and 51% of rural households have a motorbike or scooter as a means of transportation. Only 11% of urban households and 5% of rural households own a car or truck.

Wealth Index

> **Wealth index**
>
> Households are given scores based on the number and kinds of consumer goods they own, ranging from a television to a bicycle or car, and housing characteristics such as source of drinking water, toilet facilities, and flooring materials. These scores are derived using principal component analysis. National wealth quintiles are compiled by assigning the household score to each usual (de jure) household member, ranking each person in the household population by her or his score, and then dividing the distribution into five equal categories, each comprising 20% of the population.
>
> ***Sample:*** Households

Table 2.8 presents data on wealth quintiles and the Gini coefficient according to residence, region, and province. The Gini coefficient indicates the level of concentration of wealth, with 0 representing an equal wealth distribution and 1 representing a totally unequal distribution. Pakistan's Gini coefficient is 0.28, indicating a somewhat uneven distribution of wealth in the population.

In urban areas, 41% of the population is in the highest wealth quintile and only 3% is in the lowest quintile. Conversely, in rural areas only 8% of the population is in the highest wealth quintile, while 30% is in the lowest quintile (**Figure 2.4**).

Among the provinces, 26% of the population in Punjab is in the highest wealth quintile and 11% is in the lowest wealth quintile. Sindh has a higher level

***Figure 2.4* Household wealth by residence**

Percent distribution of de jure population by wealth quintiles

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

of poverty than Punjab, with 33% of the population falling in the lowest wealth quintile. In Khyber Pakhtunkhwa, 18% of the population is in the lowest wealth quintile. In that region, the highest percentage of the population falls in the second wealth quintile (33%). The percentage of the population in the lowest wealth quintile in Balochistan (45%) is alarming. Only 5% of the population in Balochistan falls in the
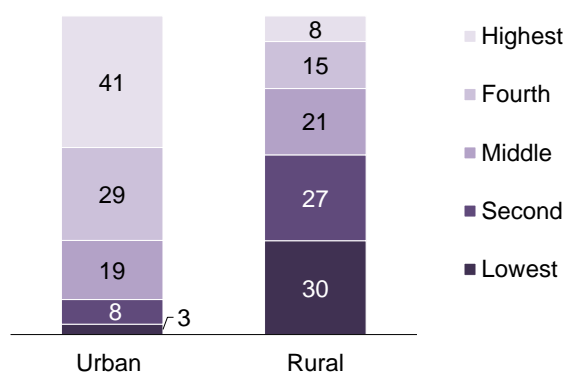
highest wealth quintile. Poverty is higher in rural areas than urban areas in all of the provinces, especially in rural Sindh, where 70% of the population is in the lowest wealth quintile.

In Azad Jammu and Kashmir, 32% of the population falls in the middle wealth quintile and 28% in the fourth quintile. Only 7% of the population in this region is in the lowest wealth quintile. In Gilgit Baltistan, 25% of the population is in the lowest wealth quintile and just 2% in the highest quintile.

2.6   SERVICES IN RURAL AREAS

The 2019 PMMS Community Questionnaire was administered in each of the 610 selected rural sample points. It included questions about the availability of various public services, such as district headquarters, post offices, banks, educational institutions, shops, transportation services, and health facilities. As the data were provided by community informants and distances to services were not verified, the results should be viewed with some caution. **Table 2.9** shows the percent distribution of rural households by distance to various services.

Ninety-four percent of households in rural areas have electricity coverage in their community, and 93% have mobile phone coverage. Three-quarters of rural households have access to a general store or shop, and 65% have access to motorised public transport. Although television signals are available to 86% of rural households, only 36% have access to cable television connections. A post office is available to only 20% of rural households, while 2-12% of households have access to National Database and Registration Authority (NADRA) offices, banks, and courier services.

A large majority of rural households have primary schools located in their community. However, it is noteworthy that primary schools for boys are more prevalent than primary schools for girls (85% versus 80%). The majority of rural households (64%) are 10 or more kilometres from degree-granting colleges.

With respect to health services, only 17% of rural households have a functioning basic health unit in their community, while 32% have one within 1-4 kilometres. Only 9% of rural households have a female doctor in their community; 50% have to travel 10 or more kilometres to see a female doctor when needed. Also, the majority of households are 10 or more kilometres away from ultrasound or ambulance services, a functioning maternal and child health centre, rural health centre, or family welfare centre. The health-related personnel most likely to be available in the community are traditional birth attendants (dais) (51%) and dispensers/compounders (39%).

2.7   BASIC CHARACTERISTICS OF SURVEY RESPONDENTS

The survey results indicate that 42% of ever-married women age 15-49 are under age 30 (**Table 2.10**). Ninety-five percent of women are currently married. Women are more likely to reside in rural areas (63%) than in urban areas (37%). More than half of women have no education. The distribution of women across wealth quintiles is generally equal, with 18% being in the lowest wealth quintile and 22% in the highest quintile. Women are most likely to reside in Punjab (53%) and least likely to reside in Balochistan (5%).

In Azad Jammu and Kashmir, 34% of women are under age 30, 95% are currently married, and 84% live in rural areas. More than one-quarter (28%) have no education. One-third of respondents in Azad Jammu and Kashmir are in the middle wealth quintile, while only 6% fall in the lowest quintile.

Forty-two percent of women in Gilgit Baltistan are under age 30, 97% are married, and 83% reside in rural areas. Half have no education. Twenty-three percent of women fall in the lowest wealth quintile, while only 9% fall in the upper two quintiles.

2.8 EDUCATIONAL ATTAINMENT

Median educational attainment
Half of the population has completed less than the median number of years of schooling, and half of the population has completed more than the median number of years of schooling.
Sample: Ever-married women age 15-49

Education and access to information are important in determining behaviours. They are also crucial in developing approaches toward reproductive and maternal health. The 2019 PMMS results showed that one in two ever-married women have no education (52%), while 18% have a primary education. Overall, 23% of ever-married women have a secondary or higher level of education (**Table 2.11**).

In Azad Jammu and Kashmir, about half of urban women (51%) have a secondary or higher education. The median number of years of education in Azad Jammu and Kashmir is 6.2, which is higher than in other provinces and Gilgit Baltistan.

Trends: The percentages of educated women in different age brackets depict a mixed trend. In 2019, the highest percentage of uneducated women (67%) were age 45-49, and 14% of women in this age group had a secondary or higher level of education. In 2006-07, 79% women in this age group were uneducated, and only 8% had a secondary or higher education.

Patterns by background characteristics

- Among ever-married women age 15-49, the highest percentages with no education are in the older age brackets (**Table 2.11**). Two-thirds of women age 45-49 have no education, compared with 49% of women age 15-24.

- Sixty-two percent of rural women have no education, compared with 34% of urban women (**Figure 2.5**). Urban women (39%) are more likely to have a secondary or higher education than their rural counterparts (14%). The median years of education is 4.9 in urban areas and 0.0 in rural areas.

- Women in the highest wealth quintile (61%) are much more likely than those in the lowest wealth quintile (1%) to have a secondary or higher education (**Table 2.11** and **Figure 2.6**).

- Nine percent of women in Balochistan have a secondary or higher level of education, compared with 26% of women in Punjab. Thirty-four percent of women in Azad Jammu and Kashmir have a secondary or higher education.

Figure 2.5 **Education of survey respondents**

Percent distribution of ever-married women age 15-49 by highest level of schooling attended or completed
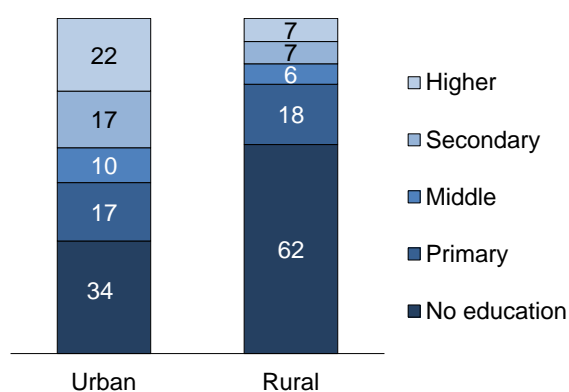
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Figure 2.6 **Secondary education by household wealth**

Percentage of ever-married women age 15-49 with a secondary education or higher
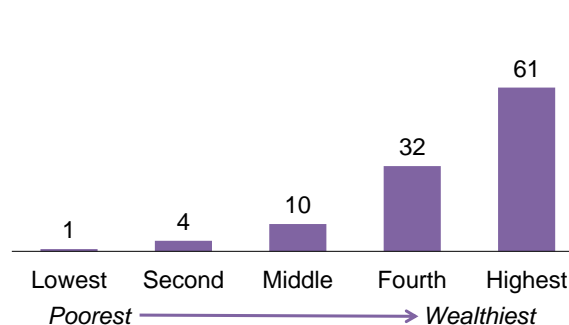
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

- Four in five rural women in Sindh (82%) and Balochistan (80%) have no education. Two in five urban women in Punjab (41%) and Sindh (40%) have a secondary or higher education.

LIST OF TABLES

For more information on household population and housing characteristics, see the following tables:

Table 2.1 Household population by age, sex, and residence

Percent distribution of the de facto household population by various age groups, dependency age groups, and child and adult populations, and percentage of adolescents and young people, according to sex and residence, Pakistan MMS 2019

Age	Urban			Rural			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	12.4	12.0	12.2	15.3	14.2	14.7	14.2	13.4	13.8
5-9	12.3	12.0	12.1	15.4	14.3	14.8	14.2	13.4	13.8
10-14	11.5	11.3	11.4	12.8	11.7	12.2	12.3	11.5	11.9
15-19	11.0	11.0	11.0	11.0	11.1	11.0	11.0	11.0	11.0
20-24	9.4	10.2	9.8	7.9	9.2	8.6	8.5	9.6	9.0
25-29	8.4	9.2	8.8	6.9	8.5	7.7	7.5	8.8	8.1
30-34	7.0	7.3	7.1	5.7	6.4	6.1	6.2	6.7	6.5
35-39	6.2	6.4	6.3	5.2	5.9	5.6	5.6	6.1	5.8
40-44	5.0	4.9	4.9	4.0	4.0	4.0	4.4	4.3	4.4
45-49	4.4	4.5	4.5	3.7	4.0	3.8	4.0	4.1	4.0
50-54	3.6	3.3	3.4	3.0	2.9	3.0	3.2	3.1	3.1
55-59	2.6	2.5	2.5	2.4	2.4	2.4	2.5	2.4	2.4
60-64	2.5	2.1	2.3	2.3	2.0	2.2	2.4	2.0	2.2
65-69	1.6	1.3	1.4	1.6	1.4	1.5	1.6	1.4	1.5
70-74	1.2	0.9	1.0	1.2	1.0	1.1	1.2	0.9	1.1
75-79	0.5	0.4	0.5	0.6	0.5	0.5	0.6	0.4	0.5
80+	0.7	0.6	0.7	0.8	0.7	0.8	0.8	0.7	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Dependency age groups									
0-14	36.1	35.2	35.7	43.5	40.1	41.8	40.8	38.4	39.6
15-64	60.0	61.5	60.7	52.2	56.3	54.3	55.1	58.2	56.6
65+	3.9	3.2	3.6	4.3	3.5	3.9	4.2	3.4	3.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Child and adult populations									
0-17	42.5	41.6	42.1	50.0	46.7	48.3	47.2	44.9	46.1
18+	57.5	58.4	57.9	50.0	53.3	51.7	52.8	55.1	53.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percentage of adolescents age 10-19	22.5	22.3	22.4	23.8	22.7	23.3	23.3	22.6	22.9
Percentage of young people age 15-24	20.4	21.2	20.8	18.9	20.3	19.6	19.5	20.6	20.0
Number of persons	134,382	130,773	265,154	229,956	233,025	462,981	364,337	363,798	728,135

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 2.2 Household population by age, sex, and region

Percent distribution of the de facto household population by various age groups, dependency age groups, and child and adult populations, and percentage of adolescents and young people, according to sex and region, Pakistan MMS 2019

	Region																	
	Punjab			Sindh			Khyber Pakhtunkhwa			Balochistan			Azad Jammu and Kashmir			Gilgit Baltistan		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	13.7	12.7	13.2	13.6	13.0	13.3	15.8	15.0	15.4	15.4	15.3	15.4	13.9	11.5	12.6	15.7	13.9	14.8
5-9	13.5	12.5	13.0	13.8	13.8	13.8	15.7	14.6	15.1	17.6	16.5	17.1	13.6	11.4	12.4	15.5	13.8	14.7
10-14	11.8	10.9	11.4	12.1	11.9	12.0	13.4	12.2	12.8	14.0	12.9	13.4	13.0	11.3	12.1	13.2	13.0	13.1
15-19	10.6	10.9	10.8	11.4	11.1	11.3	11.5	11.2	11.4	11.0	11.4	11.2	11.0	10.8	10.9	11.6	12.0	11.8
20-24	8.5	9.9	9.2	9.0	9.5	9.3	8.0	9.1	8.6	7.7	8.6	8.1	8.1	9.6	8.9	7.2	8.8	8.0
25-29	7.6	9.0	8.3	8.0	8.8	8.4	6.6	8.4	7.5	7.3	8.2	7.7	6.5	8.6	7.6	6.1	8.0	7.1
30-34	6.3	6.9	6.6	6.6	7.0	6.7	5.5	6.2	5.9	5.7	6.3	6.0	5.4	7.1	6.3	5.2	6.2	5.7
35-39	5.8	6.2	6.0	5.9	6.1	6.0	4.7	5.8	5.3	5.1	5.3	5.2	4.9	6.7	5.9	5.0	5.3	5.2
40-44	4.6	4.5	4.6	4.6	4.5	4.5	3.7	3.9	3.8	3.7	3.5	3.6	4.0	4.8	4.4	4.1	4.2	4.1
45-49	4.2	4.4	4.3	4.0	4.3	4.1	3.5	3.5	3.5	3.1	3.6	3.3	4.0	4.6	4.3	3.6	3.5	3.6
50-54	3.5	3.3	3.4	3.2	2.8	3.0	2.7	2.7	2.7	2.6	2.5	2.5	3.3	3.4	3.3	2.6	2.7	2.6
55-59	2.7	2.5	2.6	2.3	2.5	2.4	2.4	2.3	2.3	1.8	1.9	1.8	2.8	2.7	2.7	2.0	2.2	2.1
60-64	2.5	2.2	2.3	2.3	1.9	2.1	2.3	1.9	2.1	1.9	1.6	1.8	2.9	2.5	2.7	2.4	2.0	2.2
65-69	1.7	1.5	1.6	1.4	1.2	1.3	1.7	1.4	1.5	1.2	1.0	1.1	2.1	1.6	1.8	1.9	1.7	1.8
70-74	1.4	1.1	1.3	1.0	0.7	0.9	1.1	0.8	0.9	1.0	0.7	0.8	1.8	1.3	1.5	1.7	1.1	1.4
75-79	0.6	0.5	0.6	0.4	0.3	0.4	0.6	0.5	0.5	0.3	0.3	0.3	1.1	0.7	0.9	0.8	0.6	0.7
80+	1.0	0.8	0.9	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.4	0.5	1.6	1.3	1.5	1.3	0.9	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Dependency age groups																		
0-14	39.0	36.2	37.6	39.5	38.8	39.1	45.0	41.7	43.3	46.9	44.7	45.9	40.5	34.2	37.1	44.4	40.8	42.6
15-64	56.3	59.9	58.1	57.3	58.5	57.9	51.0	55.1	53.1	50.0	52.9	51.4	52.9	60.9	57.1	49.9	54.9	52.5
65+	4.8	3.9	4.3	3.2	2.7	3.0	4.0	3.2	3.6	3.0	2.4	2.7	6.6	5.0	5.7	5.7	4.3	5.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Child and adult populations																		
0-17	45.1	42.6	43.8	46.1	45.3	45.7	52.1	48.4	50.2	53.5	51.5	52.6	47.1	40.6	43.7	51.8	48.4	50.1
18+	54.9	57.4	56.2	53.9	54.7	54.3	47.9	51.6	49.8	46.4	48.5	47.4	52.9	59.4	56.3	48.2	51.6	49.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percentage of adolescents 10-19	22.4	21.8	22.1	23.5	23.0	23.3	25.0	23.4	24.2	25.0	24.3	24.7	24.0	22.1	23.0	24.8	25.0	24.9
Percentage of young people 15-24	19.1	20.8	19.9	20.4	20.6	20.5	19.5	20.3	19.9	18.7	20.0	19.4	19.2	20.4	19.8	18.8	20.9	19.8
Number of persons	187,325	189,221	376,546	83,788	79,934	163,722	70,831	73,130	143,962	22,393	21,512	43,905	48,471	54,176	102,648	40,942	42,029	82,971

Table 2.3 Household composition

Percent distribution of households by sex of head of household and household size, and mean size of households, according to residence, Pakistan MMS 2019

Characteristic	Pakistan			Azad Jammu and Kashmir			Gilgit Baltistan		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Household headship									
Male	92.1	89.6	90.6	84.0	76.2	77.5	94.6	91.8	92.3
Female	7.9	10.4	9.4	16.0	23.8	22.5	5.4	8.2	7.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of usual members									
1	1.5	1.1	1.2	1.6	1.6	1.6	0.5	0.7	0.7
2	5.0	4.7	4.8	5.5	4.6	4.8	1.7	2.8	2.6
3	8.2	7.6	7.8	8.6	8.6	8.6	4.4	4.1	4.1
4	13.4	11.3	12.1	14.5	12.8	13.1	8.4	8.5	8.5
5	17.1	14.5	15.5	18.7	17.3	17.6	13.0	13.3	13.2
6	17.1	15.3	16.0	17.7	16.6	16.8	16.8	14.3	14.7
7	11.8	12.8	12.4	11.2	13.1	12.7	15.2	13.3	13.7
8	8.4	9.5	9.1	8.0	9.0	8.8	11.2	11.0	11.0
9+	17.5	23.2	21.0	14.1	16.4	16.0	28.9	31.9	31.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean size of households	6.3	6.9	6.7	5.9	6.2	6.1	7.5	7.6	7.6
Number of households	41,607	67,159	108,766	2,827	13,761	16,588	1,924	8,948	10,872

Note: Table is based on de jure household members, i.e., usual residents.

Table 2.4.1 Household drinking water

Percent distribution of households and de jure population by source of drinking water and by time to obtain drinking water, percentage of households and de jure population with basic drinking water service, and percentage with limited drinking water service, according to residence, Pakistan MMS 2019

Characteristic	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Source of drinking water						
Improved source	98.8	96.1	97.1	98.9	95.9	97.0
Piped into dwelling/yard/plot	31.5	15.2	21.4	31.7	15.7	21.5
Piped to neighbour	1.4	1.7	1.6	1.6	1.7	1.7
Public tap/standpipe	4.6	4.7	4.7	4.7	4.8	4.8
Tube well or borehole	31.0	63.4	51.0	31.8	62.1	51.0
Protected dug well	0.6	2.4	1.7	0.6	2.7	2.0
Protected spring	0.1	1.2	0.7	0.1	1.3	0.9
Rainwater	0.0	0.1	0.0	0.0	0.1	0.0
Tanker truck/cart with small tank	8.5	2.1	4.5	8.7	2.8	4.9
Bottled water	4.7	0.4	2.0	3.8	0.3	1.6
Filtration plant	16.3	5.1	9.4	15.9	4.3	8.6
Unimproved source	1.2	3.9	2.9	1.1	4.1	3.0
Unprotected dug well	0.1	1.4	0.9	0.1	1.5	1.0
Unprotected spring	0.1	0.8	0.5	0.1	0.8	0.6
Surface water	0.2	1.5	1.0	0.2	1.6	1.1
Other	0.9	0.1	0.4	0.7	0.1	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Time to obtain drinking water (round trip)						
Water on premises[1]	74.1	74.4	74.2	74.8	75.0	74.9
30 minutes or less	22.0	18.7	20.0	21.1	17.9	19.1
More than 30 minutes	2.5	6.5	4.9	2.6	6.5	5.0
Don't know/missing	1.4	0.4	0.8	1.6	0.7	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage with basic drinking water service[2]	95.0	91.1	92.6	94.9	90.7	92.3
Percentage with limited drinking water service[3]	3.7	5.0	4.5	4.0	5.2	4.8
Number of households/population	4,009	6,470	10,479	25,574	44,346	69,920

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[1] Includes water piped to a neighbour and those reporting a round-trip collection time of zero minutes
[2] Defined as drinking water from an improved source, provided either water is on the premises or round-trip collection time is 30 minutes or less. Includes safely managed drinking water, which is not shown separately.
[3] Drinking water from an improved source, and round-trip collection time is more than 30 minutes or is unknown

Table 2.4.2 Treatment of household drinking water

Percentage of households and de jure population using various methods to treat drinking water, and percentage using an appropriate treatment method, according to residence, Pakistan MMS 2019

Water treatment method	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Boil	10.5	1.6	5.0	10.2	1.5	4.7
Bleach/chlorine added	0.6	0.1	0.3	0.5	0.1	0.2
Strain through cloth	4.1	1.8	2.7	4.5	1.9	2.8
Ceramic, sand, or other filter	1.2	0.2	0.6	1.2	0.2	0.6
Let stand and settle	0.2	0.4	0.3	0.2	0.5	0.4
Other	0.6	0.0	0.2	0.7	0.0	0.3
No treatment	84.2	96.0	91.5	84.1	96.0	91.6
Percentage using an appropriate treatment method[1]	12.1	1.9	5.8	11.7	1.7	5.4
Number of households/population	4,009	6,470	10,479	25,574	44,346	69,920

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan. Respondents may report multiple treatment methods, so the sum of treatment may exceed 100%.
[1] Appropriate water treatment methods include boiling, bleaching, filtering, and solar disinfecting.

Table 2.5 Household sanitation facilities household members usually use

Percent distribution of households and de jure population by type of toilet/latrine facilities household members usually use, percent distribution of households and de jure population with a toilet/latrine facility by location of the facility, percentage of households and de jure population with basic sanitation service, and percentage with limited sanitation service, according to residence, Pakistan MMS 2019

Type and location of toilet/latrine facility	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Improved sanitation facility	94.5	69.2	78.8	94.3	69.8	78.7
Flush/pour flush to piped sewer system	58.2	5.9	25.9	57.0	6.4	24.9
Flush/pour flush to septic tank	28.4	43.8	37.9	28.4	43.0	37.7
Flush/pour flush to pit latrine	6.6	16.8	12.9	7.5	17.4	13.8
Flush/pour flush, don't know where	0.8	0.7	0.7	0.8	0.7	0.7
Ventilated improved pit (VIP) latrine	0.2	0.2	0.2	0.2	0.1	0.2
Pit latrine with slab	0.4	1.6	1.1	0.4	2.0	1.4
Composting toilet	0.0	0.1	0.1	0.1	0.2	0.1
Unimproved sanitation facility	4.1	6.1	5.3	4.3	6.5	5.7
Flush/pour flush not to sewer/septic tank/pit latrine	3.6	4.1	3.9	3.6	4.0	3.9
Pit latrine without slab/open pit	0.3	1.4	1.0	0.4	1.8	1.3
Bucket	0.0	0.3	0.2	0.0	0.4	0.3
Hanging toilet/hanging latrine	0.0	0.0	0.0	0.0	0.1	0.0
Other	0.2	0.3	0.3	0.2	0.3	0.2
Open defecation (no facility/bush/field)	1.4	24.8	15.8	1.4	23.7	15.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population	4,009	6,470	10,479	25,574	44,346	69,920
Location of toilet facility						
In own dwelling	96.2	91.2	93.4	96.7	91.4	93.6
In own yard/plot	3.3	7.2	5.5	3.0	7.3	5.4
Elsewhere	0.4	1.5	1.0	0.2	1.2	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population with a toilet/latrine facility	3,952	4,868	8,821	25,208	33,830	59,039
Percentage with basic sanitation service[1]	86.1	55.9	67.4	86.7	58.0	68.5
Percentage with limited sanitation service[2]	8.4	13.3	11.4	7.6	11.7	10.2
Number of households/population	4,009	6,470	10,479	25,574	44,346	69,920

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[1] Defined as use of improved facilities that are not shared with other households. Includes safely managed sanitation service, which is not shown separately.
[2] Defined as use of improved facilities shared by 2 or more households

Table 2.6 Household characteristics

Percent distribution of households and de jure population by housing characteristics, percentage using solid fuel for cooking, and percentage using clean fuel for cooking, according to residence, Pakistan MMS 2019

Housing characteristic	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Electricity						
Yes	99.3	90.5	93.9	99.3	90.6	93.8
No	0.7	9.5	6.1	0.7	9.4	6.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Flooring material						
Earth/sand	8.2	51.4	34.9	8.8	52.3	36.4
Dung	0.5	4.3	2.9	0.5	4.0	2.7
Wood/planks	0.0	0.0	0.0	0.0	0.1	0.0
Ceramic tiles	3.8	1.1	2.1	3.5	1.1	2.0
Cement	55.8	29.5	39.5	55.9	28.9	38.8
Carpet	1.2	0.6	0.8	1.2	1.0	1.1
Chips/terrazzo	8.8	2.0	4.6	8.6	1.8	4.3
Bricks	4.9	5.5	5.3	4.9	5.4	5.2
Mats	0.7	0.7	0.7	0.8	0.9	0.9
Marble	16.1	4.7	9.1	15.6	4.5	8.6
Other	0.1	0.1	0.1	0.0	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Rooms used for sleeping						
One	34.8	43.0	39.8	26.2	33.2	30.7
Two	41.9	37.1	38.9	40.7	36.8	38.2
Three or more	23.2	19.8	21.1	33.0	29.9	31.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Place for cooking						
In the house	93.2	92.4	92.7	93.6	92.6	93.0
In a separate building	6.2	6.0	6.1	6.0	6.3	6.2
Outdoors	0.2	1.1	0.8	0.2	1.0	0.7
No food cooked in household	0.4	0.5	0.5	0.2	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Cooking fuel						
Electricity	0.3	0.2	0.2	0.2	0.1	0.2
LPG/natural gas/biogas	86.0	25.9	48.9	85.0	24.7	46.8
Coal/lignite	0.1	0.1	0.1	0.1	0.1	0.1
Charcoal	0.6	1.6	1.2	0.6	1.6	1.2
Wood	10.4	50.1	34.9	11.4	53.0	37.8
Straw/shrubs/grass	0.2	2.6	1.7	0.3	2.7	1.9
Agricultural crop	1.0	9.7	6.4	1.0	8.9	6.0
Animal dung	1.1	9.5	6.3	1.2	8.7	6.0
No food cooked in household	0.4	0.5	0.5	0.2	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using solid fuel for cooking[1]	13.4	73.5	50.5	14.6	75.0	52.9
Percentage using clean fuel for cooking[2]	86.2	26.0	49.1	85.2	24.8	46.9
Number of households/population	4,009	6,470	10,479	25,574	44,346	69,920

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
LPG = Liquefied petroleum gas
[1] Includes coal/lignite, charcoal, wood, straw/shrubs/grass, agricultural crops, and animal dung
[2] Includes electricity and LPG/natural gas/biogas

Table 2.7 Household possessions

Percentage of households possessing various household effects, means of transportation, and livestock/farm animals, by residence, Pakistan MMS 2019

	Residence		
Possession	Urban	Rural	Total
Household effects			
Radio	2.6	6.3	4.9
Television	83.9	47.9	61.7
Mobile phone	97.8	92.4	94.5
Watch	60.7	51.4	54.9
Non-mobile telephone	6.2	1.8	3.5
Computer	19.5	5.7	11.0
Refrigerator	75.2	45.2	56.6
Almirah/cabinet	76.7	44.6	56.9
Chair	64.5	45.8	53.0
Room cooler	23.2	13.3	17.1
Air conditioner	17.0	3.6	8.8
Washing machine	81.8	44.9	59.1
Water pump	68.4	46.2	54.7
Bed	77.8	56.1	64.4
Clock	81.3	53.1	63.9
Sofa	50.0	27.2	35.9
Camera	5.9	2.4	3.7
Sewing machine	70.2	54.5	60.5
Internet connection	15.9	2.7	7.7
Means of transport			
Bicycle	15.9	14.6	15.1
Animal-drawn cart	2.2	9.6	6.7
Motorcycle/scooter	63.6	50.5	55.5
Car/truck	10.7	5.3	7.4
Tractor	0.6	3.7	2.5
Boat without a motor	0.0	0.1	0.1
Rickshaw/chingchi	3.0	2.1	2.4
Ownership of farm animals[1]	13.8	59.4	42.0
Number	4,009	6,470	10,479

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[1] Cows, bulls, other cattle, horses, donkeys, mules, goats, sheep, camels, chickens, or other poultry

---

Table 2.8 Wealth quintiles

Percent distribution of the de jure population by wealth quintiles, and the Gini coefficient, according to residence and region, Pakistan MMS 2019

	Wealth quintile						Number of persons	Gini coefficient
Residence/region	Lowest	Second	Middle	Fourth	Highest	Total		
Residence								
Urban	3.3	7.7	18.6	29.2	41.3	100.0	25,423	0.16
Rural	29.5	27.0	20.8	14.8	8.0	100.0	44,950	0.29
Region								
Punjab[1]	11.1	18.6	21.5	22.3	26.3	100.0	35,177	0.21
Urban	0.7	5.9	17.4	26.0	49.9	100.0	12,891	0.14
Rural	17.2	26.0	23.9	20.2	12.7	100.0	22,286	0.23
Sindh	33.1	11.8	13.6	21.5	20.0	100.0	16,506	0.35
Urban	4.4	7.1	18.0	35.7	34.8	100.0	9,303	0.18
Rural	70.2	17.8	7.9	3.1	0.9	100.0	7,203	0.32
Khyber Pakhtunkhwa[2]	18.1	33.2	24.8	14.7	9.1	100.0	13,810	0.30
Urban	5.9	12.4	21.7	25.9	34.2	100.0	2,004	0.21
Rural	20.2	36.7	25.3	12.9	4.9	100.0	11,806	0.29
Balochistan	44.9	20.3	16.9	13.0	5.0	100.0	4,880	0.30
Urban	17.8	23.1	30.2	17.6	11.2	100.0	1,224	0.23
Rural	53.9	19.3	12.5	11.4	2.9	100.0	3,656	0.30
Total[3]	20.0	20.0	20.0	20.0	20.0	100.0	70,373	0.28
Azad Jammu and Kashmir	6.8	22.2	31.8	27.6	11.7	100.0	9,613	0.20
Urban	1.0	8.9	23.8	38.2	28.2	100.0	1,606	0.15
Rural	7.9	24.9	33.4	25.4	8.4	100.0	8,006	0.20
Gilgit Baltistan	24.7	44.7	22.3	6.0	2.3	100.0	8,312	0.25

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 2.9 Availability of services in rural areas

Percent distribution of rural households by distance to selected services from their communities, Pakistan MMS 2019

Service	Number of kilometres to service						Total	Number
	In community[1]	1-4 km	5-9 km	10+ km	Don't know/ missing	Distance not asked		
Administrative services								
District headquarters	0.2	2.5	5.3	91.6	0.5	na	100.0	89,527
Post office	20.2	21.6	20.8	35.9	1.5	na	100.0	89,527
Courier services	4.9	12.5	17.6	61.2	3.8	na	100.0	89,527
Bank	11.8	17.9	19.0	48.5	2.8	na	100.0	89,527
NADRA office	1.8	6.6	15.9	71.7	4.1	na	100.0	89,527
Public call office	9.1	na	na	na	na	90.9	100.0	89,527
Health services								
Hospital	7.4	14.3	20.3	54.3	3.6	na	100.0	89,527
Functioning basic health unit	16.5	31.7	26.5	24.1	1.2	na	100.0	89,527
Rural health centre	6.3	14.2	19.3	53.8	6.3	na	100.0	89,527
Functioning government dispensary	15.5	24.2	22.2	34.8	3.3	na	100.0	89,527
Functioning MCH centre	5.9	15.9	17.0	56.4	4.8	na	100.0	89,527
Female doctor	8.5	17.1	21.7	49.7	3.0	na	100.0	89,527
Private doctor	12.9	18.1	21.8	44.4	2.8	na	100.0	89,527
Dispenser/compounder	39.2	26.1	16.1	16.7	2.0	na	100.0	89,527
Family welfare centre	10.3	13.5	22.0	49.9	4.3	na	100.0	89,527
Hakeem	16.2	12.5	19.6	48.1	3.6	na	100.0	89,527
Dai	51.1	18.4	11.1	17.9	1.4	na	100.0	89,527
Homeopath	12.1	12.7	16.5	55.2	3.6	na	100.0	89,527
Any ambulance service	9.3	12.6	17.9	56.2	3.9	na	100.0	89,527
Ultrasound service	8.3	12.9	19.2	56.1	3.6	na	100.0	89,527
Medical store	35.1	19.1	17.6	27.5	0.7	na	100.0	89,527
Transportation services								
Motorised public transport	64.6	14.9	8.9	10.4	1.2	na	100.0	89,527
Non-motorised public transport	60.3	8.8	6.0	11.3	13.6	na	100.0	89,527
Educational services								
Primary school for boys	84.9	11.0	2.9	1.0	0.1	na	100.0	89,527
Primary school for girls	79.7	11.6	4.9	3.1	0.6	na	100.0	89,527
Secondary school for boys	37.5	22.1	18.7	19.4	2.2	na	100.0	89,527
Secondary school for girls	30.6	22.0	19.8	25.2	2.3	na	100.0	89,527
Degree college for boys or girls	3.5	10.9	17.4	63.6	4.5	na	100.0	89,527
Basic infrastructure services								
Wastewater drainage scheme	14.5	na	na	na	na	85.5	100.0	89,527
Sewerage system	11.0	na	na	na	na	89.0	100.0	89,527
Drinking water scheme	26.4	na	na	na	na	73.6	100.0	89,527
Television signal/service	86.0	na	na	na	na	14.0	100.0	89,527
Cable television connections	35.9	na	na	na	na	64.1	100.0	89,527
Land-line telephone service	30.7	na	na	na	na	69.3	100.0	89,527
Mobile telephone coverage	93.4	na	na	na	na	6.6	100.0	89,527
Electricity	93.8	na	na	na	na	6.2	100.0	89,527
Gas connection	17.6	na	na	na	na	82.4	100.0	89,527
General store or shop	74.5	9.3	6.8	9.2	0.2	na	100.0	89,527

Note: Table is based on community profile of rural clusters.
na = Not applicable
NADRA = National Database and Registration Authority
MCH = Maternal and Child Health
[1] Includes responses of "0" kilometres

Table 2.10 Background characteristics of respondents

Percent distribution of ever-married women age 15-49 by selected background characteristics, Pakistan MMS 2019

Background characteristic	Pakistan			Azad Jammu and Kashmir			Gilgit Baltistan		
	Weighted percent	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number
Age									
15-19	5.1	604	633	2.5	41	37	4.7	55	47
20-24	15.5	1,839	1,828	12.9	215	196	15.6	183	190
25-29	21.0	2,486	2,459	18.3	305	310	21.8	257	248
30-34	18.0	2,139	2,176	19.0	317	321	17.0	200	197
35-39	16.8	1,987	1,963	18.3	304	319	15.3	181	190
40-44	12.1	1,432	1,411	15.0	249	248	13.5	159	162
45-49	11.6	1,373	1,389	14.1	234	235	12.2	143	144
Marital status									
Married	95.2	11,290	11,382	95.2	1,586	1,581	97.0	1,143	1,142
Divorced/separated	1.8	214	156	2.3	38	32	0.6	7	7
Widowed	3.0	355	321	2.5	42	53	2.4	28	29
Residence									
Urban	37.0	4,386	5,540	16.1	269	777	17.2	203	309
Rural	63.0	7,473	6,319	83.9	1,397	889	82.8	975	869
Education									
No education	51.7	6,131	6,477	28.3	471	405	50.1	590	573
Primary[1]	17.8	2,108	1,770	19.0	317	296	11.3	133	140
Middle[2]	7.7	912	823	18.5	308	296	10.9	129	127
Secondary[3]	10.4	1,239	1,222	16.9	282	298	13.5	159	156
Higher[4]	12.4	1,469	1,567	17.3	288	371	14.2	167	182
Wealth quintile									
Lowest	18.0	2,139	2,395	5.9	98	64	22.5	265	260
Second	19.3	2,289	2,286	22.2	370	289	44.9	529	509
Middle	19.7	2,333	2,231	32.5	541	497	23.4	276	293
Fourth	21.1	2,501	2,267	27.6	460	523	6.7	79	89
Highest	21.9	2,597	2,680	11.9	198	293	2.4	28	27
Region									
Punjab[5]	53.2	6,308	4,387	na	na	na	na	na	na
Urban	20.1	2,379	2,089	na	na	na	na	na	na
Rural	33.1	3,929	2,298	na	na	na	na	na	na
Sindh	22.7	2,697	2,857	na	na	na	na	na	na
Urban	12.5	1,488	1,356	na	na	na	na	na	na
Rural	10.2	1,209	1,501	na	na	na	na	na	na
Khyber Pakhtunkhwa[6]	19.2	2,271	2,836	na	na	na	na	na	na
Urban	2.9	342	1,259	na	na	na	na	na	na
Rural	16.3	1,929	1,577	na	na	na	na	na	na
Balochistan	4.9	582	1,779	na	na	na	na	na	na
Urban	1.5	177	836	na	na	na	na	na	na
Rural	3.4	406	943	na	na	na	na	na	na
Total	100.0	11,859	11,859	100.0	1,666	1,666	100.0	1,178	1,178

na = Not applicable
[1] Primary refers to classes 1-5.
[2] Middle refers to classes 6-8.
[3] Secondary refers to classes 9-10.
[4] Higher refers to classes 11 and above.
[5] Punjab includes ICT.
[6] Khyber Pakhtunkhwa includes the merged districts of former FATA.

Table 2.11 Educational attainment

Percent distribution of ever-married women age 15-49 by highest level of schooling completed, and median years completed, according to background characteristics, Pakistan MMS 2019

Background characteristic	Highest level of schooling					Total	Median years completed	Number of women
	No education	Primary[1]	Middle[2]	Secondary[3]	Higher[4]			
Age								
15-24	48.8	20.4	9.4	11.7	9.7	100.0	1.1	2,443
15-19	51.3	23.7	12.0	9.8	3.1	100.0	0.0	604
20-24	48.0	19.3	8.5	12.3	11.9	100.0	1.4	1,839
25-29	44.3	16.7	9.9	12.0	17.2	100.0	3.6	2,486
30-34	45.2	21.3	7.6	10.3	15.5	100.0	2.7	2,139
35-39	55.6	16.4	7.1	9.6	11.3	100.0	0.0	1,987
40-44	59.1	15.0	4.7	10.9	10.3	100.0	0.0	1,432
45-49	66.9	14.4	4.8	6.5	7.3	100.0	0.0	1,373
Residence								
Urban	33.6	17.4	10.4	16.9	21.7	100.0	4.9	4,386
Rural	62.3	18.0	6.1	6.6	6.9	100.0	0.0	7,473
Wealth quintile								
Lowest	91.2	6.9	1.1	0.6	0.2	100.0	0.0	2,139
Second	73.8	18.3	3.9	2.4	1.5	100.0	0.0	2,289
Middle	57.1	25.3	7.5	5.9	4.2	100.0	0.0	2,333
Fourth	32.0	23.6	12.8	18.6	12.9	100.0	4.6	2,501
Highest	13.7	13.9	11.7	21.8	38.8	100.0	9.4	2,597
Region								
Punjab[5]	41.7	22.0	9.8	11.4	15.0	100.0	3.8	6,308
Urban	27.2	20.4	11.9	16.7	23.9	100.0	6.5	2,379
Rural	50.5	23.0	8.6	8.3	9.6	100.0	0.0	3,929
Sindh	57.1	13.4	5.4	11.9	12.2	100.0	0.0	2,697
Urban	36.5	14.7	8.4	19.8	20.5	100.0	4.9	1,488
Rural	82.4	11.8	1.7	2.2	1.9	100.0	0.0	1,209
Khyber Pakhtunkhwa[6]	66.8	13.3	5.0	7.5	7.4	100.0	0.0	2,271
Urban	48.5	11.9	9.5	12.3	17.8	100.0	1.8	342
Rural	70.0	13.6	4.3	6.6	5.6	100.0	0.0	1,929
Balochistan	76.2	9.6	5.2	4.5	4.5	100.0	0.0	582
Urban	66.5	10.0	7.9	5.4	10.2	100.0	0.0	177
Rural	80.4	9.5	4.1	4.0	2.0	100.0	0.0	406
Total[7]	51.7	17.8	7.7	10.4	12.4	100.0	0.0	11,859
Azad Jammu and Kashmir	28.3	19.0	18.5	16.9	17.3	100.0	6.2	1,666
Urban	16.3	16.0	17.2	18.6	32.1	100.0	8.2	269
Rural	30.6	19.6	18.8	16.6	14.4	100.0	5.0	1,397
Gilgit Baltistan	50.1	11.3	10.9	13.5	14.2	100.0	0.0	1,178

[1] Primary refers to classes 1-5.
[2] Middle refers to classes 6-8.
[3] Secondary refers to classes 9-10.
[4] Higher refers to classes 11 and above.
[5] Punjab includes ICT.
[6] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[7] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

ADULT AND MATERNAL MORTALITY

3

Key Findings

- **Adult mortality:** During the 3 years before the survey, the mortality rate among women age 15-49 was 1.72 per 1,000 persons, and the mortality rate among men age 15-49 was 2.48 per 1,000. The mortality rate in the 15-49 age bracket is almost 50% higher among men than women.

- **Life expectancy:** A newborn child in Pakistan in 2019 is expected to reach age 65.4. A newborn girl is expected to live approximately 2 years longer (66.5 years) than a newborn boy (64.3 years).

- **Maternal mortality ratio:** The maternal mortality ratio for the 3 years preceding the survey is estimated at 186 maternal deaths per 100,000 live births.

- **Pregnancy-related mortality ratio:** The pregnancy-related mortality ratio is 255 overall, 188 in Azad Jammu and Kashmir, and 202 in Gilgit Baltistan.

A dult and maternal mortality indicators can be used to assess the health status of a population. Mortality indicators are also used to estimate the life expectancy of the population and subsequently to assess the country's level of development. The issue of reproductive health care, particularly health care during pregnancy, childbirth, and the postpartum period, has been of major concern to governments in most developing countries, and Pakistan is no exception.

Maternal mortality represents one of the largest and most persistent gaps in health indicators between developed and developing countries. The maternal mortality ratio (MMR), which is the ratio of maternal deaths per 100,000 live births, is several times higher in some developing countries than in the developed countries of Northern Europe (Abou Zahr and Wardlaw 2004). The MMR is believed to be the most sensitive indicator of women's health status in a society and of the quality and accessibility of maternal health services available to women. A maternal death is not merely a result of treatment failure; rather, it is the final outcome of a complex interplay among a myriad of social, cultural, and economic factors. Therefore, maternal mortality is widely recognised as a key human rights issue (Rosenfield et al. 2006). In the vast majority of cases, a maternal death reflects the failure of society to look after the life and health of its mothers.

The Sustainable Development Goals (SDGs) include the MMR as a target of Goal 3 (ensuring healthy lives and promoting well-being for all at all ages), with an aim of reducing the global MMR to less than 70 maternal deaths per 100,000 live births by 2030. Many experts believe that it is possible to achieve this target in a majority of developing countries where the MMR is currently higher than 100 by increasing access to high-quality skilled birth attendance and emergency obstetric care (Campbell and Graham 2006).

3.1   MORTALITY RATES

The crude death rate (number of deaths per 1,000 population in a given year) is not considered an appropriate indicator of a country's health status, as this rate is usually higher in developed and higher income countries due to their having a larger proportion of the elderly in the population. Age-specific mortality rates (ASMRs), on the other hand, provide a more precise picture of the health and mortality indicators of a country. ASMRs are also used to generate life tables, which estimate life expectancy at birth and in subsequent age groups.

Table 3.1 presents overall age-specific mortality rates by sex for Pakistan (excluding Azad Jammu and Kashmir and Gilgit Baltistan). The first row reflects the mortality rate among infants (less than age 1), which is considerably higher among boys than girls. However, the mortality rate among children age 1-4 is slightly higher among females. Mortality rates are higher among males in the young adult and middle-age groups with the exception of the 35-39 and 60-64 groups, where female mortality is slightly higher than male mortality. In the older age groups (75-79 and 80 or above), female mortality substantially exceeds male mortality. After taking into consideration possible errors in age reporting, the distribution of age-specific mortality rates reflects lower mortality overall among females than males, resulting in higher female life expectancy at birth. The mortality rate in the 15-49 age bracket is almost 50% higher among males than females; the overall mortality rate for all ages (roughly corresponding to the crude death rate) is also higher among males. Correspondingly, the probability of death (q) in the 15-49 and 15-60 age groups is also higher among males than females.

Figure 3.1 also depicts age-specific mortality rates among females and males. As expected, a high risk of death is observed in early childhood, dropping to a minimum at age 10-14 and then rising steadily into older ages. As a general rule, mortality rates start to increase rapidly beyond approximately age 40. In Pakistan, mortality rates increase rapidly after age 65. Male mortality rates are slightly higher than female mortality rates, and the most prominent differences are between the 15-19 and 55-54 age groups. The overall mortality rate is 22% higher among males than females (8.11 versus 6.63 per 1,000 population).

Figure 3.1 Age-specific mortality rates in the 3 years preceding the survey by sex (log scale)
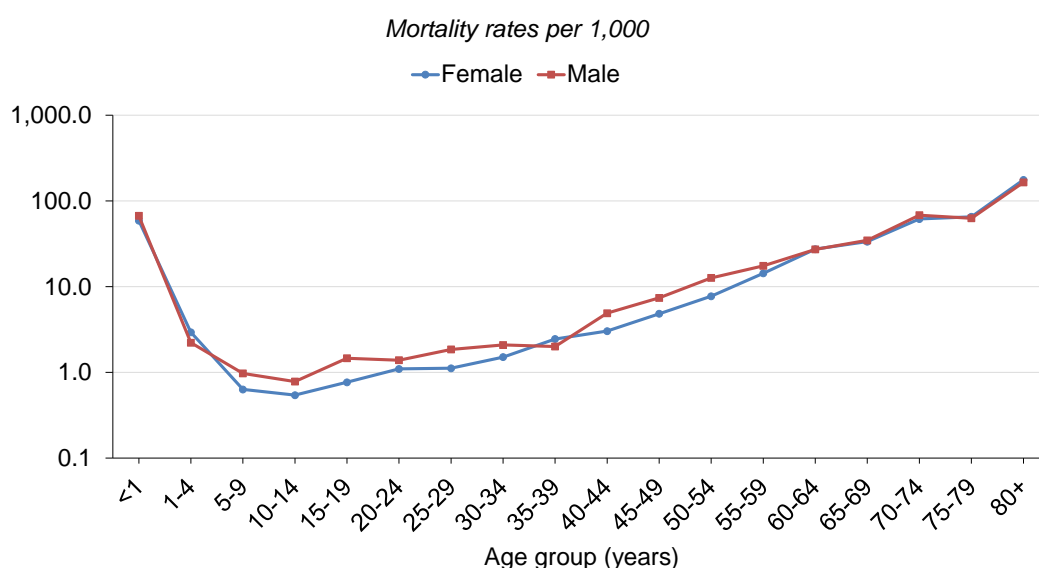
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Patterns by background characteristics

- Age-specific mortality rates are generally higher in rural areas than urban areas among women and men less than age 45, but the reverse is true among those above age 45 (**Figure 3.2**).

Figure 3.2 Age-specific mortality rates in the 3 years preceding the survey by residence (log scale)

Mortality rates per 1,000
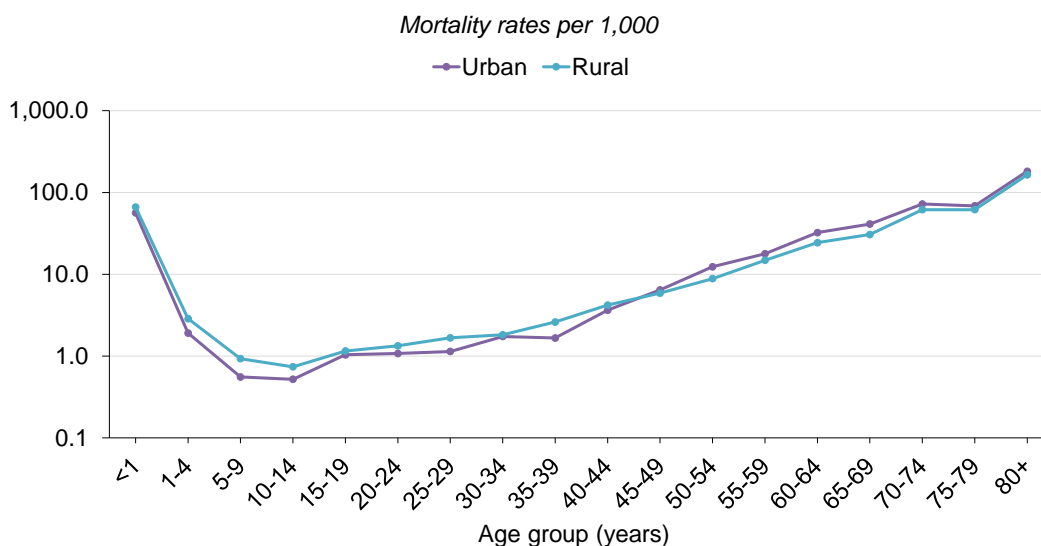
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

- Mortality rates among infants are higher in Punjab and Sindh than in Khyber Pakhtunkhwa. Mortality rates in Punjab and Sindh are similar across age groups, while rates in Khyber Pakhtunkhwa are generally lower than those in Punjab and Sindh among women and men age 45 and above (**Table 3.2**).

- Mortality rates among infants and in most age groups above 45-49 are somewhat lower in Balochistan than in the other regions (**Figure 3.3**).

Figure 3.3 Age-specific mortality rates in the 3 years preceding the survey by region (log scale)

Mortality rates per 1,000
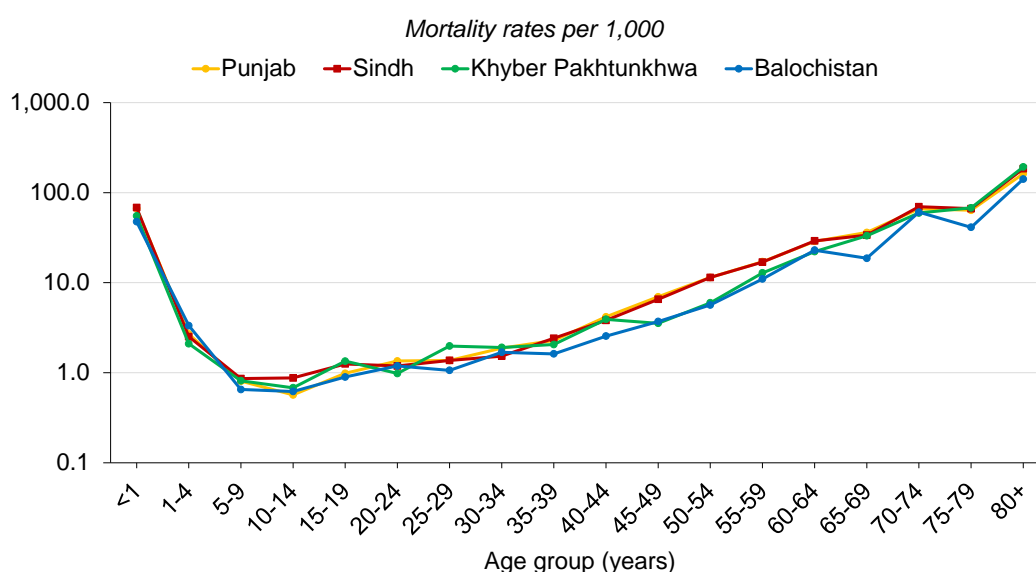
- Mortality rates are typically lower in Azad Jammu and Kashmir and Gilgit Baltistan than in other areas of Pakistan from age 35-39 to age 70-74.

- The mortality rate among infants is higher in Gilgit Baltistan than in Azad Jammu and Kashmir. In most subsequent age groups, however, rates are lower in Gilgit Baltistan.

3.2   REPRODUCTIVE AGE MORTALITY

Reproductive age mortality rate
The number of adult deaths in the 15-49 age group per 1,000 population age 15-49 is calculated directly from death and census data collected through the short questionnaire administered to each household.

Age-specific mortality rates are higher in rural areas than urban areas for all ages up to age 40-44 (**Table 3.2**). In all subsequent age groups, however, rural mortality rates are lower than urban rates. Further exploration of the data is needed to determine the reasons for this apparent anomaly. It could be due to reporting errors in the ages of deceased persons in rural areas. This phenomenon is also reflected in the mortality rate for the 15-49 age group and the overall rate for all ages (roughly corresponding to the crude death rate for the population), although the differences as a whole are not large. Both rates are highest in Punjab followed by Sindh, Khyber Pakhtunkhwa, and Balochistan. Two summary measures of adult mortality are also highlighted. The overall mortality rate for Pakistan is 7.37 per 1,000 persons, and the overall rate for the 15-49 age group is 2.07.

Patterns by background characteristics

- The mortality rate for the 15-49 age group and the overall mortality rate for all ages (roughly corresponding to the crude death rate for the population) are higher in Azad Jammu and Kashmir than Gilgit Baltistan (**Figure 3.4**).

Figure 3.4 **Age-specific mortality rates in the 3 years preceding the survey in Azad Jammu and Kashmir and Gilgit Baltistan (log scale)**

Mortality rates per 1,000
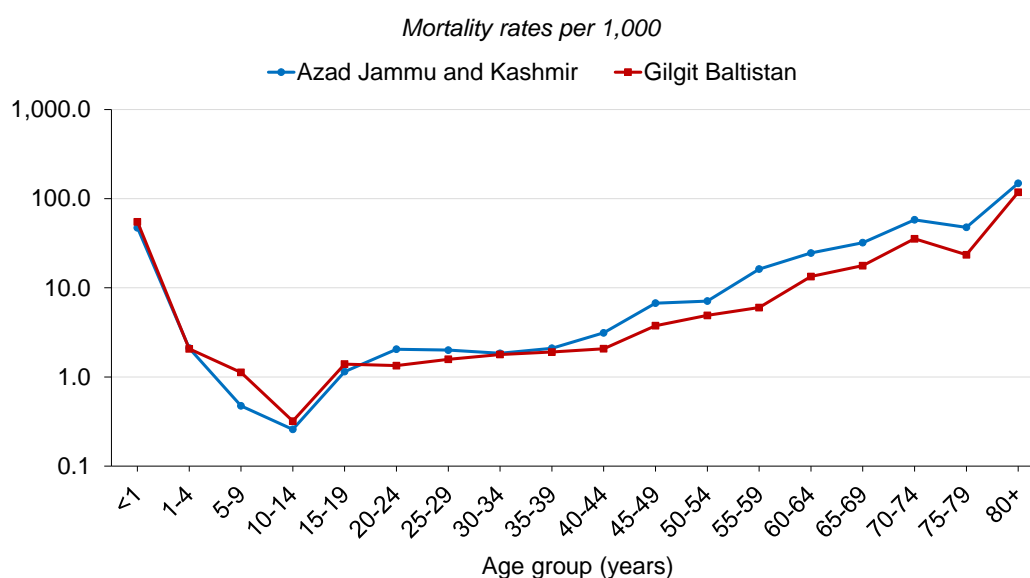
- The rapid increase in the mortality rate beyond age 50 reflects not only the health status of persons in Azad Jammu and Kashmir and Gilgit Baltistan but also the availability of health services in remote areas.

Table 3.3.1 and **Table 3.3.2** show female and male mortality rates by age, residence, and region and two summary measures of adult mortality.

In Pakistan, mortality is higher among males than females in almost every age group. The mortality rate is higher among rural females than urban females up to age 49, but this pattern is reversed at age 50 and above (**Figure 3.5**). Rural males below age 30 have a higher probability of dying than their urban counterparts, but the reverse is true at age 30 and above (**Table 3.3.2** and **Figure 3.6**). Mortality is higher among males than females in all regions, with the largest difference in Azad Jammu and Kashmir (**Figure 3.7**).

Figure 3.5 **Age-specific female mortality rates in the 3 years preceding the survey by residence (log scale)**
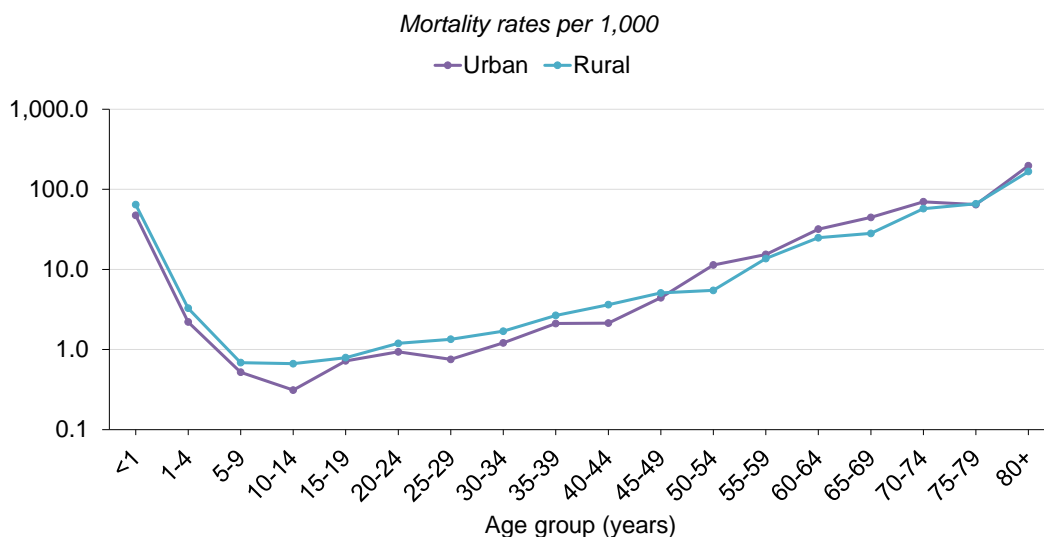
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Figure 3.6 **Age-specific male mortality rates in the 3 years preceding the survey by residence (log scale)**
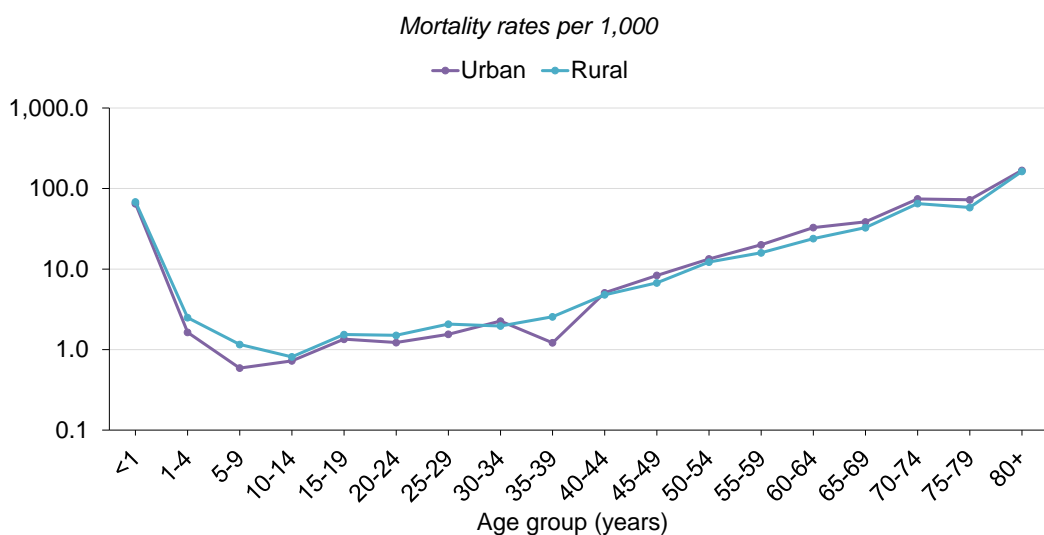
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Figure 3.7 Crude mortality rates in the 3 years preceding the survey by sex and region
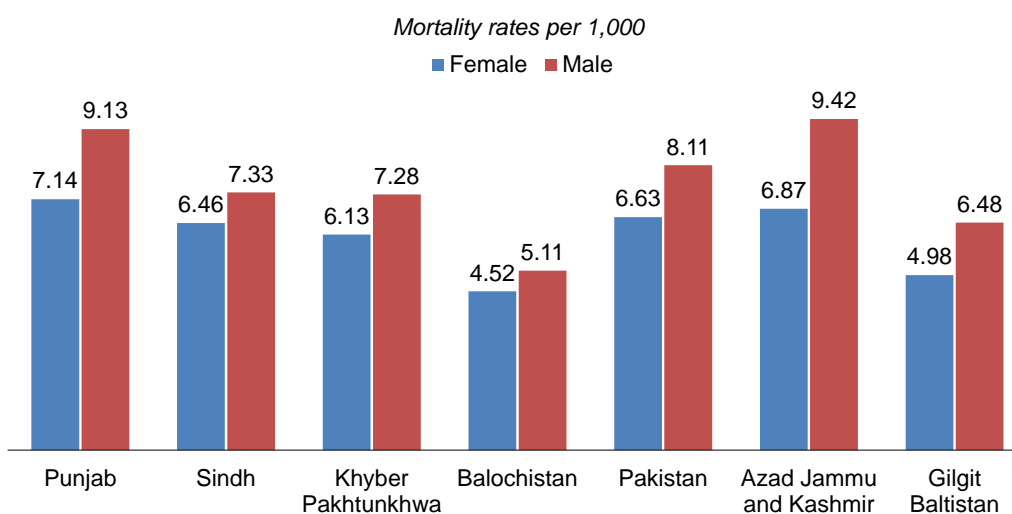
Mortality rates per 1,000

Note: Pakistan total excludes Azad Jammu and Kashmir and Gilgit Baltistan

Patterns by background characteristics

▪ Mortality rates in Punjab and Sindh are similar across almost all age groups, while rates in Khyber Pakhtunkhwa are generally lower than in Punjab and Sindh at age 45 and above.

▪ Balochistan has lower mortality than most regions at age 40 and above. Mortality rates in each age group in Azad Jammu and Kashmir and Gilgit Baltistan are generally lower than in the other regions.

▪ Mortality rates for females and males are consistently lower in Gilgit Baltistan than in Azad Jammu and Kashmir with the exception of the younger age groups.

3.3 TRENDS IN ADULT MORTALITY

Table 3.4 shows deaths, person-years of exposure, and mortality rates by 5-year age groups, residence, and region for the 3 years preceding the survey. In Pakistan, mortality in the 15-49 age group is 44% higher among males than females. The overall mortality rate for females age 15-49 is 1.72 per 1,000 persons, and the overall rate for males age 15-49 is 2.48 per 1,000 persons. Male mortality rates are much higher than female mortality rates in every age group other than the 35-39 group, and the most pronounced difference is in the 15-19 age group, in which the male mortality rate is 90% higher than the female rate. Mortality rates among women increase from 0.77 in the 15-19 age group to 4.83 in the 45-49 age group; among men, mortality rates increase from 1.46 in the 15-19 age group to 7.41 in the 45-49 age group (**Figure 3.8**). The higher mortality among men could be attributed to some extent to men being more involved in activities outside of the house and being exposed to more risks.

Figure 3.8 All-cause adult mortality rates in the 3 years preceding the survey by sex and age
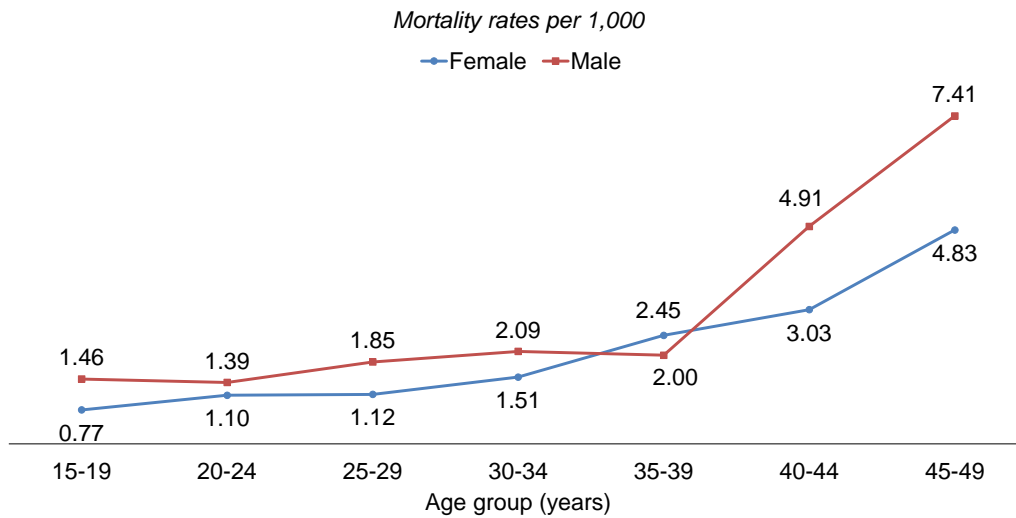
Mortality rates per 1,000

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Patterns by background characteristics

- With regard to patterns by residence, mortality rates are higher in rural areas than in urban areas. Rural females have higher mortality rates than urban females (1.89 versus 1.45) (**Figure 3.9**).

- Similarly, rural males have a higher probability of dying than their urban counterparts (2.51 versus 2.43).

Figure 3.9 All-cause adult mortality rates (15-49 years) in the 3 years preceding the survey by sex and residence

Mortality rates per 1,000
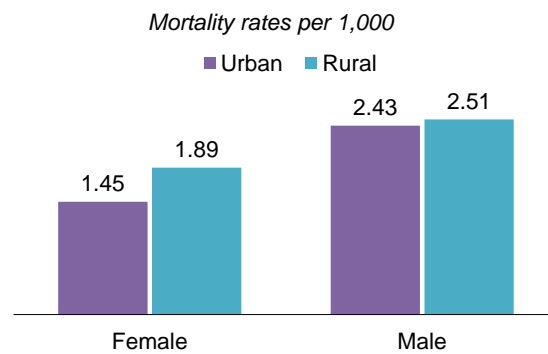
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

- In Punjab, Sindh, and Khyber Pakhtunkhwa, men age 15-49 have higher mortality rates than women age 15-49, while in Balochistan mortality among women and men is nearly identical (**Figure 3.10**).

Figure 3.10 All-cause adult mortality rates (15-49 years) in the 3 years preceding the survey by sex and region

Mortality rates per 1,000

■ Female ■ Male

Region	Female	Male
Punjab	1.81	2.64
Sindh	1.79	2.39
Khyber Pakhtunkhwa	1.45	2.43
Balochistan	1.52	1.50
Pakistan	1.72	2.48
Azad Jammu and Kashmir	1.79	3.06
Gilgit Baltistan	1.41	2.19
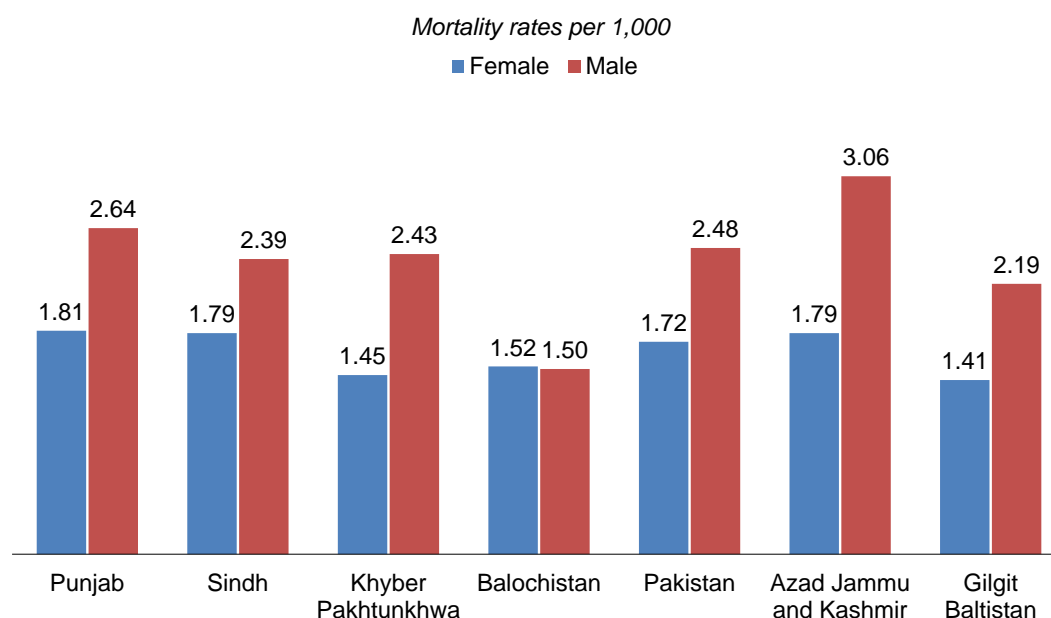
Note: Pakistan total excludes Azad Jammu and Kashmir and Gilgit Baltistan

- Mortality rates for males and females are higher in Azad Jammu and Kashmir than in Gilgit Baltistan.

3.4 LIFE EXPECTANCY

Table 3.5 presents Pakistan's life table for both sexes combined (excluding Azad Jammu and Kashmir and Gilgit Baltistan). Life expectancy at birth is 65.4 years (i.e., a newborn in Pakistan in 2019 can expect to reach age 65.4 if current age-specific mortality rates remain constant). A newborn girl is expected to live approximately 2 years longer (66.5 years) than a newborn boy (64.3 years) (**Figure 3.11**). The female life expectancy advantage in Pakistan is lower than the average female advantage of 5 years worldwide. Life expectancy at birth for both females and males has increased relative to 1998 census figures (63.0 years for females and 62.5 years for males) (NIPS and ICF International 2013).

Figure 3.11 Life expectancy according to sex

	Both sexes	Female	Male
	65.4	66.5	64.3
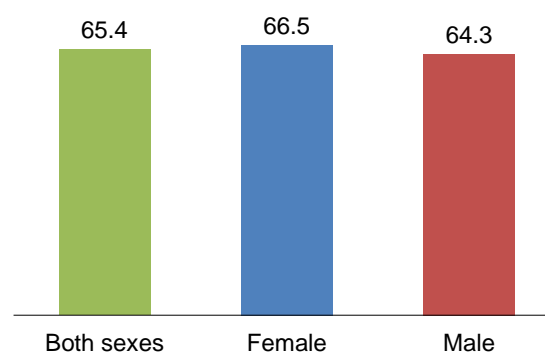
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Table 3.6 presents separate life tables for males and females, describing life expectancy at various ages. In all age groups up to age 50-54, life expectancy among women is about 1-2 years higher than life expectancy among men. However, from age 55-59 onward there is almost no difference in average years of remaining life. This might be due to the fact that women in older age groups are no longer protected by female hormones and share the same risk of death as men in terms of factors such as sedentary lifestyles, unhealthy dietary patterns, and co-morbidities such as diabetes and hypertension.

The number of females and males, from the beginning of the birth cohort as 100,000, starts to drop in the first two age intervals but remains fairly steady till age 45. From age 55-59 onward, the number of people alive at the start of each interval starts dropping more rapidly, with sharper decreases for males than females (**Figure 3.12**).

Figure 3.12 **Number of females and males living at the beginning of each age interval across the life span**
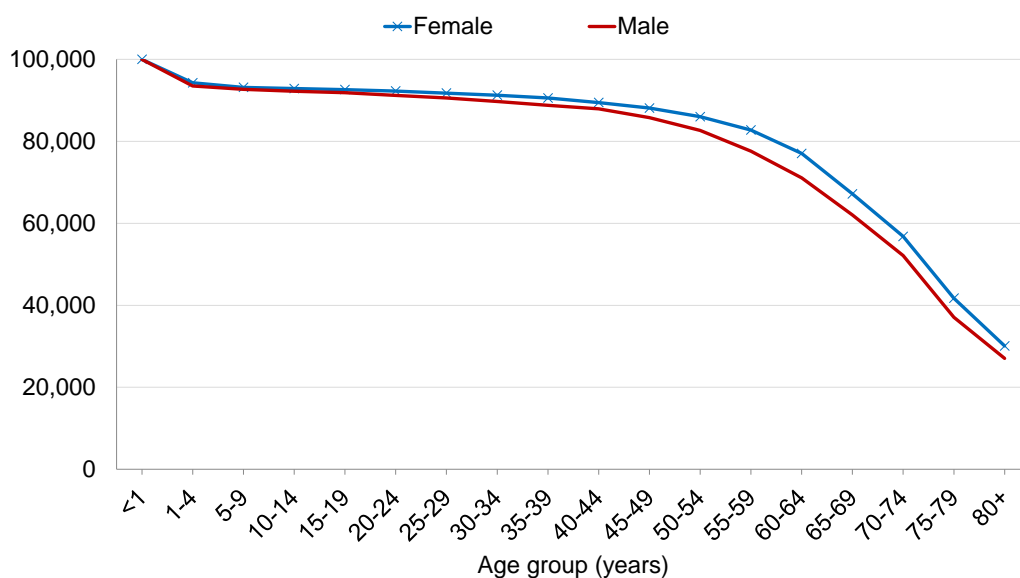
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

3.5   ESTIMATES OF PREGNANCY-RELATED AND MATERNAL MORTALITY

> **Difference between maternal mortality rate and maternal mortality ratio:**
> While the numerator is the same in both indicators (maternal deaths), the maternal mortality ratio (MMR) uses live births as the denominator and the maternal mortality rate uses the person-years lived by women of reproductive age (15-49 years) during the 3-year recall period for which maternal deaths were recorded.

> **Maternal mortality ratio:** The number of maternal deaths per 100,000 live births. The maternal mortality ratio is calculated by dividing the age-standardised maternal mortality rate for women age 15-49 in the 3 years preceding the survey by the general fertility rate (GFR) for the same time period. The MMR is calculated using two different methods: (1) by using the number of live births reported in the entire sample (referred to as the "direct method" in this report) and (2) by using an estimated number of live births from the GFR (referred to as the "indirect method" in this report).

Deaths among women of reproductive age (15-49 years) in the preceding 3 years were recorded via the Short Household Questionnaire. All households reporting a female death during that period were revisited to conduct a verbal autopsy to determine the cause of death. Completed Verbal Autopsy Questionnaires were then reviewed by panels of experts (senior obstetricians and general physicians) to determine causes of death as per the International Classification of Diseases (ICD-10) codes and to ascertain whether deaths met the ICD-10 definition of maternal deaths. The number of maternal deaths identified through this process was used to estimate the MMR, where the denominator was derived from the live births reported from the sample households during the 3 years preceding the survey. The MMR thus calculated is referred to as the "direct MMR" in this chapter. The number of live births used in the denominator to estimate the

MMR was also derived in another manner ("indirectly") by calculating the general fertility rate from women's pregnancy histories (which were recorded in the 10% subsample households through the Woman's Questionnaires), which was then used to estimate the number of live births.

Maternal deaths are a subset of all female deaths. They are defined as any death that occurred during pregnancy or childbirth or within 42 days after the birth or termination of a pregnancy. Maternal deaths do not include deaths due to accidents or violence (ICD-10 definition of maternal deaths). In the 2019 PMMS, the MMR was estimated directly from maternal deaths (identified through verbal autopsy interviews of the next of kin of deceased women) and live births reported in the household survey. A "pregnancy-related death" is defined as the death of a woman age 15-49 during pregnancy or childbirth/abortion or within 42 days of the termination of a pregnancy, regardless of the cause of death. Pregnancy-related deaths, therefore, may include incidental or accidental deaths.

Table 3.7 presents pregnancy-related mortality rates and ratios by age group, residence, and region. The pregnancy-related mortality rate for Pakistan is 0.31 per 1,000 person-years lived by women of reproductive age (15-49 years) during the last 3 years. This rate is lower in Azad Jammu and Kashmir (0.20) and Gilgit Baltistan (0.28). The age-adjusted pregnancy-related mortality ratio (PRMR) is 251 per 100,000 live births, with rates of 179 and 196 in Azad Jammu and Kashmir and Gilgit Baltistan, respectively. There are substantial differences in both indicators by region and residence. Note that in the table, the PRMR is calculated using an estimate of live births derived from the general fertility rate, which in turn is estimated from the pregnancy histories recorded in the Woman's Questionnaire (administered in a subsample). This method is used here in an effort to ensure that the current rates and ratios are comparable to those reported in the 2006-07 PDHS (NIPS and Macro International 2008).

Table 3.8 presents pregnancy-related mortality ratios calculated directly by using live births (reported in the entire sample at the household level) in the denominator. The pregnancy-related mortality ratio is 255 overall, 188 in Azad Jammu and Kashmir, and 202 in Gilgit Baltistan. There are sizable differences in pregnancy-related mortality ratios by urban/rural residence and region.

Patterns by background characteristics

▪ Age-specific pregnancy-related mortality ratios show the expected pattern of being low in the younger age groups, increasing in the early reproductive years and reaching a peak in the 40-44 age group, and then decreasing at age 45-49 as pregnancy and childbirth taper off.

- The PRMR is notably higher in the 15-19 age group than in 20-24 age group (**Figure 3.13**).

Figure 3.13 **Age-specific pregnancy-related mortality ratio trends, 2006-07 PDHS and 2019 PMMS**

Per 100,000 live births
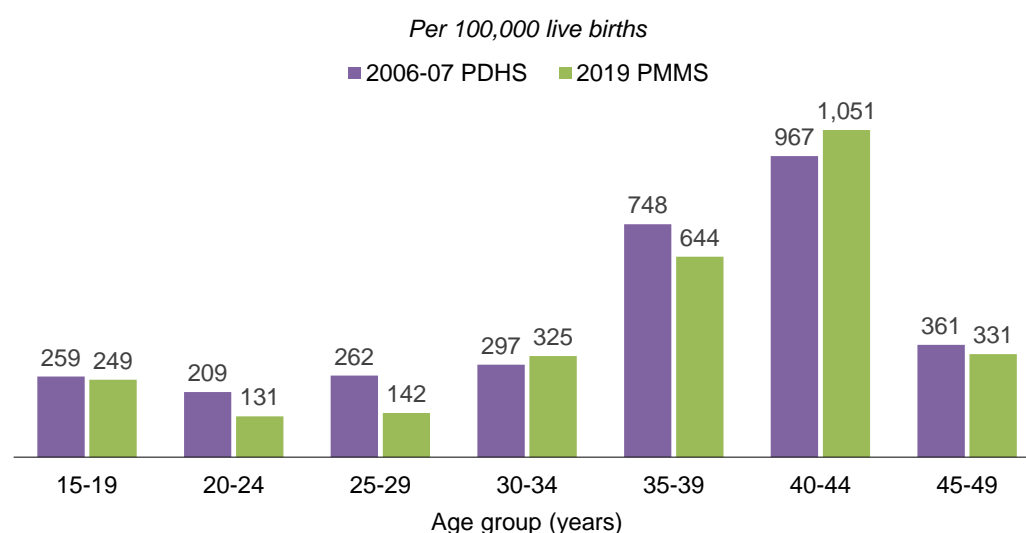
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

- The probability of pregnancy decreases substantially at older ages. Pregnancies at the older reproductive ages are riskier, resulting in higher mortality rates among women who become pregnant at older ages (**Figure 3.13**).

- By region, the pregnancy-related mortality ratio is lowest in Khyber Pakhtunkhwa (175) and highest in Balochistan (358) (**Figure 3.14**).

Figure 3.14 **Pregnancy-related mortality ratios by region**

Per 100,000 live births
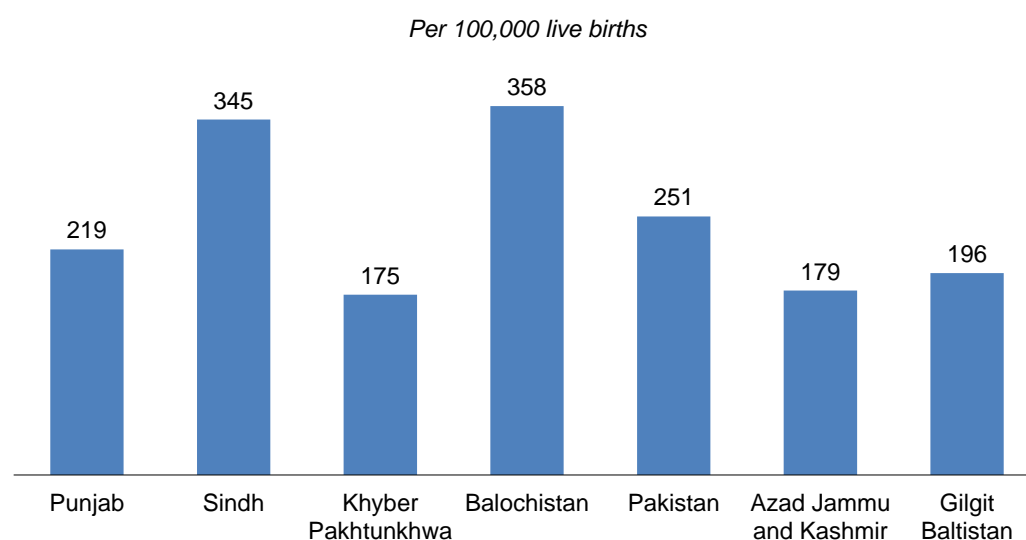
Note: Pakistan total excludes Azad Jammu and Kashmir and Gilgit Baltistan

Table 3.9 shows direct estimates of maternal mortality rates and ratios for the 3 years preceding the survey by 5-year age groups, residence, and region. The MMR is 186 in Pakistan, 104 in Azad Jammu and Kashmir, and 157 in Gilgit Baltistan. It is almost twice as high in Balochistan (298) as in Punjab (157). The MMR is 26% higher in rural areas than in urban areas.

Figure 3.15 compares the MMR in 2019 with the MMR in 2006-07. The MMR in 2019 is highest at age 35-39 (481) and lowest at age 20-24 (99). The maternal mortality ratio decreased substantially in five of the seven age groups from 2006-07 to 2019. There was a slight increase between the two surveys at age 30-34 and a more substantial increase in the oldest age group (45-49). In general, there was an overall decrease in the MMR between the 2006-07 PDHS and the 2019 PMMS, from 276 maternal deaths per 100,000 live births to 186 (for the 3 years preceding the survey), showing a one-third decline[1].

Figure 3.15 Age-specific maternal mortality ratio trends, 2006-07 PDHS and 2019 PMMS

Per 100,000 live births
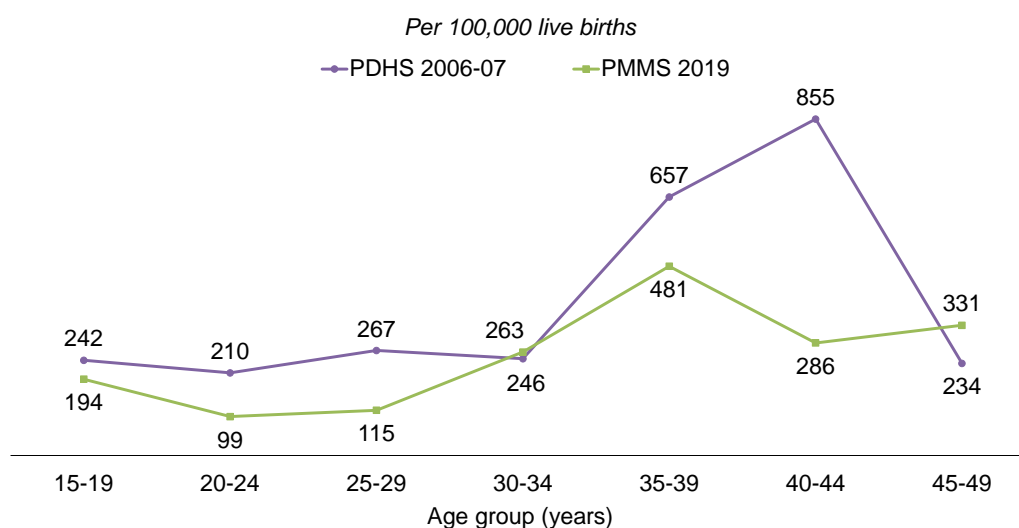
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Table 3.10 shows the total fertility rate, general fertility rate, maternal mortality ratio (with upper and lower confidence interval bounds), and lifetime risk of maternal death for the 3 years preceding the survey by urban-rural residence and region. Maternal mortality ratios (with 95% confidence intervals) are also shown in **Figure 3.16**. The MMR shown in the table is computed indirectly by using live births derived from the general fertility rate (as described above). The MMR for Pakistan overall is estimated at 186 (95% confidence interval: 138-234), which is higher than in Azad Jammu and Kashmir and Gilgit Baltistan. There are substantial differences in the MMR by region and urban/rural residence. The lifetime risk of maternal mortality is 0.007, which means that 1 in every 143 women in Pakistan will die due to complications during pregnancy, childbirth/abortion, or the postpartum period.

---

[1]This evidence of a decline does not take account of statistical uncertainty in the estimates from the two surveys.

Figure 3.16 **Maternal mortality ratios by region**

Maternal deaths per 100,000 live births

Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Pakistan	Azad Jammu and Kashmir	Gilgit Baltistan
235	299	246	466	234	185	261
157	224	165	298	186	104	157
79	148	84	130	138	23	53

Note: Pakistan total excludes Azad Jammu and Kashmir and Gilgit Baltistan
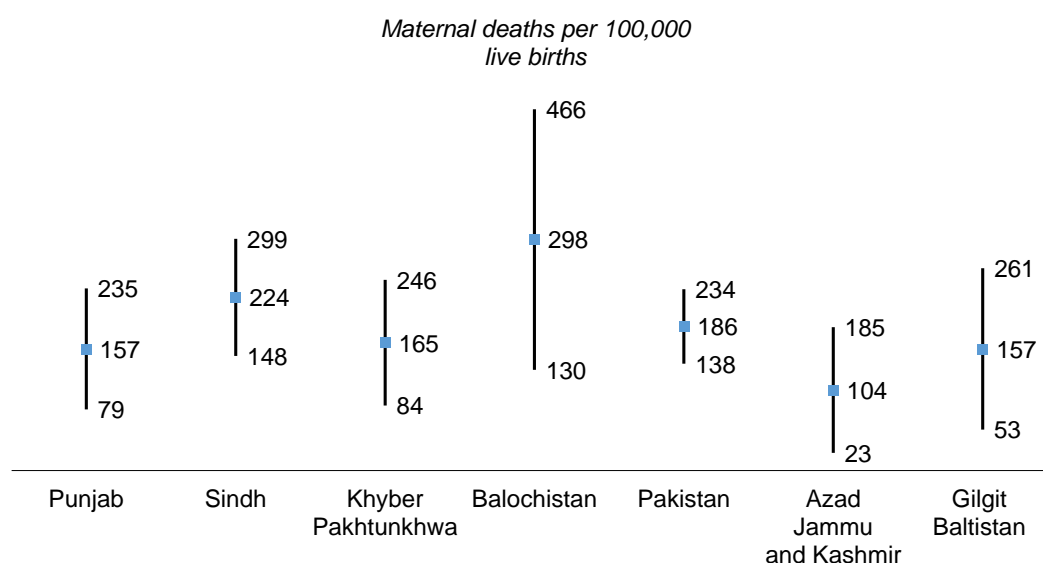
Patterns by background characteristics

- Urban-rural MMR estimates show a difference of 41 deaths per 100,000 live births, with a higher estimate in rural areas (199) than in urban areas (158).

- The 95% confidence intervals for all regions indicate that the MMR differences between regions are not statistically significant (**Figure 3.16**).

- The MMR is lowest in Punjab (157 per 100,000 live births), followed by Khyber Pakhtunkhwa (165 per 100,000 live births), Sindh (224 per 100,000 live births), and Balochistan (298 per 100,000 live births).

Table 3.11 shows maternal mortality ratios using the direct method (maternal deaths divided by live births from household birth records, as reported in the entire sample). The estimated MMR is 189 maternal deaths per 100,000 live births. The MMR is higher in rural areas (203 per 100,000 live births) than in urban areas (159 per 100,000 live births). Azad Jammu and Kashmir has a lower MMR (108 per 100,000 live births) than Gilgit Baltistan (162 per 100,000 live births). There are substantial regional MMR variations, ranging from 161 per 100,000 live births in Khyber Pakhtunkhwa to 317 per 100,000 live births in Balochistan.

LIST OF TABLES

For more information on adult and maternal mortality, see the following tables:

Table 3.1 Mortality rates by sex

Direct estimates of mortality rates (per 1,000 persons) from the household listing of usual members who died in the 3 years preceding the survey, according to sex, Pakistan MMS 2019

Age group	Females			Males		
	Deaths	Exposure years	Mortality rate	Deaths	Exposure years	Mortality rate
<1	1,855	31,442	59.00	2,233	33,248	67.17
1-4	343	116,917	2.94	279	125,440	2.22
5-9	88	139,430	0.63	145	148,800	0.97
10-14	67	123,614	0.54	100	128,370	0.78
15-19	90	117,365	0.77	169	115,300	1.46
20-24	110	100,449	1.10	124	89,522	1.39
25-29	101	90,591	1.12	146	79,032	1.85
30-34	103	68,283	1.51	134	64,327	2.09
35-39	150	61,286	2.45	115	57,463	2.00
40-44	136	44,828	3.03	221	44,956	4.91
45-49	200	41,395	4.83	303	40,846	7.41
50-54	255	32,958	7.74	423	33,427	12.67
55-59	381	26,629	14.31	503	28,756	17.51
60-64	535	19,538	27.40	639	23,469	27.22
65-69	472	14,078	33.52	605	17,415	34.76
70-74	509	8,248	61.66	737	10,793	68.26
75-79	347	5,300	65.44	399	6,341	62.86
80+	1,215	6,891	176.38	1,279	7,760	164.86
Total age 15-49	890	524,197	1.70	1,212	491,445	2.47
Total all ages	6,959	1,049,243	6.63	8,554	1,055,263	8.11
Probability of dying						
$_{35}q_{15}$[1]			71			100
$_{45}q_{15}$[2]			168			226

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan. Deaths are from the household listing of usual members who died in the 3 years preceding the survey (excluding the month of the interview); exposure is from usual members of the household and applicable exposure of members who died; deaths with missing age at death have been redistributed proportionately; and cases with missing age in the household schedule (assumed exposure) have been redistributed.
[1] The probability of dying between exact ages 15 and 50, expressed per 1,000 persons at age 15
[2] The probability of dying between exact ages 15 and 60, expressed per 1,000 persons at age 15

Table 3.2 Age-specific mortality rates by residence and region

Direct estimates of mortality rates (per 1,000 persons) from the household listing of usual members who died in the 3 years preceding the survey, according to residence and region, Pakistan MMS 2019

| | Residence | | Region | | | | | | |
| | Urban | Rural | Punjab[1] | Sindh | Khyber Pakhtun-khwa[2] | Balochistan | Total[3] | Azad Jammu and Kashmir | Gilgit Baltistan |
Age group									
<1	56.34	66.39	66.62	68.14	55.23	47.59	63.20	47.20	54.97
1-4	1.91	2.87	2.69	2.51	2.10	3.34	2.57	2.11	2.07
5-9	0.56	0.93	0.81	0.86	0.81	0.65	0.81	0.47	1.12
10-14	0.52	0.74	0.57	0.87	0.68	0.62	0.66	0.26	0.32
15-19	1.04	1.16	0.98	1.25	1.34	0.90	1.11	1.15	1.39
20-24	1.08	1.34	1.35	1.19	0.98	1.19	1.23	2.05	1.34
25-29	1.14	1.67	1.37	1.37	1.98	1.06	1.46	2.00	1.58
30-34	1.74	1.82	1.87	1.53	1.91	1.69	1.79	1.84	1.78
35-39	1.66	2.61	2.28	2.41	2.06	1.62	2.23	2.10	1.90
40-44	3.64	4.20	4.18	3.82	3.92	2.55	3.97	3.12	2.07
45-49	6.44	5.89	6.97	6.53	3.53	3.70	6.11	6.72	3.76
50-54	12.37	8.83	11.42	11.42	5.98	5.65	10.22	7.11	4.90
55-59	17.84	14.84	17.11	16.93	12.85	10.99	15.97	16.22	6.00
60-64	32.33	24.36	28.76	29.10	22.13	22.98	27.30	24.60	13.38
65-69	41.15	30.63	36.08	33.77	33.19	18.67	34.21	32.07	17.73
70-74	72.33	61.68	66.19	69.75	59.53	60.72	65.40	57.88	35.51
75-79	68.66	61.66	63.72	66.45	67.80	41.23	64.03	47.71	23.48
80+	181.92	164.79	162.58	184.36	192.78	141.22	170.28	148.86	118.11
Total age 15-49	1.92	2.17	2.18	2.08	1.91	1.50	2.07	2.33	1.77
Total all ages	7.06	7.55	8.13	6.91	6.70	4.82	7.37	8.07	5.72
Probability of dying									
$_{35}q_{15}$[4]	80	89	91	87	76	62	86	91	67
$_{45}q_{15}$[5]	210	191	212	208	159	137	198	191	116

Note: Deaths are from the household listing of usual members who died in the 3 years before the survey (excluding the month of the interview); exposure is from usual members of the household and applicable exposure of members who died; deaths with missing age at death have been redistributed proportionately; and cases with missing age in the household schedule (assumed exposure) have been redistributed.
[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[4] The probability of dying between exact ages 15 and 50, expressed per 1,000 persons at age 15
[5] The probability of dying between exact ages 15 and 60, expressed per 1,000 persons at age 15

Table 3.3.1 Mortality rates by residence and region: Females

Direct estimates of mortality rates (per 1,000 persons) from the household listing of usual members who died in the 3 years preceding the survey, according to residence and region, Pakistan MMS 2019

| | Residence | | Region | | | | | | |
| | Urban | Rural | Punjab[1] | Sindh | Khyber Pakhtun-khwa[2] | Balochistan | Total[3] | Azad Jammu and Kashmir | Gilgit Baltistan |
Age group									
<1	47.34	64.39	60.54	66.35	52.65	45.01	59.00	44.61	51.95
1-4	2.21	3.28	3.19	2.99	2.28	3.12	2.94	1.97	2.21
5-9	0.52	0.69	0.72	0.59	0.56	0.39	0.63	0.46	1.05
10-14	0.31	0.67	0.45	0.76	0.65	0.16	0.54	0.24	0.42
15-19	0.72	0.79	0.63	1.11	0.73	0.78	0.77	0.81	0.72
20-24	0.94	1.20	1.18	1.21	0.73	1.15	1.10	1.26	0.94
25-29	0.75	1.34	1.19	1.01	1.30	0.29	1.12	1.48	1.35
30-34	1.21	1.69	1.56	1.26	1.49	2.04	1.51	1.62	1.21
35-39	2.11	2.67	2.32	3.27	1.68	2.83	2.45	2.09	2.02
40-44	2.14	3.63	2.99	3.02	3.38	2.29	3.03	2.58	1.74
45-49	4.43	5.08	5.76	3.89	3.41	3.91	4.83	4.73	3.99
50-54	11.35	5.48	7.72	10.52	5.22	5.40	7.74	4.28	3.36
55-59	15.40	13.68	15.72	13.30	12.53	10.16	14.31	14.31	7.74
60-64	31.82	24.89	27.02	29.89	25.41	29.81	27.40	22.57	12.92
65-69	44.61	28.19	34.55	33.61	34.44	16.91	33.52	29.82	20.37
70-74	69.80	57.30	60.11	72.32	55.40	67.24	61.66	64.41	38.87
75-79	64.40	66.00	64.15	63.51	78.29	26.22	65.44	49.80	25.11
80+	197.11	166.56	168.53	191.44	193.85	162.77	176.38	144.86	103.26
Total age 15-49	1.42	1.87	1.78	1.78	1.44	1.50	1.70	1.77	1.40
Total all ages	6.25	6.85	7.14	6.46	6.13	4.52	6.63	6.87	4.98
Probability of dying									
$_{35}q_{15}$[4]	60	79	75	71	62	64	71	70	58
$_{45}q_{15}$[5]	178	163	178	176	141	134	168	153	109

Note: Deaths are from the household listing of usual members who died in the 3 years before the survey (excluding the month of the interview); exposure is from usual members of the household and applicable exposure of members who died; deaths with missing age at death have been redistributed proportionately; and cases with missing age in the household schedule (assumed exposure) have been redistributed.
[1] Punjab includes ICT.
[12] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[4] The probability of dying between exact ages 15 and 50, expressed per 1,000 persons at age 15
[5] The probability of dying between exact ages 15 and 60, expressed per 1,000 persons at age 15

Table 3.3.2 Mortality rates by residence and region: Males

Direct estimates of mortality rates (per 1,000 persons) from the household listing of usual members who died in the 3 years preceding the survey, according to residence and region, Pakistan MMS 2019

| Age group | Residence | | Region | | | | Total[3] | Azad Jammu and Kashmir | Gilgit Baltistan |
	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtun-khwa[2]	Balochistan			
<1	64.79	68.29	72.35	69.80	57.77	50.00	67.17	49.63	57.71
1-4	1.63	2.49	2.22	2.08	1.92	3.54	2.22	2.24	1.94
5-9	0.59	1.16	0.88	1.12	1.05	0.88	0.97	0.49	1.20
10-14	0.72	0.81	0.68	0.98	0.71	1.04	0.78	0.27	0.22
15-19	1.34	1.54	1.36	1.39	1.97	1.01	1.46	1.53	2.14
20-24	1.22	1.50	1.54	1.17	1.28	1.23	1.39	3.15	1.85
25-29	1.55	2.07	1.58	1.73	2.82	1.87	1.85	2.79	1.87
30-34	2.26	1.97	2.20	1.79	2.40	1.33	2.09	2.17	2.44
35-39	1.21	2.55	2.23	1.55	2.51	0.45	2.00	2.11	1.78
40-44	5.07	4.79	5.39	4.54	4.49	2.81	4.91	3.87	2.42
45-49	8.34	6.74	8.21	9.08	3.67	3.49	7.41	9.24	3.53
50-54	13.35	12.21	15.07	12.26	6.79	5.89	12.67	10.34	6.65
55-59	20.01	15.95	18.39	20.34	13.14	11.71	17.51	18.21	4.31
60-64	32.74	23.91	30.25	28.48	19.40	17.41	27.22	26.37	13.79
65-69	38.57	32.69	37.35	33.90	32.19	19.98	34.76	33.98	15.45
70-74	74.26	65.04	70.92	67.84	62.60	55.92	68.26	52.65	33.22
75-79	72.51	58.17	63.37	68.92	58.52	51.82	62.86	45.96	22.26
80+	168.35	163.21	157.44	177.22	191.82	124.74	164.86	152.42	128.84
Total age 15-49	2.41	2.51	2.62	2.38	2.44	1.50	2.47	3.08	2.19
Total all ages	7.84	8.26	9.13	7.33	7.28	5.11	8.11	9.42	6.48
Probability of dying									
$_{35}q_{15}$[4]	100	100	106	101	91	59	100	117	77
$_{45}q_{15}$[5]	238	219	244	236	178	138	226	235	126

Note: Deaths are from the household listing of usual members who died in the 3 years before the survey (excluding the month of the interview); exposure is from usual members of the household and applicable exposure of members who died; deaths with missing age at death have been redistributed proportionately; and cases with missing age in the household schedule (assumed exposure) have been redistributed.
[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[4] The probability of dying between exact ages 15 and 50, expressed per 1,000 persons at age 15
[5] The probability of dying between exact ages 15 and 60, expressed per 1,000 persons at age 15

Table 3.4 Adult mortality rates (15-49 years)

Direct estimates of female and male mortality rates for the 3 years preceding the survey, by 5-year age groups, residence, and region, Pakistan MMS 2019

Background characteristic	Deaths	Exposure years	Mortality rate[1]
FEMALE			
Age			
15-19	90	117,365	0.77
20-24	110	100,449	1.10
25-29	101	90,591	1.12
30-34	103	68,283	1.51
35-39	150	61,286	2.45
40-44	136	44,828	3.03
45-49	200	41,395	4.83
Residence			
Urban	284	199,897	1.45
Rural	606	324,300	1.89
Region			
Punjab[2]	496	278,770	1.81
Sindh	208	117,149	1.79
Khyber Pakhtunkhwa[3]	143	99,292	1.45
Balochistan	43	28,987	1.52
Total 15-49[4]	890	524,197	1.72[a]
Azad Jammu and Kashmir	143	81,048	1.79
Gilgit Baltistan	79	56,225	1.41
MALE			
Age			
15-19	169	115,300	1.46
20-24	124	89,522	1.39
25-29	146	79,032	1.85
30-34	134	64,327	2.09
35-39	115	57,463	2.00
40-44	221	44,956	4.91
45-49	303	40,846	7.41
Residence			
Urban	483	200,512	2.43
Rural	729	290,933	2.51
Region			
Punjab[2]	670	255,548	2.64
Sindh	286	120,069	2.39
Khyber Pakhtunkhwa[3]	213	87,431	2.43
Balochistan	43	28,397	1.50
Total 15-49[4]	1,212	491,445	2.48[a]
Azad Jammu and Kashmir	185	60,144	3.06
Gilgit Baltistan	108	49,419	2.19

[1] Expressed per 1,000 population
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[a] Age-adjusted rate

Table 3.5 Complete life table for Pakistan

Complete life table for the total population, Pakistan MMS 2019

Age group	Proportion of persons alive at the beginning of the age interval who died during the interval (q_x)	Number living at the beginning of the age interval (l_x)	Number dying during the age interval (d_x)	Stationary population in the age interval (L_x)	Stationary population in this and all subsequent age intervals (T_x)	Average number of years of life remaining at the beginning of the age interval (e_x)
<1	0.0612	100,000	6,125	96,905	6,536,651	65.37
1-4	0.0102	93,875	959	373,580	6,439,746	68.60
5-9	0.0040	92,916	375	463,644	6,066,166	65.29
10-14	0.0033	92,542	307	461,941	5,602,522	60.54
15-19	0.0055	92,235	511	459,896	5,140,581	55.73
20-24	0.0061	91,724	564	457,207	4,680,686	51.03
25-29	0.0073	91,160	662	454,140	4,223,479	46.33
30-34	0.0089	90,497	806	450,469	3,769,339	41.65
35-39	0.0111	89,691	996	445,962	3,318,870	37.00
40-44	0.0197	88,695	1,744	439,101	2,872,909	32.39
45-49	0.0301	86,951	2,616	428,181	2,433,808	27.99
50-54	0.0498	84,335	4,202	411,080	2,005,627	23.78
55-59	0.0767	80,133	6,150	385,085	1,594,547	19.90
60-64	0.1276	73,983	9,439	345,780	1,209,463	16.35
65-69	0.1572	64,544	10,147	296,629	863,682	13.38
70-74	0.2789	54,397	15,173	231,988	567,053	10.42
75-79	0.2740	39,224	10,746	167,822	335,065	8.54
80+	1.0000	28,477	28,477	167,243	167,243	5.87

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 3.6 Complete life table for the total population of Pakistan by sex

Complete life table for the total population by sex, Pakistan MMS 2019

Age group	Proportion of persons alive at the beginning of the age interval who died during the interval (q_x)	Number living at the beginning of the age interval (l_x)	Number dying during the age interval (d_x)	Stationary population in the age interval (L_x)	Stationary population in this and all subsequent age intervals (T_x)	Average number of years of life remaining at the beginning of the age interval (e_x)
FEMALE						
<1	0.0573	100,000	5,730	97,107	6,647,938	66.48
1-4	0.0117	94,270	1,101	374,874	6,550,831	69.49
5-9	0.0032	93,169	294	465,110	6,175,957	66.29
10-14	0.0027	92,875	251	463,747	5,710,847	61.49
15-19	0.0038	92,624	354	462,232	5,247,100	56.65
20-24	0.0055	92,269	505	460,084	4,784,868	51.86
25-29	0.0056	91,765	511	457,543	4,324,784	47.13
30-34	0.0075	91,253	685	454,551	3,867,240	42.38
35-39	0.0122	90,568	1,103	450,076	3,412,689	37.68
40-44	0.0150	89,465	1,346	443,951	2,962,613	33.11
45-49	0.0239	88,119	2,103	435,317	2,518,662	28.58
50-54	0.0380	86,016	3,267	421,862	2,083,345	24.22
55-59	0.0691	82,750	5,715	399,291	1,661,483	20.08
60-64	0.1280	77,035	9,861	359,959	1,262,192	16.38
65-69	0.1543	67,174	10,365	309,231	902,233	13.43
70-74	0.2653	56,808	15,072	244,428	593,002	10.44
75-79	0.2791	41,736	11,647	177,980	348,574	8.35
80+	1.0000	30,090	30,090	170,595	170,595	5.67
MALE						
<1	0.0650	100,000	6,497	96,715	6,431,015	64.31
1-4	0.0088	93,503	827	372,356	6,334,300	67.74
5-9	0.0049	92,676	450	462,254	5,961,944	64.33
10-14	0.0039	92,226	359	460,232	5,499,690	59.63
15-19	0.0073	91,867	670	457,658	5,039,458	54.86
20-24	0.0069	91,197	630	454,408	4,581,800	50.24
25-29	0.0092	90,567	834	450,747	4,127,392	45.57
30-34	0.0104	89,733	932	446,333	3,676,645	40.97
35-39	0.0100	88,802	885	441,792	3,230,312	36.38
40-44	0.0243	87,917	2,132	434,232	2,788,519	31.72
45-49	0.0364	85,785	3,119	421,079	2,354,287	27.44
50-54	0.0614	82,666	5,073	400,514	1,933,209	23.39
55-59	0.0838	77,593	6,503	371,471	1,532,695	19.75
60-64	0.1272	71,090	9,044	332,327	1,161,223	16.33
65-69	0.1596	62,046	9,900	284,763	828,896	13.36
70-74	0.2892	52,146	15,079	220,893	544,133	10.43
75-79	0.2697	37,067	9,997	159,036	323,240	8.72
80+	1.0000	27,070	27,070	164,204	164,204	6.07

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 3.7 Pregnancy-related mortality

Direct estimates of pregnancy-related mortality for the 3 years preceding the survey, by 5-year age groups, residence, and region, Pakistan MMS 2019

Background characteristic	Percentage of female deaths that are pregnancy-related	Number of pregnancy-related deaths[1]	Weighted number of woman-years[2]	Pregnancy-related mortality rate[3]	Pregnancy-related mortality ratio[4]
Age					
15-19	16.7	15	117,365	0.13	249
20-24	23.1	25	100,449	0.25	131
25-29	28.7	29	90,591	0.32	142
30-34	36.0	37	68,283	0.54	325
35-39	27.5	41	61,286	0.67	644
40-44	9.8	13	44,828	0.30	1,051
45-49	0.6	1	41,395	0.03	331
Residence					
Urban	15.7	45	199,897	0.22	218
Rural	19.4	118	324,300	0.37	267
Region					
Punjab[5]	14.7	73	278,770	0.26	219
Sindh	24.1	50	117,149	0.43	345
Khyber Pakhtunkhwa[6]	16.7	24	99,292	0.24	175
Balochistan	35.4	15	28,987	0.54	358
Total 15-49[7]	18.2	162	524,197	0.31[a]	251[a]
Azad Jammu and Kashmir	11.1	16	81,048	0.20	179
Gilgit Baltistan	19.8	16	56,225	0.28	196

[1] A pregnancy-related death is defined as the death of a woman while pregnant, during childbirth, or within 42 days after delivery.
[2] Woman-years lived in that age group during the 36 months before the survey. For example, for the 15-19 age group, this is calculated by taking ½ of the number of women age 15, plus 1½ times the number age 16, plus 2½ times the number age 17, plus 3 times the number age 18, plus 3 times the number age 19, plus 2½ times the number age 20, plus 1½ times the number age 21, plus ½ times the number age 22, plus 1½ times the number of deaths among women age 15-49 in the previous 36 months.
[3] Expressed per 1,000 woman-years of exposure
[4] Expressed per 100,000 live births; calculated as the age-adjusted pregnancy-related mortality rate times 100 divided by the age-adjusted general fertility rate
[5] Punjab includes ICT.
[6] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[7] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[a] Age-adjusted rate

Table 3.8 Pregnancy-related mortality ratio (PRMR) using live births as the denominator (pregnancy-related deaths divided by live births reported in the household survey)

Pregnancy-related mortality ratio for the 3 years preceding the survey, by residence and region, Pakistan MMS 2019

Background characteristic	Pregnancy-related deaths[1]	Live births	Pregnancy-related mortality ratio[2]
Residence			
Urban	45	20,333	220
Rural	118	43,290	272
Region			
Punjab[3]	73	31,753	230
Sindh	50	13,786	364
Khyber Pakhtunkhwa[4]	24	14,075	170
Balochistan	15	4,010	383
Total[5]	162	63,623	255
Azad Jammu and Kashmir	16	8,501	188
Gilgit Baltistan	16	7,712	202

[1] A pregnancy-related death is defined as the death of a woman while pregnant, during childbirth, or within 42 days after delivery, regardless of the cause of death.
[2] Expressed per 100,000 live births
[3] Punjab includes ICT.
[4] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[5] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 3.9 Maternal mortality

Direct estimates of maternal mortality rates and ratios for the 3 years preceding the survey, by 5-year age groups, residence, and region, Pakistan MMS 2019

Background characteristic	Percentage of female deaths that are maternal	Number of maternal deaths[1]	Weighted number of woman-years[2]	Maternal mortality rate[3]	Maternal mortality ratio[4]
Age					
15-19	13.0	12	117,365	0.10	194
20-24	17.4	19	100,449	0.19	99
25-29	23.4	24	90,591	0.26	115
30-34	29.1	30	68,283	0.44	263
35-39	20.5	31	61,286	0.50	481
40-44	2.7	4	44,828	0.08	286
45-49	0.6	1	41,395	0.03	331
Residence					
Urban	11.4	32	199,897	0.16	158
Rural	14.5	88	324,300	0.27	199
Region					
Punjab[5]	10.5	52	278,770	0.19	157
Sindh	15.7	33	117,149	0.28	224
Khyber Pakhtunkhwa[6]	15.8	23	99,292	0.23	165
Balochistan	29.2	13	28,987	0.45	298
Total 15-49[7]	13.5	120	524,197	0.23[a]	186[a]
Azad Jammu and Kashmir	6.4	9	81,048	0.11	104
Gilgit Baltistan	15.8	12	56,225	0.22	157

[1] A maternal death is defined as the death of a woman while pregnant, during childbirth, or within 42 days after delivery for which there was a verbal autopsy that classified deaths as being either direct or indirect maternal deaths.
[2] Woman-years lived in that age group during the 36 months before the survey. For example, for the 15-19 age group, this is calculated by taking ½ of the number of women age 15, plus 1½ times the number age 16, plus 2½ times the number age 17, plus 3 times the number age 18, plus 3 times the number age 19, plus 2½ times the number age 20, plus 1½ times the number age 21, plus ½ times the number age 22, plus 1½ times the number of deaths among women age 15-49 in the previous 36 months.
[3] Expressed per 1,000 woman-years of exposure
[4] Expressed per 100,000 live births; calculated as the age-adjusted maternal mortality rate times 100 divided by the age-adjusted general fertility rate
[5] Punjab includes ICT.
[6] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[7] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[a] Age-adjusted rate

Table 3.10 Maternal mortality ratio

Total fertility rate, general fertility rate, maternal mortality ratio, and lifetime risk of maternal death for the 3 years preceding the survey, by residence and region, Pakistan MMS 2019

	Residence		Region					Azad Jammu and Kashmir	Gilgit Baltistan
	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtun-khwa[2]	Balochistan	Total[3]		
Total fertility rate (TFR)	3.2	4.3	3.7	3.9	4.4	5.1	3.9	3.6	4.8
General fertility rate (GFR)[4]	102	137	120	124	139	152	124	110	141
Maternal mortality ratio (MMR)[5]	158	199	157	224	165	298	186	104	157
MMR (95% CI, lower bound)	91	136	79	148	84	130	138	23	53
MMR (95% CI, upper bound)	225	263	235	299	246	466	234	185	261
Lifetime risk of maternal death[6]	0.005	0.009	0.006	0.009	0.007	0.015	0.007	0.004	0.007

CI: Confidence interval
[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[4] Age-adjusted rate, expressed per 1,000 women age 15-49
[5] Expressed per 100,000 live births; calculated as the age-adjusted maternal mortality rate times 100 divided by the age-adjusted general fertility rate
[6] Calculated as $1-(1-MMR)^{TFR}$, where TFR represents the total fertility rate for the 3 years preceding the survey

Table 3.11 Maternal mortality ratio using direct method

Maternal mortality ratios for the 3 years preceding the survey, by residence and region, Pakistan MMS 2019

Background characteristic	Maternal deaths[1]	Live births	Maternal mortality ratio
Residence			
Urban	32	20,333	159
Rural	88	43,290	203
Region			
Punjab[2]	52	31,753	165
Sindh	33	13,786	237
Khyber Pakhtunkhwa[3]	23	14,075	161
Balochistan	13	4,010	317
Total[4]	120	63,623	189
Azad Jammu and Kashmir	9	8,501	108
Gilgit Baltistan	12	7,712	162

[1] A maternal death is defined as the death of a woman while pregnant, during childbirth, or within 42 days after delivery for which there was a verbal autopsy that classified deaths as being either direct or indirect maternal deaths.
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

CAUSES OF DEATH

4

Key Findings

- ***All-cause mortality:*** Circulatory disease, infectious and parasitic disease, and neoplasms are the most common causes of death among women of reproductive age.

- ***Maternal causes of death:*** 12% of deaths are due to complications of during pregnancy, childbirth, and the puerperium. Ninety-six percent of maternal deaths are due to direct obstetric causes and 4% are due to non-obstetric (indirect) causes.

- ***Direct maternal causes of death:*** Obstetric haemorrhage is the most frequent cause of maternal death (41%), followed by hypertensive disorders (29%).

- ***Treatment for deceased women:*** The majority of deceased women of reproductive age (15-49 years), including those dying as a result of pregnancy and childbirth complications, sought care from health facilities in the public sector.

This chapter presents results of the verbal autopsy interviews conducted to determine causes of death among women age 15-49 in the 3 years preceding the 2019 PMMS. Knowing the causes of maternal deaths can help in formulating policies to prevent those deaths. However, obtaining data on deaths requires robust vital registration systems, which are lacking in most developing countries, including Pakistan. In the absence of such systems, the verbal autopsy method (an interview with family members or caregivers of the deceased person) has been developed as a way of collecting information that can be used to ascertain the cause or causes of death.

4.1 VERBAL AUTOPSY QUESTIONNAIRE

The Verbal Autopsy Questionnaire (VAQ) used in the 2019 PMMS was based on the 2016 WHO standard VAQ for adults age 15-49 (version 1.5), with adaptations to address the country-specific context and to preserve comparability with the 2006-07 PDHS instrument. The questionnaire collected information on the deceased woman's socioeconomic background, whether she experienced any accident or violence leading to death, specific diagnoses she may have received, signs and symptoms of a disease or a complication of pregnancy or childbirth in the period preceding death, and treatment by or contact with health care providers before death.

4.2 VERBAL AUTOPSY FIELDWORK

During the household listing phase, every household in every cluster was asked if any household member had died in the 3 years preceding the survey (i.e., since January 2016). If the answer was yes, information on the name, sex, age at death, and year of death was collected. Later, fieldwork teams in each cluster were provided with a list of all households where a female in the 15-49 age group had died. Interviews were completed only in cases in which deaths occurred on or after 1 January 2016, the deceased woman was age

15-49 at the time of the death, and the household could furnish a respondent who had knowledge of the circumstances preceding the death of the woman.

During fieldwork, 1,182 verbal autopsies were conducted for women age 15-49 who died on or after 1 January 2016. Of these 1,182 VAQs, 1,177 (unweighted) were completed for women who died in the 3 years preceding the survey.

4.3   CAUSE OF DEATH CERTIFICATION AND ICD-10 CODING

For the verbal autopsy process to be complete, each questionnaire must be reviewed so that a death certificate with the immediate and underlying cause(s) of death for the deceased person can be completed. Coding the cause(s) of death recorded in the death certificate according to the International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10; WHO 2016a), is a further step that produces internationally comparable data on the final underlying cause of death.

Three panels of three reviewers each were created (with two obstetricians/gynaecologists and one specialist physician on each panel). The three doctors filled out death certificates according to WHO guidelines, and ICD-10 coding was done by another two physicians who had been trained in coding at a workshop facilitated by ICF.

Death Certification

The WHO standard death certificate (shown below) requires certifiers to identify a sequence of conditions and/or events leading to death that make both chronological and pathological sense. Conditions and events (for example, road traffic accidents) that have a causal relationship to death are listed in Part 1 of the certificate. The immediate (direct) cause of death is listed on the first line (a) of Part 1. There must always be an entry on line 1(a), but it is possible that in Part 1 only line 1(a) is filled out. When there are two or more conditions and/or events that form part of the sequence leading directly to death, each condition/event should be recorded on a separate line in Part 1. The last-listed condition/event in Part 1 is considered the underlying cause of death (the "tentative starting point" in the process of ICD-10 coding described below). If the tentative starting point had not taken place, death would have been averted. In the example below, line 1(c) is the underlying cause of death.

Conditions and events that are significant and contributory but not causally related to death are listed in Part 2 of the certificate.

Administrative Data																
Sex		☐ Female														
Date of birth	3	0	0	1	1	9	7	2	Date of death		3	1	0	1	2	0	1	8
Death Certificate: Part 1 and 2																

1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line			Cause of death	Time interval from onset to death
		a	Haemorrhagic shock	1 hour
		b	Due to: Abdominal haemorrhage	2 hours
		c	Due to: Passenger in car that hit another car	2 hours
		d	Due to :	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)			Diabetes mellitus (5 years)	

The reviewers assessed the 2019 PMMS VAQs and recorded their comments in the form developed from the WHO guidelines. The form provided the following information on the deceased woman according to the VAQ:

- Tentative underlying cause of death.

- Final underlying cause of death.

- Reviewer's decision on the category of death (direct obstetric death, indirect obstetric death, probable obstetric death, coincidental obstetric death, late maternal death, non-obstetric death, undecided on category of death).

- Timing of death in relation to pregnancy, delivery, or the postpartum period.

- Delay in seeking treatment (only required for maternal deaths).

- Reviewer's assessment of the quality of the information in the VAQ. Each reviewer assessed the quality of data on a scale of 1-5 (whereby 1 was considered as the poorest quality and 5 as the highest quality). Scoring was based on the following criteria: missing information, discrepancy within objective data, and discrepancy between objective data and the verbatim history of the fatal illness.

ICD-10 Coding

The coding of causes of death was done by applying the standard ICD-10 coding procedures. This process is essential for correct application of the ICD-10 instructions and for selection and modification of the tentative starting point.

The ICD-10 categorises diseases and health conditions into four-digit codes. The hard copy version consists of three books. Volume 1 is a tabular list (by ICD-10 code) of diseases and conditions; Volume 2 provides guidance on the use of the ICD-10, including coding procedures; and Volume 3 is an alphabetical index of diseases and health conditions.

To code a death certificate and determine the final underlying cause of death, coders first look up each entry on each line of the death certificate in the alphabetical index (Volume 3) to obtain the ICD-10 code for the entry and then look up each code in Volume 1 to verify that it is the correct one and see if there are any special instructions on how to use the code (which may lead to modification of the tentative starting point).

After the code for each entry on the death certificate has been obtained, coders determine the tentative underlying cause of death by applying steps SP1 through SP8 to the codes in the death certificate as described in Volume 2. Next, coders apply the special instructions for modifications of the starting point (steps M1 to M4) as described in Volume 2, check for age and sex inconsistencies, and arrive at the final underlying cause of death. It is this final underlying cause of death that has ultimately been tabulated in the 2019 PMMS final report.

When the three panel reviewers completed the review and returned the completed 2019 PMMS assessment of verbal autopsy forms, the information from these three forms was aggregated by one of the two ICD-10 coders on another (fourth) yellow coloured 2019 PMMS assessment of verbal autopsy form to determine if there was a consensus among the three reviewers about the category and underlying cause of death.

Figure 4.1 provides the physician review process for the verbal autopsies. If at least two of the three reviewers agreed on the category and underlying cause of death, it was accepted as the category and underlying cause of death for that VAQ. If all three reviewers did not agree on the underlying cause and category of death, VAQs were reviewed by two original reviewers and a third lead reviewer.

Figure 4.1 Physician review process for verbal autopsies
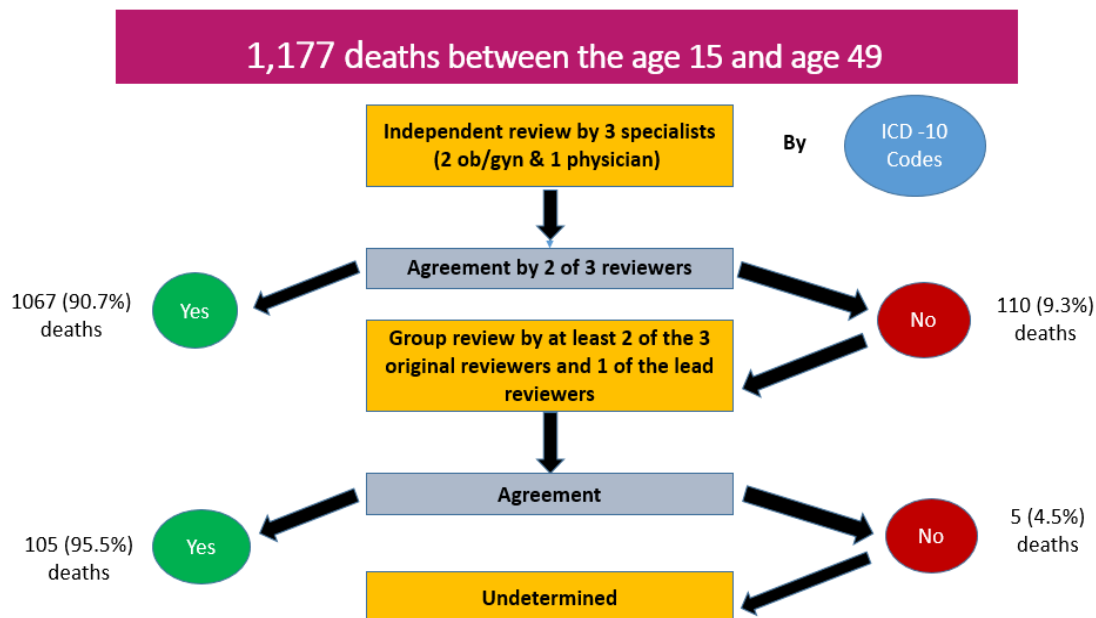
The fourth assessment form was filled out in green if there was a consensus among the reviewers. However, if there was no agreement, the fourth form was filled out in red and categorised as "undetermined."

4.4 CHARACTERISTICS OF DECEASED WOMEN

The prime focus of the 2019 PMMS was identifying female deaths in survey households in an effort to gather detailed information regarding causes of death and estimate maternal mortality. The VAQ was completed and a final death certificate written for 1,177 women (unweighted) who died at age 15-49 in the 3 years preceding the survey.

Table 4.1 shows that 38% of deceased women were age 40 or above at the time of their death and 72% were married. A majority were rural residents (69%), had no education (63%), and were not working (82%). One in 10 (11%) deceased women had a secondary education or higher. Twenty-one percent had never been married. Female deaths are distributed almost uniformly across the five wealth quintiles. Thirty-three percent of deceased women's husbands had no education, while 23% had a secondary education or higher.

In Azad Jammu and Kashmir, 37% of deceased women were age 40 or older at the time of their death, 73% were married, 85% lived in rural areas, 33% had no education, and 91% were not working. Forty-four percent of the husbands of deceased women in Azad Jammu and Kashmir had a secondary education or higher.

Thirty-one percent of deceased women in Gilgit Baltistan were age 40 or older at the time of their death, 69% were married, 87% resided in rural areas, 64% had no education, and almost all were not working (98%). Twenty-nine percent of deceased women's husbands had no education.

4.5 Respondents to the Verbal Autopsy Questionnaires

Verbal autopsy interviews were conducted with the deceased woman's next of kin (one or more members of her household who were present during the fatal illness and/or at the time of death and who knew the most about her personal life). These interviews were conducted for all deaths of women age 15-49 identified during the first round of the survey to ascertain causes of death and identify maternal deaths as per the ICD-10 classification. **Table 4.2** shows the characteristics of respondents to the verbal autopsy interviews.

At the national level, 82% of verbal autopsies were conducted with more than one respondent, and in 94% of cases at least one respondent was present at the time of death. The corresponding percentages were 83% and 91% in Azad Jammu and Kashmir and 94% and 95% in Gilgit Baltistan. Brothers-in-law or sisters-in-law were the most common respondents for the verbal autopsy interviews (52% in Pakistan, 65% in Azad Jammu and Kashmir, and 69% in Gilgit Baltistan). Other common respondents were husbands, sons or daughters, parents, and brothers or sisters.

4.6 Cause-specific Mortality

Underlying cause of death

The disease or injury that initiated the sequence of morbid events leading directly to death, or the circumstances of the accident or violence that produced the fatal injury (WHO 2016a).

Sample: Women who died at age 15-49 in the 3 years preceding the survey

The most common causes of death among women of reproductive age are circulatory disease (20%), infectious and parasitic diseases (14%), and neoplasms (14%). While the percentages of deaths caused by circulatory disease and neoplasms generally increase with age, deaths from infectious and parasitic diseases fluctuate somewhat erratically by age group (**Table 4.3**). Maternal causes such as complications of pregnancy, childbirth, and the puerperium are responsible for 12% of deaths among women of childbearing age in Pakistan. Deaths due to transport accidents and other external factors also account for 12% of the total (**Figure 4.2**).

Patterns by background characteristics

- Older women (age 35-49) and teenagers (age 15–19) are more likely to die from infectious and parasitic diseases than women age 20-34. Almost two-thirds of deaths from maternal causes occur at age 25-39. Deaths from circulatory disease are most common among women age 40-49.

- Deaths from conditions related to the nervous system, digestive system, and respiratory system are more common among younger women (age 15-34) and women in rural areas (11%).

- The percentage of deaths from infectious and parasitic diseases is highest in Sindh (18%).

Figure 4.2 All-cause mortality

Percent distribution of deceased women age 15-49 in the 3 years before the survey

Transport accident and other external 12%

No cause determined 1%

Maternal 12%

Infectious and parasitic disease 14%

Other disease 61%
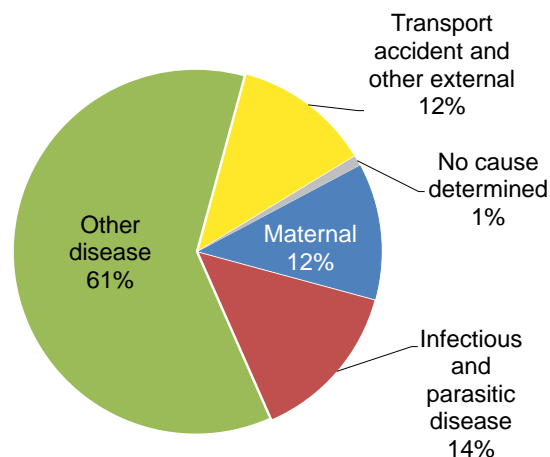
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

- Balochistan has a higher percentage of deaths (18%) due to complications of pregnancy, childbirth, and the puerperium than other provinces (14% each in Sindh and Khyber Pakhtunkhwa and 10% in Punjab).

- Deaths due to transport accidents are higher in Punjab (5%) than in any other province.

4.7 MATERNAL CAUSES OF DEATH

Ninety-six percent of maternal deaths were due to direct obstetric causes and 4% were due to non-obstetric (indirect) causes. The most frequent causes of maternal death were obstetric haemorrhage (41%) and hypertensive disorders (29%). Pregnancies with abortive outcomes were the cause of 10% of maternal deaths, and another 6% of women died due to pregnancy-related infections (**Table 4.4** and **Figure 4.3**).

Trends: Some causes of death increased as a percentage of all obstetric causes between 2006-07 and 2019. Obstetric haemorrhage increased from 33% to 41%, hypertensive disorders increased from 10% to 29%, and pregnancies with abortive outcomes increased from 6% to 10% (**Figure 4.4**). Other causes of death decreased as a percentage of all obstetric causes over that period. Pregnancy-related infections fell from 14% to 6%, and non-obstetric causes decreased from 13% to 4%. While iatrogenic causes of death contributed to 8% of maternal deaths in 2006-07, this specific cause was not identified in the 2019 PMMS; however, surgical and medical negligence were the trigger point for many maternal deaths, especially deaths due to obstetric haemorrhage.

Figure 4.3 Maternal causes of death

Percent distribution of deceased women age 15-49 in the 3 years before the survey
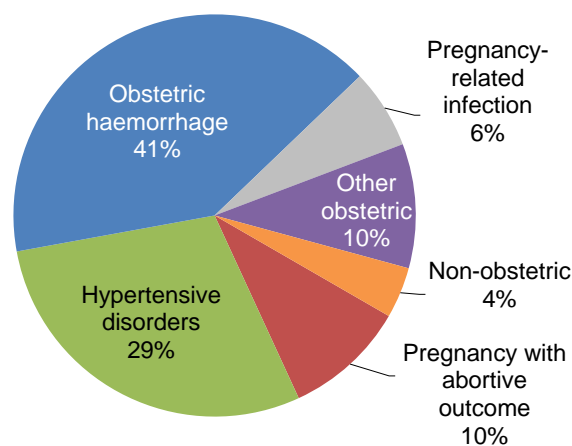
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Figure 4.4 Trends in obstetric-coded deaths

Percent distribution of deceased women age 15-49 in the 3 years preceding the survey whose death was due to a maternal cause
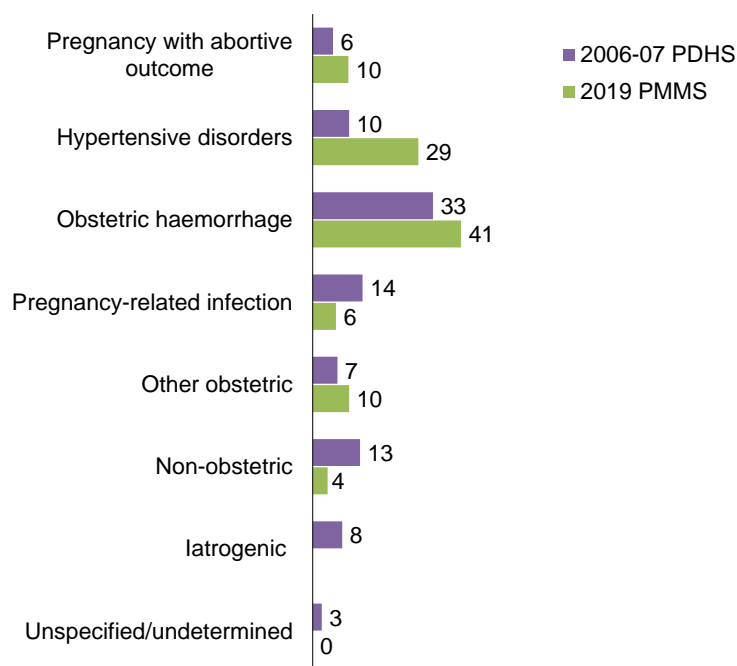
Notes: Iatrogenic was not used as an underlying cause of death in the 2019 PMMS. Excludes Azad Jammu and Kashmir and Gilgit Baltistan

4.8   DECEASED WOMEN AND HEALTH CARE

Among women who died at age 15-49 (both maternal and non-maternal deaths) in the 3 years preceding the survey, the majority received care from a public sector health facility (**Table 4.5**). Forty-two percent of women who died due to maternal causes received treatment from only the public sector, whereas 36% received care from the private sector only (**Figure 4.5**).

Figure 4.5 Treatment received for deceased women
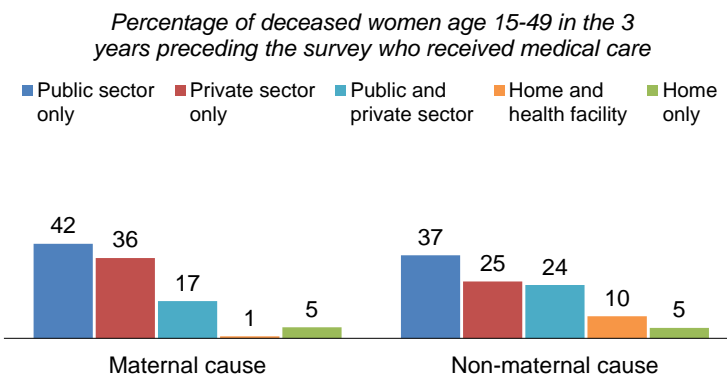
Percentage of deceased women age 15-49 in the 3 years preceding the survey who received medical care

■ Public sector only   ■ Private sector only   ■ Public and private sector   ■ Home and health facility   ■ Home only

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Patterns by background characteristics

▪ Women in all of the age groups other than age 20-24 were more likely to receive treatment from public than private facilities.

▪ A larger percentage of urban than rural women received treatment only from the private sector (33% versus 23%).

▪ The percentage of women who received treatment only from a public sector facility was highest in Khyber Pakhtunkhwa (42%) and lowest in Balochistan (29%).

Place of Death

One in two women (51%) died at a hospital regardless of whether the death was maternal or non-maternal, while 36% died at home. Thirteen percent of women died on their way to the hospital or while returning home from the hospital (**Table 4.6**).

A higher proportion of maternal deaths than non-maternal deaths occurred in a health facility (58% versus 50%). The proportion of women who died on the way to or while returning home from a health facility was twice as high among those dying from maternal causes as among those dying from non-maternal causes (22% versus 11%). A higher proportion of non-maternal deaths (38%) occurred at home than maternal deaths (18%).

Patterns by background characteristics

▪ Sixty-two percent of women in urban areas died at a health facility, compared with 45% of women in rural areas. The percentage of women dying on the way to the hospital or while returning home is higher in rural areas than in urban areas (15% and 7%, respectively).

▪ Khyber Pakhtunkhwa had the highest proportion of hospital-based deaths (60%), followed by Balochistan (54%), Sindh (51%), and Punjab (47%).

Table 4.1 Background characteristics of deceased women

Percent distribution of women age 15-49 who died in the 3 years before the survey by selected background characteristics at the time of their death, Pakistan MMS 2019

Background characteristic	Pakistan Weighted percent	Pakistan Weighted number	Pakistan Unweighted number	Azad Jammu and Kashmir Weighted percent	Azad Jammu and Kashmir Weighted number	Azad Jammu and Kashmir Unweighted number	Gilgit Baltistan Weighted percent	Gilgit Baltistan Weighted number	Gilgit Baltistan Unweighted number
Age									
15-19	10.2	89	98	10.3	15	12	11.7	9	7
20-24	12.3	107	105	13.0	19	15	12.9	10	12
25-29	11.1	97	98	13.8	20	16	16.8	13	11
30-34	11.8	103	96	12.3	18	17	11.1	9	7
35-39	16.4	144	135	13.4	19	18	16.8	13	14
40-44	15.5	135	133	12.7	18	21	9.6	7	10
45-49	22.7	198	191	24.5	35	41	21.1	16	16
Marital status									
Married	72.1	629	617	73.2	105	100	68.7	52	51
Divorced/separated	2.8	24	26	2.2	3	3	3.4	3	3
Widowed	4.4	38	38	6.4	9	9	1.9	1	1
Never married	20.8	181	175	18.2	26	28	25.9	20	22
Residence									
Urban	31.5	275	376	14.9	21	62	13.3	10	17
Rural	68.5	598	480	85.1	122	78	86.7	66	60
Education									
No education	63.3	552	544	33.4	48	48	63.5	49	46
Primary[1]	16.0	140	132	17.5	25	25	8.3	6	9
Middle[2]	9.2	80	68	22.4	32	26	7.7	6	4
Secondary[3]	5.4	48	55	18.8	27	27	11.3	9	8
Higher[4]	6.0	53	54	7.9	11	14	9.2	7	10
Don't know	0.0	0	3	0.0	0	0	0.0	0	0
Husband's education									
Woman was never married	20.8	181	175	18.2	26	28	25.9	20	22
No education	32.9	287	257	11.7	17	15	29.1	22	21
Primary[1]	14.9	130	128	15.6	22	22	15.0	11	7
Middle[2]	8.4	73	81	10.6	15	19	10.3	8	9
Secondary[3]	13.5	118	126	33.1	47	36	12.5	10	9
Higher[4]	9.2	80	84	10.7	15	19	7.1	5	9
Don't know	0.3	3	5	0.2	0	1	0.0	0	0
Employment status									
Working	17.3	151	152	8.9	13	13	2.5	2	1
Not working	82.4	719	702	91.1	130	127	97.5	74	76
Don't know	0.3	3	2	0.0	0	0	0.0	0	0
Wealth quintile									
Lowest	21.0	183	186	5.8	8	6	31.3	24	22
Second	21.6	189	170	27.2	39	25	37.5	29	25
Middle	21.4	187	171	29.7	42	41	20.6	16	21
Fourth	18.4	160	163	21.9	31	40	8.9	7	7
Highest	17.6	154	166	15.4	22	28	1.6	1	2
Region									
Punjab[5]	55.7	487	330	na	na	na	na	na	na
Sindh	23.4	204	232	na	na	na	na	na	na
Khyber Pakhtunkhwa[6]	15.9	139	181	na	na	na	na	na	na
Balochistan	5.0	43	113	na	na	na	na	na	na
Total 15-49	100.0	873	856	100.0	143	140	100.0	76	77

na = Not applicable
[1] Primary refers to classes 1-5.
[2] Middle refers to classes 6-8.
[3] Secondary refers to classes 9-10.
[4] Higher refers to classes 11 and above.
[5] Punjab includes ICT.
[6] Khyber Pakhtunkhwa includes the merged districts of former FATA.

Table 4.2 Respondents to Verbal Autopsy Questionnaires

Percentage of respondents by their relationship to the deceased woman, Pakistan MMS 2019

	Relationship to deceased woman		
Relationship	Pakistan	Azad Jammu and Kashmir	Gilgit Baltistan
Husband	38.2	35.9	42.4
Son or daughter	38.4	27.4	22.9
Son-in-law or daughter-in-law	10.5	3.7	9.4
Grandchild	0.2	1.4	0.0
Parent	27.5	22.5	36.3
Parent-in-law	20.8	17.8	25.3
Brother or sister	27.4	23.9	32.0
Brother-in-law/sister-in-law	52.3	64.8	68.6
Niece/nephew	5.4	10.3	6.0
Grandparent	0.7	2.5	4.0
Aunt/uncle	10.5	9.3	7.3
Other relative	12.3	11.1	29.1
Adopted/foster/stepchild	0.3	0.0	0.0
Not related	4.0	0.5	0.9
Domestic servant	0.3	0.0	0.0
Percentage with more than one respondent	81.8	82.6	93.7
Percentage with at least one respondent who was present when the deceased fell ill	96.1	95.0	93.7
Percentage with at least one respondent who was present when the deceased died	94.1	90.9	95.1
Number of deceased women	873	143	76

Table 4.3 All cause-specific mortality

Percent distribution of deceased women age 15-49 in the 3 years preceding the survey by probable underlying cause of death, according to background characteristics, Pakistan MMS 2019

Background characteristic	Maternal causes[1]	Infectious and parasitic disease[2]	Neoplasms[3]	Circulatory disease[4]	Transport accidents[5]	Other external causes[6]	Nervous system, digestive, respiratory[7]	Other causes (classified)[8]	No cause deter- mined[9]	Total	Number of deceased women
Age at death											
15-19	12.9	17.9	7.7	6.2	4.2	11.6	15.0	24.4	0.0	100.0	89
20-24	14.5	10.8	11.0	15.3	1.2	13.7	12.5	17.6	3.6	100.0	107
25-29	22.5	8.1	13.3	16.7	0.0	8.6	13.4	16.1	1.3	100.0	97
30-34	22.3	3.9	14.2	18.6	5.6	12.5	10.8	12.0	0.0	100.0	103
35-39	19.9	15.8	14.9	16.9	2.2	6.6	4.3	17.3	2.1	100.0	144
40-44	2.3	15.8	19.6	27.9	3.4	5.5	8.8	16.7	0.0	100.0	135
45-49	0.6	20.4	14.6	29.6	4.3	7.6	7.0	15.8	0.0	100.0	198
Residence											
Urban	12.0	13.6	13.3	22.8	3.1	8.9	7.3	18.6	0.3	100.0	275
Rural	12.0	14.4	14.4	19.2	3.1	9.0	10.5	16.1	1.2	100.0	598
Region											
Punjab[10]	10.3	14.1	14.4	22.3	4.6	9.6	9.0	14.9	0.8	100.0	487
Sindh	13.7	17.5	16.5	15.4	1.9	10.2	9.6	15.2	0.0	100.0	204
Khyber Pakhtunkhwa[11]	13.7	9.9	10.9	20.2	0.5	6.0	10.9	25.0	3.0	100.0	139
Balochistan	18.3	12.7	9.4	23.0	0.6	5.8	9.8	20.3	0.2	100.0	43
Total	12.0	14.2	14.1	20.4	3.1	9.0	9.5	16.9	0.9	100.0	873

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[1] ICD-10 codes O00-O994
[2] ICD-10 codes A010-B24
[3] ICD-10 codes C069-D434
[4] ICD-10 codes I081-I802
[5] ICD-10 codes V892, V878
[6] ICD-10 codes S068-T909, W34-Z915
[7] ICD-10 codes G039-G948, J188-J969, K027-K922
[8] ICD-10 codes D561-D70, E059-E669, L100, L899, M069-M629, N049-N390, R100-R99
[9] ICD-10 codes Q223, Q249
[10] Punjab includes ICT.
[11] Khyber Pakhtunkhwa includes the merged districts of former FATA.

Table 4.4 Causes of maternal deaths

Percent distribution of deceased women age 15-49 in the 3 years preceding the survey who died from maternal causes, by cause of death, Pakistan MMS 2019

Cause of death	Maternal deaths
Maternal death: direct	95.9
Pregnancy with abortive outcome[1]	9.8
Hypertensive disorders in pregnancy, childbirth, and the puerperium[2]	29.0
Obstetric haemorrhage[3]	40.7
Pregnancy-related infection[4]	6.4
Other obstetric complications[5]	10.0
Maternal death: indirect	4.1
Non-obstetric complications[6]	4.1
Total	100.0
Number of deceased women who died from maternal causes	105

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[1] ICD-10 codes O00-O75
[2] ICD-10 codes O101-O159
[3] ICD-10 codes O441-O469, O670, O711, O72, O720, O721, O722
[4] ICD-10 codes O223, O85
[5] ICD-10 codes O211, O639, O669, O731, O759, O871, O882, O900, O909
[6] ICD-10 codes O244, O990, O994

Table 4.5 Treatment received for deceased women

Percent distribution of deceased women age 15-49 in the 3 years preceding the survey who received medical care by place of care, according to background characteristics, Pakistan MMS 2019

Background characteristic	Public sector only	Private sector only	Public and private sector	Home only	Home and public/private sector	Total	Number of deceased women
Cause of death							
Maternal	41.9	35.6	16.5	4.9	0.9	100.0	90
Non-maternal	36.8	25.2	23.6	4.6	9.8	100.0	678
Age at death							
15-19	34.0	22.5	27.6	7.7	8.2	100.0	76
20-24	35.7	36.9	17.4	3.9	5.3	100.0	95
25-29	37.4	27.9	26.5	5.0	2.8	100.0	84
30-34	47.7	22.4	17.6	7.1	5.2	100.0	89
35-39	41.4	27.4	19.5	6.0	5.7	100.0	132
40-44	35.9	20.1	27.4	1.2	15.3	100.0	122
45-49	32.5	27.3	23.6	3.4	13.2	100.0	171
Residence							
Urban	34.6	32.6	22.1	2.2	8.2	100.0	249
Rural	38.8	23.4	23.1	5.7	9.0	100.0	519
Region							
Punjab[1]	39.4	17.7	23.9	6.5	12.4	100.0	426
Sindh	31.5	43.9	16.9	3.0	4.5	100.0	184
Khyber Pakhtunkhwa[2]	41.7	28.6	25.6	1.5	2.6	100.0	122
Balochistan	29.4	32.4	30.4	1.0	6.9	100.0	35
Total	37.4	26.4	22.8	4.6	8.7	100.0	768

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.

Table 4.6 Place of death

Percent distribution of deceased women age 15-49 in the 3 years preceding the survey by place of death, according to background characteristics, Pakistan MMS 2019

Background characteristic	Hospital	Home	Way to hospital or returning home	Other	Total	Number of deceased women
Cause of death						
Maternal	57.6	17.8	22.0	2.5	100.0	90
Non-maternal	49.6	38.4	11.2	0.8	100.0	678
Age at death						
15-19	46.8	37.1	16.1	0.0	100.0	76
20-24	60.8	25.4	13.4	0.4	100.0	95
25-29	47.1	35.6	14.6	2.7	100.0	84
30-34	50.3	28.1	20.4	1.3	100.0	89
35-39	44.5	45.5	8.9	1.0	100.0	132
40-44	56.1	34.1	9.2	0.6	100.0	122
45-49	48.9	39.7	10.3	1.2	100.0	171
Residence						
Urban	62.1	31.0	6.6	0.3	100.0	249
Rural	44.9	38.4	15.3	1.4	100.0	519
Region						
Punjab[1]	47.2	39.7	12.1	1.0	100.0	426
Sindh	51.3	34.8	12.3	1.5	100.0	184
Khyber					100.0	
Pakhtunkhwa[2]	59.8	26.4	13.9	0.0		122
Balochistan	53.8	30.7	13.5	2.0	100.0	35
Total	50.5	36.0	12.5	1.0	100.0	768

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.

MATERNAL HEALTH CARE

5

<div style="background:#e8f7fb">

Key Findings

- **Antenatal care:** 91% of women who gave birth in the 3 years before the survey received antenatal care (ANC) from a skilled provider. Fifty-two percent of women had at least four antenatal care visits.

- **Components of antenatal care:** Among women who received ANC for their most recent live birth or stillbirth, 89% had their blood pressure measured, 71% had a blood sample taken, and 65% had a urine sample taken.

- **Advice during antenatal care:** 67% of women received advice on the importance of maintaining a balanced diet during pregnancy, and more than half received advice on the importance of exclusive breastfeeding and early initiation of breastfeeding.

- **Protection against neonatal tetanus:** 70% of the most recent births or stillbirths to women in the 3 years before the survey were protected against neonatal tetanus.

- **Delivery:** 71% of births were delivered in a health facility. Seventy-four percent of births were assisted by a skilled provider.

- **Postnatal checks:** 69% of women received a postnatal check within 2 days of delivery.

</div>

Accessible and quality health care services during pregnancy, childbirth, and the postnatal period are considered an essential factor in reducing maternal mortality in Pakistan. One of the targets of the Sustainable Development Goals (SDGs) 2015-2030 (World Health Organization 2016b) is for countries to reduce their maternal mortality ratio (MMR) by at least two-thirds from their baseline MMR of 2010 by 2030 (World Health Organization 2015). Pakistan's goal is to reduce its MMR from 276 maternal deaths per 100,000 live births in 2007 (NIPS and Macro International Inc. 2008) to less than 70 maternal deaths per 100,000 live births in 2030 to achieve the SDG target. The Government of Pakistan is determined to improve the coverage and quality of antenatal care (ANC) services by increasing access to institutional deliveries and skilled birth attendants and improving timely referrals of complicated pregnancies to higher-level health facilities.

5.1 ANTENATAL CARE COVERAGE AND CONTENT

5.1.1 Skilled Providers

Antenatal care (ANC) from a skilled provider

Pregnancy care received from a skilled provider (an obstetrician/specialist, doctor, nurse/midwife/lady health visitor, or community midwife).

Sample: Women age 15-49 who had a live birth, stillbirth, miscarriage, or abortion in the 3 years before the survey

The 2019 PMMS results show that in the 3 years preceding the survey, 9 in 10 women who had a live birth received antenatal care from a skilled provider at least once for their last birth (91%) (**Table 5.1**). Sixty-eight percent of women who had a miscarriage or abortion (**Table 5.2.1**) and 90% of women who had a stillbirth (**Table 5.2.2**) received antenatal care from a skilled provider at least once for their last miscarriage, abortion, or stillbirth. Overall, among ever-married women age 15-49 who had a pregnancy in the 3 years preceding the survey and received ANC, 99% received care from a skilled provider at least once during their most recent pregnancy (**Table 5.2.3**).

ANC was most often provided by an obstetrician or specialist during the pregnancy for the most recent live birth (46%) (**Table 5.1**), miscarriage or abortion (33%) (**Table 5.2.1**), or stillbirth (38%) (**Table 5.2.2**).

Trends: Figure 5.1 shows trends in ANC service utilisation from a skilled provider. The proportion of women receiving ANC from a skilled provider has increased steadily since 1990-91, from 26% to 91%.

Patterns by background characteristics

- Urban women are more likely than rural women to have received ANC from a skilled provider (95% and 89%, respectively) (**Table 5.1**).

Figure 5.1 **Trends in antenatal care coverage**

Percentage of ever-married women age 15-49 who had a live birth in the 3 years before the survey (for the most recent birth)

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

- Disparities according to socioeconomic characteristics persist; women in the highest wealth quintile and the highest education category are more likely to receive ANC services (99% each) from a skilled provider than their counterparts in the lowest wealth quintile (79%) and lowest education category (86%).

- By region, use of ANC services from skilled providers is highest in Punjab (96%) and lowest in Balochistan (76%). Notably, obstetricians or specialists are the major service providers in all regions except Khyber Pakhtunkhwa and Gilgit Baltistan, where doctors are most commonly reported as ANC providers.

5.1.2 Timing and Number of ANC Visits

Table 5.3 shows that 52% of women had at least four ANC visits for their most recent live birth or stillbirth in the 3 years before the survey; however, this proportion differed between women in urban (71%) and rural (44%) areas. Over half of women received ANC during the first trimester of pregnancy (56%), with variations between urban (71%) and rural (49%) areas. Women had been pregnant for a median of 3.5 months at their first antenatal care visit (2.9 months in urban areas and 3.8 months in rural areas).

5.1.3 Components of ANC

Among women age 15-49 with a live birth or stillbirth in the 3 years before the survey who received ANC during the pregnancy for their most recent live birth or stillbirth, most received critical components of care at least once: 89% of women had their blood pressure measured, 71% had a blood sample taken, and 65% had a urine sample taken (**Figure 5.2**).

The survey also collected information on selected services provided during ANC visits with respect to the importance of early initiation of breastfeeding, the importance of exclusive breastfeeding, and the importance of a balanced diet during pregnancy (**Table 5.4**). Two-thirds of women received advice on the importance of maintaining a balanced diet during pregnancy (67%), and more than half reported that they received advice on the importance of exclusive breastfeeding and early initiation of breastfeeding (53% each).

Figure 5.2 **Components of antenatal care**

Among ever-married women who received ANC for their most recent live birth or stillbirth, the percentage with selected services

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Urban women were more likely to receive advice on the importance of early initiation of breastfeeding, the importance of exclusive breastfeeding, and the importance of a balanced diet during pregnancy (61%, 62%, and 74%, respectively) than their rural counterparts (49%, 49%, and 63%, respectively). Highly educated and wealthier women were more likely to have received advice on the importance of a balanced diet during pregnancy (85% each) than uneducated women (55%) and the poorest women (47%) (**Table 5.4**).

Iron Tablets/Syrup and Intestinal Parasite Drugs

As shown in **Table 5.4**, about 7 in 10 women (68%) took iron tablets or syrup during the pregnancy for their most recent live birth or stillbirth in the 3 years before the survey, but only 2% took intestinal deworming drugs. There are substantial variations in iron supplementation by background characteristics. Women pregnant with their first child (75%), urban women (75%), highly educated women (86%), and wealthier women (84%) were more likely to have taken iron tablets or syrup during pregnancy than women with second- or higher-order pregnancies, rural women, less educated women, and poorer women. By region, women in Khyber Pakhtunkhwa were more likely to take iron supplements (72%) than women in Balochistan (53%).

5.1.4 Protection against Neonatal Tetanus

Protection against neonatal tetanus

The number of tetanus toxoid injections needed to protect a baby from neonatal tetanus depends on the mother's vaccinations. A birth is protected against neonatal tetanus if the mother has received any of the following:

- Two tetanus toxoid injections during the pregnancy
- Two or more injections, the last one within 3 years of the birth
- Three or more injections, the last one within 5 years of the birth
- Four or more injections, the last one within 10 years of the birth
- Five or more injections at any time prior to the birth

Sample: Last live births and stillbirths in the 3 years before the survey to women age 15-49
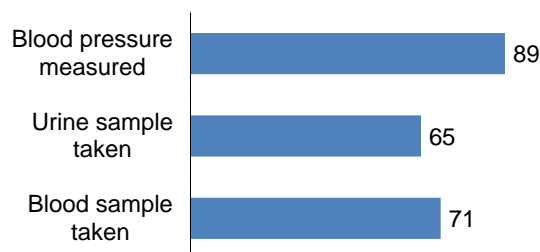
Seventy percent of women's most recent live births or stillbirths in the 3 years before the survey were protected against neonatal tetanus (**Table 5.5**).

Patterns by background characteristics

- Tetanus toxoid coverage increases with increasing education, from 57% among women with no education to 90% among those with more than a secondary education.

- Tetanus toxoid coverage also increases with increasing wealth, from 46% among women in the lowest wealth quintile to 91% among those in the highest quintile.

- Only 30% of live births or stillbirths in Balochistan are protected against neonatal tetanus, compared with 81% in Punjab. Protection against neonatal tetanus is highest in Azad Jammu and Kashmir (85%).

5.2   DELIVERY SERVICES

5.2.1   Institutional Deliveries

Institutional deliveries
Deliveries that occur in a health facility.
Sample: Most recent live births in the 3 years before the survey

Table 5.6 shows that in Pakistan, 71% of the most recent live births in the 3 years before the survey were delivered in a health facility. Forty-three percent of deliveries took place in private facilities, and only 29% took place in government facilities.

Trends: There has been substantial improvement over time in the percentage of deliveries in health facilities; institutional deliveries increased from 37% to 71% between 2006-07 and 2019 (**Figure 5.3**).

Patterns by background characteristics

- First-order births were more likely to be delivered in a health facility (83%) than sixth- and higher-order births (56%) (**Table 5.6**).

Figure 5.3 **Trends in place of birth**

Percentage of live births in the 3 years before the survey

	1990-91 PDHS	2006-07 PDHS	2012-13 PDHS	2017-18 PDHS	2019 PMMS
Delivered in health facility	14	37	53	70	71
Delivered at home	85	62	47	30	29

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

- Eighty-six percent of the most recent births to mothers with four or more ANC visits were delivered in a health facility, compared with only 29% of births to women with no ANC visits.
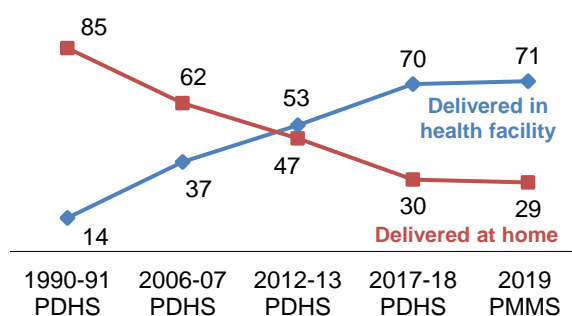
- Major differences persist according to mother's educational status; more than 9 in 10 births to women with a higher education occurred in a health facility, compared with less than 6 in 10 births to women with no education (58%) (**Figure 5.4**).

- The percentage of births delivered in a health facility was higher in urban areas (83%) than in rural areas (65%). Births to women in the highest wealth quintile were more likely to occur in a health facility (90%) than births to women in the lowest quintile (46%) (**Table 5.6**).

- The proportion of deliveries taking place in a health facility was highest in Punjab (75%) and lowest in Balochistan (51%).

Figure 5.4 **Health facility births by education**

Percentage of live births in the 3 years before the survey that were delivered in a health facility

No education 58
Primary 79
Middle 81
Secondary 88
Higher 93
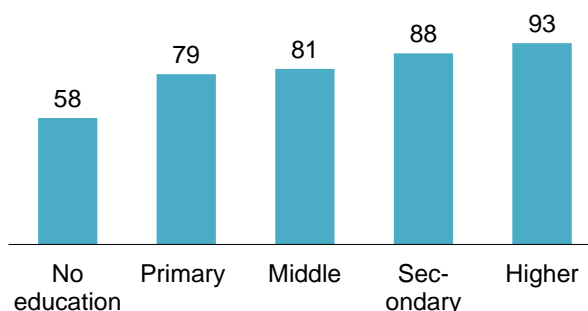
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

5.2.2 Skilled Assistance during Delivery

Skilled assistance during delivery

Births delivered with the assistance of an obstetrician/specialist, doctor, nurse/midwife/lady health visitor, or community midwife.

Sample: All live births, stillbirths, miscarriages, and abortions in the 3 years before the survey

In Pakistan, 74% of live births (**Table 5.7**), 86% of stillbirths (**Table 5.8.1**), and 67% of abortions or care after miscarriages (**Table 5.8.2**) were assisted by a skilled provider.

Figure 5.5 shows that the majority of births were attended by an obstetrician/specialist (37%), doctor (23%), or other skilled health care provider (14%). However, a considerable proportion of births were attended by a dai or traditional birth attendant (21%) (**Table 5.7**).

Patterns by background characteristics

- Eighty-five percent of first births were delivered by a skilled provider, compared with 60% of sixth- and higher-order births.

- Births to women with four or more ANC visits were almost three times as likely to be attended by a skilled provider as births to women with no ANC visits (88% and 32%, respectively).

Figure 5.5 **Assistance during delivery**

Percent distribution of most recent live births in the 3 years before the survey

No one <1%
Relative/other 5%
Obstetrician/specialist 37%
Dai/TBA 21%
Doctor 23%
Nurse/midwife/LHV/CMW 14%
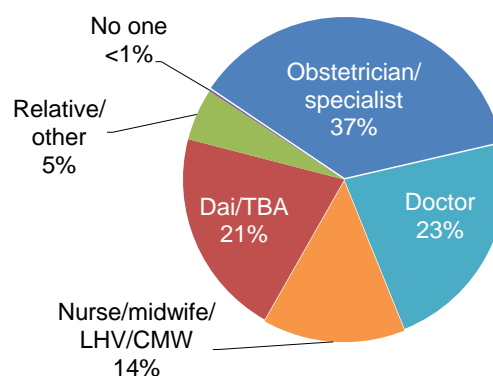
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan
Percentages may not add up to 100 due to rounding.

- Women with one to three ANC visits were more likely to have their most recent abortions or care after miscarriages provided by a skilled provider (75%) than women with no ANC visits (51%) (**Table 5.8.2**).

- By region, births in Balochistan are least likely to be assisted by a skilled provider (55%). Notably, a higher proportion of births in Balochistan (34%) than in the other regions (26% or below) are assisted

by traditional birth attendants. The percentage of deliveries assisted by relatives, friends, or others is higher in Gilgit Baltistan (20%) than in Azad Jammu and Kashmir (5%).

- The proportion of births attended by a skilled provider increases with increasing educational attainment, from 61% among mothers with no education to 94% among those with a higher education (**Figure 5.6**).

- The proportion of deliveries assisted by skilled providers is almost twice as high in the highest wealth quintile (92%) as in the lowest quintile (48%).

5.2.3 Delivery by Caesarean

Among the most recent live births in the 3 years preceding the survey, 23% were delivered by caesarean section (C-section). The percentage of planned C-sections was higher (16%) than the percentage that were decided after the onset of labour (7%) (**Table 5.9**).

***Figure 5.6* Skilled assistance at delivery by mother's education**

Percentage of most recent live births in the 3 years before the survey assisted by a skilled provider

| No education | Primary | Middle | Secondary | Higher |
| 61 | 82 | 85 | 90 | 94 |

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Patterns by background characteristics

- The C-section delivery rate is twice as high for births in private facilities (41%) than public facilities (20%).

- C-section deliveries are almost twice as prevalent in urban areas (34%) as in rural areas (18%).

- Women with a higher education are more than three times as likely to have a C-section delivery (46%) as women with no education (14%).

- The percentage of C-section deliveries is lowest in Khyber Pakhtunkhwa (7%) and highest in Azad Jammu and Kashmir (32%).

- Births to women in the highest wealth quintile are more likely to be delivered by C-section (43%) than births to women in the lowest quintile (8%).

Pregnancy Outcomes

Eighty-four percent of pregnancies in the 3 years preceding the survey ended in a live birth, 3% resulted in a stillbirth, and 14% ended in a miscarriage or abortion (**Table 5.10**).

5.3 POSTNATAL CARE

5.3.1 Postnatal Health Check for Mothers

Appropriate care during the postpartum period is critical for both maternal and newborn survival and well-being. Postnatal care (PNC) is recognised as an integral component of comprehensive maternal and child health care. However, the postnatal period is often considered the "most neglected period" in the maternal and child health care continuum (WHO 2014). In the 2019 PMMS, women were asked whether they received postnatal checks during the 2 months following delivery for the most recent birth, miscarriage, or abortion in the 3 years preceding the survey. They were also asked about the timing of PNC, the type of provider from whom they received a check, and the place where they received their first check. It is recommended that women receive at least three postnatal check-ups, the first within 24 hours of delivery, the second on the third day after delivery, and the third on the seventh day after delivery.

Table 5.11 shows that 69% of women age 15-49 who gave birth in the 2 years preceding the survey reported having a postnatal check in the first 2 days after birth, with most checks occurring within 4 hours of delivery (63%). However, 29% of women did not receive any postnatal care after delivery.

Patterns by background characteristics

▪ Early postnatal care decreases as birth order increases; 76% of women with first-order births received a postnatal check during the first 2 days after birth, compared with only 57% of women with sixth- or higher-order births.

▪ Eighty-one percent of women who delivered in a health facility received a postnatal check within 2 days after delivery, compared with only 39% of women who delivered elsewhere.

▪ Women in the highest wealth quintile were more likely to receive postnatal care within 2 days of delivery (86%) than women in the lowest quintile (53%).

▪ Eighty percent of urban women and 64% of rural women received a postnatal check within 2 days after delivery.

▪ Only 31% of women in Balochistan received an appropriately timed first postnatal check, compared with 81% of women in Punjab.

Type of Provider

Postnatal care from a skilled provider is important to diagnose problems or complications during the postpartum period and recommend appropriate treatment or referral. About three-fifths (59%) of women who gave birth in the 2 years before the survey received their first postnatal check from a skilled provider (obstetrician/specialist, doctor, nurse, midwife, lady health visitor, or community midwife). Seventy-three percent of women in urban areas received their first postnatal check from a skilled provider, compared with 53% of women in rural areas (**Table 5.12**).

5.3.2 Complete Maternity Care

Table 5.13 illustrates the complete continuum of maternity care, including antenatal care, assistance at delivery, and postnatal care from a skilled provider. The 2019 PMMS results show that 57% of women received complete maternity care. However, 5% of women reported receiving none of the three maternity care services.

Patterns by background characteristics

▪ Complete maternity care decreases as birth order increases, from 69% for first-order births to 47% for sixth- and higher-order births (**Figure 5.7**).

▪ Seven in 10 births to urban women receive complete maternity care (72%), compared with 51% of births to rural women.

Figure 5.7 **Skilled assistance during ANC, delivery, and PNC by birth order**

Percentage of most recent live births or stillbirths in the 3 years before the survey that were delivered by a skilled provider

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

▪ Births to women with a higher education (83%) and those in the highest wealth quintile (81%) are more likely to receive complete maternity care than births to women with no education (43%) and those in the lowest wealth quintile (34%).
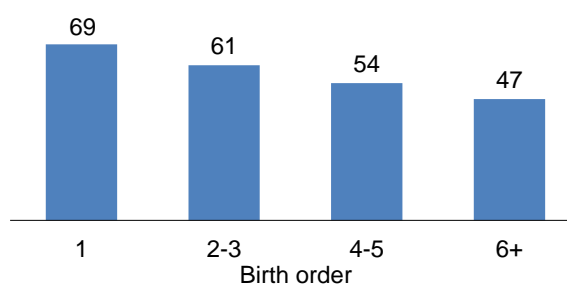
- One-fourth of births to women in Balochistan receive complete maternity care (25%), compared with two-thirds of births to women in Punjab and Azad Jammu and Kashmir (66% each).

LIST OF TABLES

For more information on maternal health care, see the following tables:

Table 5.1 Antenatal care

Percent distribution of ever-married women age 15-49 who had a live birth in the 3 years preceding the survey by antenatal care (ANC) provider during the pregnancy for the most recent birth and percentage receiving antenatal care from a skilled provider for the most recent birth, according to background characteristics, Pakistan MMS 2019

| Background characteristic | Antenatal care provider | | | | | | No ANC | Total | Percentage receiving antenatal care from a skilled provider[1] | Number of women |
	Obste-trician/ specialist	Doctor	Nurse/mid-wife/lady health visitor	Community midwife	Dai/TBA	Other				
Age at birth										
<20	35.3	41.9	13.5	0.4	1.2	0.7	7.1	100.0	91.0	447
20-34	47.9	32.5	11.2	0.2	0.8	0.4	7.1	100.0	91.7	3,690
35-49	41.0	31.6	15.0	0.5	0.5	0.7	10.7	100.0	88.1	620
Birth order										
1	49.4	36.2	11.0	0.0	0.0	0.1	3.3	100.0	96.7	1,014
2-3	49.3	31.0	10.3	0.3	0.7	0.3	8.1	100.0	90.9	1,845
4-5	43.9	33.4	12.4	0.2	1.6	1.0	7.4	100.0	90.0	1,183
6+	34.6	34.4	16.5	0.5	0.6	0.8	12.6	100.0	85.9	714
Residence										
Urban	57.0	31.5	6.8	0.1	0.6	0.5	3.5	100.0	95.4	1,559
Rural	40.3	34.1	14.4	0.3	0.9	0.5	9.6	100.0	89.1	3,197
Education										
No education	35.8	34.7	14.6	0.4	1.3	0.8	12.4	100.0	85.5	2,439
Primary	45.5	34.1	15.0	0.3	0.0	0.2	4.9	100.0	94.9	833
Middle	55.4	33.5	8.3	0.0	0.3	0.3	2.2	100.0	97.2	408
Secondary	59.7	32.5	6.1	0.0	0.7	0.0	1.0	100.0	98.3	499
Higher	69.5	26.0	3.8	0.0	0.0	0.0	0.7	100.0	99.3	577
Wealth quintile										
Lowest	33.2	29.1	16.7	0.0	2.1	1.0	17.9	100.0	79.0	1,023
Second	31.2	36.9	18.1	0.9	0.8	0.4	11.7	100.0	87.1	954
Middle	43.3	39.3	11.2	0.3	0.3	0.7	4.8	100.0	94.1	965
Fourth	56.6	33.0	8.4	0.0	0.0	0.2	1.8	100.0	98.0	975
Highest	68.0	27.2	4.0	0.0	0.6	0.0	0.2	100.0	99.2	839
Region										
Punjab[2]	54.2	27.1	14.7	0.3	0.8	0.4	2.5	100.0	96.4	2,426
Urban	66.4	22.9	8.3	0.0	0.4	0.4	1.6	100.0	97.6	823
Rural	48.0	29.3	18.0	0.4	1.0	0.4	2.9	100.0	95.7	1,603
Sindh	41.7	40.5	6.8	0.0	0.9	0.7	9.3	100.0	89.0	1,067
Urban	47.9	41.9	4.1	0.0	1.0	0.9	4.2	100.0	93.9	506
Rural	36.1	39.3	9.1	0.0	0.9	0.6	13.9	100.0	84.5	561
Khyber Pakhtunkhwa[3]	31.2	41.0	12.4	0.5	0.1	0.6	14.3	100.0	85.0	988
Urban	44.5	40.4	8.4	0.6	0.0	0.0	6.1	100.0	93.9	154
Rural	28.7	41.1	13.2	0.4	0.2	0.7	15.8	100.0	83.4	834
Balochistan	39.8	30.7	5.1	0.2	2.3	0.0	21.9	100.0	75.8	275
Urban	41.2	37.7	5.3	0.7	1.1	0.0	13.9	100.0	85.0	76
Rural	39.2	28.0	5.1	0.0	2.7	0.1	25.0	100.0	72.2	199
Total[4]	45.8	33.2	11.9	0.2	0.8	0.5	7.6	100.0	91.2	4,756
Azad Jammu and Kashmir	68.3	24.7	4.0	0.1	0.2	0.4	2.2	100.0	97.1	647
Urban	69.9	25.6	1.0	0.5	0.7	0.8	1.5	100.0	97.0	90
Rural	68.0	24.6	4.5	0.0	0.2	0.4	2.4	100.0	97.1	557
Gilgit Baltistan	38.3	44.7	2.5	0.0	0.6	0.1	13.8	100.0	85.5	572

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
TBA = Traditional birth attendant
[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.2.1 Antenatal care: Miscarriage and abortion

Percent distribution of ever-married women age 15-49 who had a miscarriage or abortion in the 3 years preceding the survey by antenatal care (ANC) provider during the pregnancy for the most recent miscarriage or abortion, and percentage receiving antenatal care from a skilled provider for the most recent miscarriage or abortion, according to background characteristics, Pakistan MMS 2019

Background characteristic	Antenatal care provider							Percentage receiving antenatal care from a skilled provider[1]	Number of women
	Obstetrician/ specialist	Doctor	Nurse/ midwife/ lady health visitor	Dai/TBA	Other	No ANC	Total		
Age at miscarriage or abortion									
<20	22.9	32.6	22.5	0.0	0.0	22.0	100.0	78.0	56
20-34	35.2	22.6	10.2	1.5	0.9	29.5	100.0	68.0	447
35-49	30.2	16.4	16.0	0.5	0.5	36.6	100.0	62.5	127
Pregnancy order									
1	46.4	18.5	10.3	1.3	0.0	23.5	100.0	75.2	106
2-3	34.8	24.2	12.5	0.6	0.6	27.2	100.0	71.6	175
4-5	32.6	25.2	11.3	0.7	1.9	28.3	100.0	69.2	164
6+	24.2	19.9	14.7	2.1	0.3	38.8	100.0	58.8	185
Residence									
Urban	43.1	19.5	11.3	0.5	1.0	24.6	100.0	73.9	233
Rural	27.2	23.8	13.2	1.6	0.6	33.6	100.0	64.2	398
Education									
No education	24.6	24.2	16.3	2.3	0.9	31.8	100.0	65.1	279
Primary	22.2	26.4	14.1	0.5	0.0	36.7	100.0	62.8	126
Middle	42.7	16.6	8.7	0.8	0.0	31.1	100.0	68.1	59
Secondary	35.2	19.3	10.8	0.0	0.0	34.6	100.0	65.4	66
Higher	63.0	16.7	3.2	0.0	2.3	14.8	100.0	82.9	101
Wealth quintile									
Lowest	22.7	23.7	18.2	3.1	0.5	31.7	100.0	64.6	112
Second	25.4	24.3	16.9	0.0	0.0	33.4	100.0	66.6	107
Middle	21.7	23.9	18.5	2.7	1.2	31.9	100.0	64.2	146
Fourth	35.8	22.9	5.4	0.0	0.9	34.9	100.0	64.1	136
Highest	58.2	16.6	4.6	0.0	0.8	19.7	100.0	79.4	130
Region									
Punjab[2]	40.7	16.1	16.7	0.6	1.1	24.8	100.0	73.5	366
Urban	54.0	13.3	16.5	0.1	1.6	14.6	100.0	83.7	147
Rural	31.8	17.9	16.8	0.9	0.8	31.7	100.0	66.6	219
Sindh	24.1	31.9	8.1	1.7	0.5	33.7	100.0	64.1	117
Urban	22.5	32.9	2.2	1.0	0.0	41.4	100.0	57.6	63
Rural	26.0	30.7	14.9	2.6	1.1	24.6	100.0	71.6	54
Khyber Pakhtunkhwa[3]	19.7	32.1	6.3	2.6	0.0	39.4	100.0	58.1	127
Urban	26.9	22.3	2.5	3.6	0.0	44.6	100.0	51.8	13
Rural	18.8	33.3	6.7	2.4	0.0	38.8	100.0	58.8	114
Balochistan	31.2	15.9	1.3	0.0	0.0	51.6	100.0	48.4	21
Urban	34.0	23.5	2.9	0.0	0.0	39.6	100.0	60.4	9
Rural	(29.0)	(9.7)	(0.0)	(0.0)	(0.0)	(61.3)	100.0	(38.7)	11
Total[4]	33.1	22.2	12.5	1.2	0.7	30.3	100.0	67.8	631
Azad Jammu and Kashmir	48.0	21.8	3.9	0.0	0.0	26.4	100.0	73.6	83
Urban	(51.3)	(18.1)	(6.6)	(0.0)	(0.0)	(24.0)	100.0	(76.0)	16
Rural	(47.2)	(22.6)	(3.3)	(0.0)	(0.0)	(26.9)	100.0	(73.1)	68
Gilgit Baltistan	39.3	14.1	5.9	0.0	0.0	40.7	100.0	59.3	65

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation. Figures in parentheses are based on 25-49 unweighted cases.
TBA = Traditional birth attendant
[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.2.2 Antenatal care: Stillbirths

Percent distribution of ever-married women age 15-49 who had a stillbirth in the 3 years preceding the survey by antenatal care (ANC) provider during the pregnancy for the most recent stillbirth, and percentage receiving antenatal care from a skilled provider for the most recent stillbirth, according to residence, Pakistan MMS 2019

| Residence | Antenatal care provider | | | | | No ANC | Total | Percentage receiving antenatal care from a skilled provider[1] | Number of women |
	Obstetrician/ specialist	Doctor	Nurse/ midwife/lady health visitor	Dai/TBA	Other				
Urban	55.9	32.6	7.3	0.0	0.1	4.1	100.0	95.8	33
Rural	31.1	38.7	18.1	1.8	2.9	7.5	100.0	87.9	80
Total[2]	38.4	36.9	14.9	1.2	2.1	6.5	100.0	90.2	113

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
TBA = Traditional birth attendant
[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.
[2] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.2.3 Providers among those receiving antenatal care

Percent distribution of pregnancies among ever-married women age 15-49 who had a pregnancy in the 3 years preceding the survey and received antenatal care by source of antenatal care, according to background characteristics, Pakistan MMS 2019

| Background characteristic | Source of antenatal care | | | | | | | Percentage receiving antenatal care from a skilled provider[1] | Number of pregnancies |
	Obstetrician/ specialist	Doctor	Nurse/ midwife/ lady health visitor	Community midwife	Dai/TBA	Other	Total		
Age at birth									
<20	37.3	44.2	15.8	0.3	1.1	1.1	100.0	97.7	473
20-34	51.2	34.7	12.4	0.2	1.0	0.5	100.0	98.5	3,812
35-49	45.7	35.2	17.4	0.5	0.6	0.7	100.0	98.7	656
Birth order									
1	51.2	35.4	13.0	0.0	0.1	0.3	100.0	99.6	961
2-3	52.5	34.7	11.6	0.3	0.5	0.4	100.0	99.1	1,679
4-5	49.5	35.4	11.9	0.0	2.0	1.1	100.0	96.8	1,273
6+	41.4	37.9	18.6	0.5	0.9	0.6	100.0	98.4	1,028
Residence									
Urban	58.9	32.0	7.9	0.1	0.6	0.6	100.0	98.8	1,712
Rural	44.0	37.6	16.3	0.3	1.1	0.6	100.0	98.3	3,229
Education									
No education	40.3	39.3	17.3	0.4	1.6	1.0	100.0	97.3	2,402
Primary	46.7	36.4	16.3	0.3	0.1	0.2	100.0	99.7	882
Middle	57.1	33.5	8.7	0.0	0.4	0.3	100.0	99.3	448
Secondary	59.7	32.7	6.9	0.0	0.6	0.0	100.0	99.4	545
Higher	70.6	25.3	3.8	0.0	0.0	0.4	100.0	99.6	663
Wealth quintile									
Lowest	39.5	35.2	21.2	0.0	2.6	1.4	100.0	96.0	953
Second	35.2	41.9	20.7	0.9	0.9	0.4	100.0	98.6	940
Middle	44.4	40.7	13.2	0.2	0.7	0.9	100.0	98.5	1,036
Fourth	57.6	33.7	8.4	0.0	0.0	0.3	100.0	99.7	1,062
Highest	68.6	26.6	4.1	0.0	0.5	0.1	100.0	99.4	950
Region									
Punjab[2]	55.3	27.1	16.0	0.2	0.8	0.6	100.0	98.6	2,685
Urban	66.8	22.3	9.9	0.0	0.4	0.6	100.0	99.1	954
Rural	48.9	29.7	19.4	0.4	1.0	0.6	100.0	98.4	1,731
Sindh	45.3	44.8	7.9	0.0	1.1	0.8	100.0	98.1	1,071
Urban	49.1	44.6	4.4	0.0	1.0	0.9	100.0	98.1	530
Rural	41.5	45.1	11.4	0.0	1.2	0.7	100.0	98.1	541
Khyber Pakhtunkhwa[3]	35.9	48.5	13.9	0.5	0.6	0.6	100.0	98.8	954
Urban	47.8	42.7	8.6	0.6	0.3	0.0	100.0	99.7	154
Rural	33.6	49.7	14.9	0.5	0.7	0.7	100.0	98.6	799
Balochistan	51.2	39.5	6.2	0.3	2.7	0.1	100.0	97.2	231
Urban	48.2	44.0	5.9	0.8	1.1	0.0	100.0	98.8	73
Rural	52.6	37.5	6.4	0.1	3.4	0.1	100.0	96.5	158
Total[4]	49.2	35.7	13.4	0.2	0.9	0.6	100.0	98.5	4,941
Azad Jammu Kashmir	69.0	26.2	4.1	0.1	0.2	0.4	100.0	99.4	706
Urban	70.6	25.7	1.9	0.5	0.7	0.7	100.0	98.7	102
Rural	68.8	26.3	4.5	0.0	0.2	0.3	100.0	99.5	604
Gilgit Baltistan	46.2	49.7	3.4	0.0	0.6	0.1	100.0	99.3	534

Note: If more than one source of ANC was mentioned, only the provider with the highest qualification is considered in this tabulation.
TBA = Traditional birth attendant
[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.3 Number of antenatal care visits and timing of first visit

Percent distribution of ever-married women age 15-49 who had a live birth or a stillbirth in the 3 years preceding the survey by number of antenatal care (ANC) visits for the most recent live birth or stillbirth and by the timing of the first visit, and among women with ANC, median months pregnant at first visit, according to residence, Pakistan MMS 2019

Number of ANC visits and timing of first visit	Residence		
	Urban	Rural	Total
Number of ANC visits			
None	3.5	9.5	7.5
1	4.4	11.3	9.0
2-3	21.2	35.5	30.8
4+	70.7	43.6	52.4
Don't know/missing	0.2	0.1	0.1
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	3.5	9.5	7.5
<4	71.4	48.9	56.3
4-5	15.4	22.1	19.9
6-7	7.2	14.0	11.7
8+	2.4	5.4	4.4
Don't know/missing	0.0	0.1	0.1
Total	100.0	100.0	100.0
Number of women	1,593	3,276	4,869
Median months pregnant at first visit (for those with ANC)	2.9	3.8	3.5
Number of women with ANC	1,536	2,965	4,501

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.4 Components of antenatal care

Among ever-married women age 15-49 with a live birth or stillbirth in the 3 years preceding the survey, percentages who took iron tablets or syrup and drugs for intestinal parasites during the pregnancy of the most recent live birth or stillbirth, and among women receiving antenatal care (ANC) for the most recent live birth or stillbirth in the 3 years preceding the survey, percentage receiving specific antenatal services, according to background characteristics, Pakistan MMS 2019

Background characteristic	Among women with a live birth or stillbirth in the past 3 years, percentage who during the pregnancy of their most recent live birth or stillbirth			Among women who received antenatal care for their most recent live birth or stillbirth in the past 3 years, percentage receiving selected services						
	Took iron tablets or syrup	Took intestinal parasite drugs	Number of women with a live birth or stillbirth in the past 3 years	Blood pressure measured	Urine sample taken	Blood sample taken	Impor-tance of early initiation of breast-feeding discussed	Impor-tance of exclusive breast-feeding discussed	Impor-tance of balanced diet discussed	Number of women with ANC for their most recent live birth or stillbirth
Age at birth										
<20	64.2	1.3	462	81.6	58.9	65.2	41.7	42.4	53.0	429
20-34	68.6	1.7	3,764	90.1	66.1	72.0	55.2	55.6	69.9	3,497
35-49	63.2	2.1	644	87.7	64.4	67.9	47.3	47.0	59.6	575
Birth order										
1	74.7	0.9	917	91.3	70.5	78.1	56.4	57.5	71.3	880
2-3	70.0	1.5	1,680	91.4	69.6	75.3	56.3	55.5	69.2	1,552
4-5	67.8	1.9	1,253	87.5	60.7	66.8	53.6	55.2	68.4	1,155
6+	56.5	2.4	1,019	84.6	58.2	61.4	42.8	43.0	57.0	915
Residence										
Urban	74.6	1.7	1,593	94.6	74.9	80.4	61.1	62.0	74.4	1,536
Rural	64.0	1.7	3,276	86.1	60.1	65.9	48.6	48.8	63.1	2,965
Education										
No education	58.5	1.6	2,520	83.0	55.4	59.8	40.1	40.3	54.6	2,212
Primary	68.3	1.5	843	90.8	64.4	72.0	61.3	63.0	73.4	803
Middle	75.8	4.0	416	93.3	72.4	80.1	59.8	60.9	73.9	407
Secondary	82.4	1.5	508	97.6	80.5	86.4	69.6	68.5	85.2	502
Higher	86.3	0.8	581	99.2	85.1	91.5	70.9	71.0	84.6	577
Wealth quintile										
Lowest	53.2	1.7	1,063	74.1	45.7	50.9	31.3	32.2	47.2	877
Second	58.4	2.3	983	87.2	55.4	57.5	46.0	46.1	59.3	869
Middle	66.2	2.0	985	89.5	61.4	70.4	50.7	51.1	64.1	937
Fourth	78.8	1.3	991	95.5	78.2	83.6	65.1	65.0	78.5	973
Highest	84.2	1.1	847	98.3	84.4	91.0	70.6	71.5	85.2	845
Region										
Punjab[1]	68.4	1.9	2,470	88.8	59.8	68.8	62.2	62.4	75.8	2,410
Urban	74.2	1.5	842	95.5	70.5	78.3	66.1	64.8	79.4	829
Rural	65.4	2.2	1,628	85.4	54.2	63.8	60.2	61.2	73.8	1,581
Sindh	65.2	1.9	1,095	87.1	69.6	75.6	50.4	52.8	60.7	993
Urban	75.8	2.2	515	93.6	82.1	85.3	60.2	65.0	73.2	493
Rural	55.8	1.6	580	80.8	57.3	66.1	40.7	40.9	48.4	500
Khyber Pakhtunkhwa[2]	71.8	1.0	1,020	92.6	76.3	74.3	32.1	31.5	54.7	877
Urban	81.9	1.0	156	95.6	80.3	84.5	43.5	46.2	64.6	147
Rural	70.0	1.0	863	92.0	75.6	72.2	29.8	28.5	52.7	730
Balochistan	52.8	1.3	284	84.9	59.6	58.3	44.2	42.3	47.5	221
Urban	57.3	1.7	79	90.1	65.5	62.5	44.5	40.7	43.6	68
Rural	51.1	1.2	205	82.6	57.0	56.5	44.1	43.0	49.2	153
Total[3]	67.5	1.7	4,869	89.0	65.2	70.8	52.9	53.3	66.9	4,501
Azad Jammu and Kashmir	78.6	1.2	660	96.0	85.8	88.7	64.2	68.2	80.3	645
Urban	88.0	0.6	92	97.5	94.1	95.8	65.8	68.4	82.6	90
Rural	77.1	1.3	568	95.8	84.5	87.6	63.9	68.1	79.9	555
Gilgit Baltistan	71.8	0.1	575	90.5	87.1	85.0	49.4	52.5	65.0	496

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.5 Tetanus toxoid injections

Among mothers age 15-49 with a live birth or stillbirth in the 3 years preceding the survey, percentage receiving two or more tetanus toxoid injections during the pregnancy for the most recent live birth/stillbirth and percentage whose most recent live birth or stillbirth was protected against neonatal tetanus, according to background characteristics, Pakistan MMS 2019

Background characteristic	Percentage receiving two or more injections during the pregnancy for the most recent live birth or stillbirth	Percentage whose most recent live birth or stillbirth was protected against neonatal tetanus[1]	Number of mothers
Age at birth			
<20	60.6	64.2	462
20-34	65.5	72.5	3,764
35-49	55.8	62.0	644
Birth order			
1	70.8	71.4	917
2-3	68.4	76.4	1,680
4-5	60.4	69.1	1,253
6+	54.0	61.0	1,019
Residence			
Urban	71.1	78.3	1,593
Rural	60.2	66.5	3,276
Education			
No education	51.6	57.0	2,520
Primary	70.0	78.4	843
Middle	77.3	85.3	416
Secondary	81.2	88.3	508
Higher	82.7	90.1	581
Wealth quintile			
Lowest	40.9	46.0	1,063
Second	54.9	62.0	983
Middle	67.8	75.1	985
Fourth	75.9	82.2	991
Highest	84.0	91.2	847
Region			
Punjab[2]	73.1	80.6	2,470
Urban	75.8	83.3	842
Rural	71.6	79.2	1,628
Sindh	59.5	65.7	1,095
Urban	72.0	78.7	515
Rural	48.4	54.2	580
Khyber Pakhtunkhwa[3]	55.8	61.7	1,020
Urban	61.1	69.7	156
Rural	54.9	60.2	863
Balochistan	28.0	30.2	284
Urban	34.6	38.7	79
Rural	25.4	26.9	205
Total[4]	63.8	70.4	4,869
Azad Jammu and Kashmir	79.5	85.1	660
Urban	68.9	79.2	92
Rural	81.2	86.0	568
Gilgit Baltistan	53.5	67.2	575

[1] Includes mothers with two injections during the pregnancy of their most recent live birth or stillbirth, or two or more injections (the last within 3 years of the most recent live birth or stillbirth), or three or more injections (the last within 5 years of the most recent live birth or stillbirth), or four or more injections (the last within 10 years of the most recent live birth or stillbirth), or five or more injections at any time prior to the most recent live birth or stillbirth
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.6 Place of delivery

Percent distribution of most recent live births in the 3 years preceding the survey by place of delivery and percentage delivered in a health facility, according to background characteristics, Pakistan MMS 2019

Background characteristic	Health facility		Home	Other	Total	Percentage delivered in a health facility	Number of live births
	Public sector	Private sector					
Mother's age at birth							
<20	30.0	43.7	26.3	0.0	100.0	73.7	447
20-34	28.7	42.9	28.3	0.1	100.0	71.5	3,690
35-49	26.4	40.0	33.4	0.2	100.0	66.4	620
Birth order							
1	28.3	54.5	17.2	0.0	100.0	82.8	1,014
2-3	29.6	44.7	25.6	0.1	100.0	74.3	1,845
4-5	28.5	36.6	34.6	0.3	100.0	65.1	1,183
6+	25.9	30.1	43.8	0.2	100.0	56.0	714
Antenatal care visits							
None	15.0	13.5	71.5	0.0	100.0	28.5	360
1-3	29.4	29.4	41.0	0.2	100.0	58.9	1,892
4+	29.8	56.6	13.5	0.1	100.0	86.4	2,496
Residence							
Urban	29.2	53.6	17.0	0.2	100.0	82.8	1,559
Rural	28.1	37.2	34.5	0.1	100.0	65.4	3,197
Education							
No education	24.9	33.4	41.6	0.1	100.0	58.3	2,439
Primary	36.5	42.0	21.5	0.0	100.0	78.5	833
Middle	34.2	46.6	18.5	0.6	100.0	80.9	408
Secondary	29.1	59.1	11.9	0.0	100.0	88.1	499
Higher	27.7	65.1	7.2	0.0	100.0	92.8	577
Wealth quintile							
Lowest	21.3	24.5	53.9	0.3	100.0	45.8	1,023
Second	30.3	34.3	35.4	0.0	100.0	64.6	954
Middle	32.0	41.0	27.0	0.0	100.0	73.0	965
Fourth	32.6	53.3	14.1	0.0	100.0	85.9	975
Highest	26.4	63.4	9.9	0.3	100.0	89.8	839
Region							
Punjab[1]	30.4	44.9	24.4	0.2	100.0	75.4	2,426
Urban	34.1	50.9	14.7	0.3	100.0	85.0	823
Rural	28.5	41.9	29.5	0.1	100.0	70.4	1,603
Sindh	20.2	52.4	27.3	0.0	100.0	72.7	1,067
Urban	18.5	66.3	15.2	0.0	100.0	84.8	506
Rural	21.8	39.9	38.2	0.1	100.0	61.7	561
Khyber Pakhtunkhwa[2]	34.1	30.2	35.5	0.2	100.0	64.3	988
Urban	37.0	36.4	26.5	0.1	100.0	73.4	154
Rural	33.5	29.1	37.2	0.2	100.0	62.6	834
Balochistan	23.3	27.9	48.8	0.0	100.0	51.2	275
Urban	32.1	32.5	35.5	0.0	100.0	64.5	76
Rural	20.0	26.1	53.9	0.0	100.0	46.1	199
Total[3]	28.5	42.6	28.8	0.1	100.0	71.1	4,756
Azad Jammu and Kashmir	44.9	31.5	23.5	0.2	100.0	76.3	647
Urban	56.3	30.9	12.8	0.0	100.0	87.2	90
Rural	43.0	31.5	25.2	0.2	100.0	74.6	557
Gilgit Baltistan	54.7	15.8	28.8	0.8	100.0	70.4	572

Note: Total includes 7 women with missing information on antenatal care visits.
[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.7 Assistance during delivery

Percent distribution of most recent live births in the 3 years preceding the survey by person providing assistance during delivery, and percentage of deliveries assisted by a skilled provider, according to background characteristics, Pakistan MMS 2019

Background characteristic	Obste-trician/ specialist	Doctor	Nurse/ midwife/ lady health visitor	Com-munity midwife	Dai/TBA	Lady health worker	Relative/ friend	No one	Total	Percent-age delivered by a skilled provider[1]	Number of births
Mother's age at birth											
<20	29.9	29.3	16.2	0.5	18.8	0.0	5.3	0.0	100.0	75.9	447
20-34	38.2	22.7	12.8	0.7	20.6	0.0	5.0	0.2	100.0	74.3	3,690
35-49	34.1	16.8	17.4	0.7	24.0	0.0	6.6	0.4	100.0	69.0	620
Birth order											
1	46.1	27.1	11.2	0.4	12.6	0.1	2.6	0.0	100.0	84.7	1,014
2-3	39.9	22.4	13.5	0.8	18.3	0.0	4.9	0.2	100.0	76.6	1,845
4-5	32.0	21.1	14.7	0.6	26.5	0.0	4.9	0.2	100.0	68.4	1,183
6+	24.0	18.6	16.1	0.8	29.7	0.0	10.2	0.6	100.0	59.6	714
Antenatal care visits											
None	13.1	6.8	10.9	1.3	46.3	0.0	21.2	0.3	100.0	32.1	360
1-3	24.7	19.1	17.9	0.7	30.7	0.0	6.6	0.2	100.0	62.4	1,892
4+	49.4	27.4	10.9	0.5	9.8	0.0	1.8	0.1	100.0	88.3	2,496
Place of delivery											
Health facility	51.3	31.4	16.3	0.1	0.8	0.0	0.1	0.0	100.0	99.1	3,380
Public facility	40.9	34.4	23.7	0.2	0.8	0.0	0.1	0.0	100.0	99.1	1,355
Private facility	58.2	29.5	11.3	0.1	0.8	0.0	0.1	0.0	100.0	99.1	2,025
Elsewhere	1.4	0.7	7.4	1.9	70.2	0.1	17.6	0.7	100.0	11.4	1,376
Residence											
Urban	49.6	24.1	10.4	0.7	13.3	0.1	1.5	0.2	100.0	84.9	1,559
Rural	30.6	21.7	15.3	0.6	24.5	0.0	7.0	0.2	100.0	68.3	3,197
Education											
No education	26.3	19.6	14.4	0.7	30.5	0.0	8.3	0.2	100.0	61.0	2,439
Primary	40.0	25.3	15.4	0.8	15.7	0.0	2.6	0.1	100.0	81.5	833
Middle	40.4	24.4	20.2	0.5	11.5	0.0	2.5	0.6	100.0	85.4	408
Secondary	50.9	27.6	10.9	0.8	8.1	0.0	1.6	0.1	100.0	90.2	499
Higher	62.2	25.2	6.3	0.0	5.3	0.1	0.8	0.1	100.0	93.7	577
Wealth quintile											
Lowest	19.1	14.3	13.6	0.6	42.0	0.0	10.3	0.2	100.0	47.5	1,023
Second	24.1	23.1	18.3	0.9	24.2	0.0	9.3	0.1	100.0	66.4	954
Middle	36.2	24.1	16.3	1.3	18.1	0.0	3.7	0.3	100.0	77.9	965
Fourth	49.7	26.7	12.3	0.3	9.9	0.0	1.1	0.1	100.0	89.0	975
Highest	58.9	25.4	7.3	0.0	7.2	0.0	0.8	0.3	100.0	91.6	839
Region											
Punjab[2]	41.9	19.1	16.8	0.2	20.8	0.0	1.1	0.1	100.0	78.0	2,426
Urban	56.1	17.5	12.1	0.2	13.1	0.0	1.0	0.0	100.0	85.9	823
Rural	34.6	19.9	19.3	0.2	24.8	0.0	1.2	0.2	100.0	73.9	1,603
Sindh	37.4	26.4	8.1	0.4	26.0	0.0	1.5	0.1	100.0	72.4	1,067
Urban	46.1	32.2	7.3	0.4	13.3	0.0	0.6	0.0	100.0	86.1	506
Rural	29.6	21.2	8.8	0.5	37.5	0.0	2.4	0.1	100.0	60.1	561
Khyber Pakhtunkhwa[3]	27.3	26.5	14.6	1.8	11.7	0.0	17.7	0.5	100.0	70.2	988
Urban	36.2	29.9	13.1	3.0	9.2	0.3	5.9	2.2	100.0	82.3	154
Rural	25.7	25.9	14.8	1.5	12.1	0.0	19.8	0.2	100.0	67.9	834
Balochistan	24.7	23.4	4.7	1.8	34.3	0.2	10.4	0.4	100.0	54.7	275
Urban	29.2	30.3	7.7	4.7	24.2	0.7	3.2	0.0	100.0	71.9	76
Rural	23.0	20.8	3.6	0.7	38.2	0.0	13.2	0.6	100.0	48.0	199
Total[4]	36.9	22.5	13.7	0.6	20.8	0.0	5.2	0.2	100.0	73.7	4,756
Azad Jammu and Kashmir	52.6	15.4	9.4	0.3	17.3	0.0	4.6	0.4	100.0	77.6	647
Urban	57.4	18.1	14.0	0.0	6.9	0.3	3.3	0.0	100.0	89.5	90
Rural	51.8	14.9	8.6	0.3	18.9	0.0	4.8	0.5	100.0	75.7	557
Gilgit Baltistan	19.2	19.7	29.9	0.2	6.1	0.4	20.4	4.0	100.0	69.1	572

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation. Total includes 7 women with missing information on antenatal care visits.
TBA = Traditional birth attendant
[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.8.1 Assistance during delivery of stillbirths

Percent distribution of most recent stillbirths in the 3 years preceding the survey by person providing assistance during delivery, and percentage of deliveries assisted by a skilled provider, according to background characteristics, Pakistan MMS 2019

| Background characteristic | Person providing assistance during delivery of stillbirths | | | | | | | | | Percent-age delivered by a skilled provider[1] | Number of stillbirths |
	Obste-trician/ specialist	Doctor	Nurse/ midwife/ lady health visitor	Com-munity midwife	Dai/TBA	Family welfare worker	Relative/ friend	No one	Total		
Antenatal care visits											
None	*	*	*	*	*	*	*	*	*	*	7
1-3	40.2	23.4	20.0	0.0	6.5	0.0	9.7	0.2	100.0	83.6	49
4+	47.5	31.3	14.1	0.0	3.4	3.6	0.0	0.0	100.0	93.0	57
Residence											
Urban	46.9	28.9	19.7	0.1	3.4	0.0	1.0	0.0	100.0	95.6	33
Rural	42.1	25.4	14.1	0.0	8.8	2.6	6.9	0.1	100.0	81.6	80
Total[2]	43.5	26.4	15.7	0.0	7.2	1.8	5.1	0.1	100.0	85.7	113

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
TBA = Traditional birth attendant
[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.
[2] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.8.2 Assistance during abortions and miscarriages

Percent distribution of most recent abortions or miscarriages in the 3 years preceding the survey by person providing assistance during abortions or care after miscarriages, and percentage of abortions or care after miscarriages by a skilled provider, according to background characteristics, Pakistan MMS 2019

Background characteristic	Obstetrician/ specialist	Doctor	Nurse/ midwife/ lady health visitor	Dai/ TBA	Lady health worker	Relative/ friend	No one	Total	Percentage of abortions or care after miscarriages by a skilled provider[1]	Number of miscarriages and abortions
Mother's age at birth										
<20	31.4	26.8	10.2	12.1	0.0	3.6	16.0	100.0	68.4	56
20-34	31.7	20.9	13.8	6.7	0.4	2.8	23.8	100.0	66.4	447
35-49	33.7	22.0	13.4	3.9	1.5	2.4	23.2	100.0	69.1	127
Birth order										
1	36.6	25.0	13.8	3.1	0.0	6.3	15.2	100.0	75.4	106
2-3	30.4	18.2	12.5	8.2	1.2	2.2	27.3	100.0	61.1	175
4-5	33.4	22.1	10.6	3.4	0.0	2.0	28.5	100.0	66.1	164
6+	29.9	22.5	16.6	9.9	0.8	2.0	18.3	100.0	69.0	185
Antenatal care visits										
None	19.4	20.0	11.1	7.2	0.8	3.7	37.8	100.0	50.5	191
1-3	38.0	20.8	16.0	5.3	0.6	2.5	16.8	100.0	74.8	377
4+	35.1	31.5	4.9	12.5	0.0	1.4	14.7	100.0	71.5	63
Residence										
Urban	42.0	20.1	11.3	5.8	1.6	2.3	17.0	100.0	73.4	233
Rural	26.3	22.5	14.6	7.1	0.0	3.0	26.4	100.0	63.4	398
Education										
No education	23.7	21.5	15.5	10.5	1.2	2.8	24.8	100.0	60.7	279
Primary	26.0	34.4	16.8	2.8	0.0	3.1	17.0	100.0	77.2	126
Middle	35.1	15.8	11.9	3.6	0.0	0.5	33.0	100.0	62.8	59
Secondary	37.5	20.8	9.1	7.9	0.0	7.0	17.7	100.0	67.4	66
Higher	57.6	9.9	7.2	1.4	0.2	0.9	22.8	100.0	74.7	101
Wealth quintile										
Lowest	28.3	19.9	16.8	10.0	0.0	1.7	23.4	100.0	65.0	112
Second	21.0	24.0	18.0	10.7	0.0	2.5	23.8	100.0	63.0	107
Middle	22.4	29.0	13.8	7.5	0.0	1.7	25.6	100.0	65.2	146
Fourth	32.9	24.4	13.8	3.3	1.1	3.6	20.8	100.0	71.1	136
Highest	54.3	10.0	5.9	2.8	1.6	4.2	21.2	100.0	70.2	130
Region										
Punjab[2]	38.8	13.8	18.1	6.8	0.5	0.6	21.3	100.0	70.7	366
Urban	50.0	9.2	16.4	6.9	1.3	1.5	14.7	100.0	75.6	147
Rural	31.4	16.9	19.3	6.8	0.0	0.0	25.7	100.0	67.6	219
Sindh	26.6	34.6	4.8	5.6	1.5	4.6	22.4	100.0	66.0	117
Urban	30.3	39.9	1.4	3.6	2.7	3.0	19.0	100.0	71.6	63
Rural	22.2	28.3	8.8	8.0	0.0	6.4	26.3	100.0	59.3	54
Khyber Pakhtunkhwa[3]	19.5	32.7	9.1	7.7	0.0	6.5	24.5	100.0	61.3	127
Urban	22.7	33.5	6.1	6.6	0.0	4.6	26.4	100.0	62.3	13
Rural	19.1	32.6	9.4	7.8	0.0	6.8	24.3	100.0	61.1	114
Balochistan	21.1	18.7	4.6	1.2	0.1	7.5	46.7	100.0	44.4	21
Urban	23.5	38.5	6.3	0.2	0.3	5.8	25.3	100.0	68.3	9
Rural	(19.3)	(2.8)	(3.2)	(1.9)	(0.0)	(8.9)	(63.9)	100.0	(25.3)	11
Total[4]	32.1	21.6	13.4	6.6	0.6	2.8	23.0	100.0	67.1	631
Azad Jammu and Kashmir	56.6	8.5	6.0	2.0	0.0	11.3	15.6	100.0	71.1	83
Urban	(47.3)	(18.3)	(2.4)	(0.0)	(0.0)	(4.2)	(27.8)	100.0	(68.0)	16
Rural	(58.7)	(6.2)	(6.9)	(2.5)	(0.0)	(12.9)	(12.8)	100.0	(71.8)	68
Gilgit Baltistan	31.7	17.6	17.5	4.0	0.0	7.5	21.5	100.0	66.8	65

Note: If the respondent mentioned more than one person attending during abortion or care after miscarriage, only the most qualified person is considered in this tabulation. Figures in parentheses are based on 25-49 unweighted cases.
TBA = Traditional birth attendant
[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.9 Caesarean section

Percentage of most recent live births in the 3 years preceding the survey for which instruments were used, percentage delivered by caesarean section (C-section), percentage delivered by C-section planned before the onset of labour pains, and percentage delivered by C-section decided on after the onset of labour pains, according to background characteristics, Pakistan MMS 2019

Background characteristic	Percentage for which instruments (forceps or vacuum) were used during delivery	Percentage delivered by C-section	Timing of decision to conduct C-section		Number of births
			Before onset of labour pains	After onset of labour pains	
Mother's age at birth					
<20	4.2	15.3	7.8	7.5	447
20-34	2.1	24.3	17.3	7.0	3,690
35-49	1.5	21.0	15.9	5.1	620
Birth order					
1	5.3	32.3	16.4	15.9	1,014
2-3	1.8	26.2	21.1	5.1	1,845
4-5	0.6	17.8	14.3	3.5	1,183
6+	1.8	10.4	6.8	3.6	714
Antenatal care visits					
None	0.3	2.1	1.2	0.9	360
1-3	1.4	12.1	8.1	4.0	1,892
4+	3.2	34.2	24.5	9.8	2,496
Place of delivery					
Health facility	3.2	32.4	22.9	9.6	3,380
Public facility	3.1	19.9	14.7	5.2	1,355
Private facility	3.2	40.8	28.4	12.4	2,025
Residence					
Urban	2.1	34.4	24.6	9.8	1,559
Rural	2.3	17.5	12.2	5.3	3,197
Education					
No education	1.9	13.7	8.9	4.8	2,439
Primary	2.3	27.6	20.8	6.8	833
Middle	3.2	24.2	20.2	4.0	408
Secondary	1.5	33.9	20.8	13.2	499
Higher	3.6	45.8	34.4	11.4	577
Wealth quintile					
Lowest	1.0	8.0	4.0	4.0	1,023
Second	3.5	13.4	9.3	4.2	954
Middle	2.1	20.3	14.9	5.4	965
Fourth	2.0	33.7	24.4	9.3	975
Highest	2.7	43.1	31.3	11.8	839
Region					
Punjab[1]	2.2	30.7	22.0	8.7	2,426
Urban	2.2	40.3	28.5	11.8	823
Rural	2.3	25.7	18.6	7.1	1,603
Sindh	1.4	24.7	16.8	7.9	1,067
Urban	1.4	35.7	26.6	9.0	506
Rural	1.4	14.8	7.9	6.9	561
Khyber Pakhtunkhwa[2]	3.3	6.9	4.6	2.3	988
Urban	4.6	11.4	6.4	5.0	154
Rural	3.1	6.0	4.2	1.8	834
Balochistan	1.5	7.6	6.1	1.5	275
Urban	0.6	8.6	5.5	3.0	76
Rural	1.8	7.2	6.3	0.9	199
Total[3]	2.2	23.1	16.3	6.8	4,756
Azad Jammu and Kashmir	4.0	31.9	21.7	10.2	647
Urban	3.0	37.7	31.5	6.2	90
Rural	4.1	31.0	20.1	10.9	557
Gilgit Baltistan	1.1	11.3	7.6	3.7	572

Note: The questions on instruments and C-section were asked only of women who delivered in a health facility. In this table, it is assumed that women who did not give birth in a health facility did not receive any interventions. Total includes 7 women with missing information on antenatal care visits.
[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.10 Pregnancy outcomes

Percent distribution of pregnancies ending in the 3 years preceding the survey by pregnancy outcome, according to background characteristics, Pakistan MMS 2019

Background characteristic	Pregnancy outcome				Total	Number of pregnancies
	Live birth	Stillbirth	Miscarriage	Abortion		
Mother's age at end of pregnancy						
<20	80.4	3.3	15.0	1.2	100.0	786
20-34	84.7	2.4	11.1	1.8	100.0	5,746
35-49	79.2	3.0	14.5	3.2	100.0	931
Pregnancy order						
1	82.4	3.9	12.4	1.3	100.0	1,513
2-3	86.1	2.3	10.4	1.2	100.0	2,581
4-5	84.1	1.9	11.8	2.2	100.0	1,844
6+	79.8	2.7	14.2	3.4	100.0	1,525
Residence						
Urban	81.8	2.4	13.4	2.4	100.0	2,405
Rural	84.4	2.7	11.2	1.7	100.0	5,058
Mother's education						
No education	84.7	3.2	10.4	1.6	100.0	3,871
Primary	81.6	2.0	13.8	2.6	100.0	1,317
Middle	82.2	3.2	12.0	2.6	100.0	653
Secondary	83.5	1.5	13.0	1.9	100.0	752
Higher	82.3	1.3	14.7	1.7	100.0	871
Wealth quintile						
Lowest	85.3	3.6	10.0	1.0	100.0	1,624
Second	84.6	2.5	11.5	1.4	100.0	1,489
Middle	82.9	2.6	11.6	3.0	100.0	1,575
Fourth	82.8	2.2	12.8	2.2	100.0	1,474
Highest	81.9	2.0	14.2	1.9	100.0	1,301
Region						
Punjab[1]	82.6	2.5	12.3	2.6	100.0	3,900
Urban	80.4	2.9	13.7	3.0	100.0	1,288
Rural	83.7	2.3	11.6	2.4	100.0	2,613
Sindh	84.2	2.5	12.1	1.2	100.0	1,625
Urban	82.4	1.7	14.0	1.9	100.0	766
Rural	85.8	3.1	10.5	0.6	100.0	859
Khyber Pakhtunkhwa[2]	84.4	2.8	11.5	1.4	100.0	1,529
Urban	87.3	1.6	9.3	1.8	100.0	232
Rural	83.9	3.0	11.9	1.3	100.0	1,297
Balochistan	86.8	3.4	9.6	0.2	100.0	409
Urban	81.1	3.6	14.7	0.6	100.0	120
Rural	89.2	3.4	7.5	0.0	100.0	289
Total[3]	83.6	2.6	11.9	1.9	100.0	7,463
Azad Jammu and Kashmir	83.9	2.7	11.2	2.3	100.0	935
Urban	81.4	2.1	12.8	3.7	100.0	143
Rural	84.3	2.8	10.9	2.0	100.0	793
Gilgit Baltistan	85.3	1.2	11.4	2.1	100.0	854

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.11 Timing of first postnatal check for the mother

Among ever-married women age 15-49 giving birth in the 2 years preceding the survey, percent distribution of the mother's first postnatal check for the most recent live birth by time after delivery, and percentage of women with a live birth in the 2 years preceding the survey who received a postnatal check in the first 2 days after giving birth, according to background characteristics, Pakistan MMS 2019

Background characteristic	Time after delivery of mother's first postnatal check[1]						No postnatal check[2]	Total	Percentage of ever-married women with a postnatal check during the first 2 days after birth[1]	Number of women
	Less than 4 hours	4-23 hours	1-2 days	3-6 days	7-41 days	Don't know/ missing				
Age at birth										
<20	58.8	3.0	4.4	1.2	1.9	0.2	30.6	100.0	66.1	364
20-34	63.9	3.8	2.3	0.5	1.4	0.4	27.7	100.0	70.1	2,905
35-49	59.6	2.4	1.4	0.3	1.6	0.5	34.1	100.0	63.4	446
Birth order										
1	68.6	5.3	1.9	0.8	0.9	0.5	22.0	100.0	75.7	840
2-3	65.4	4.1	3.1	0.4	1.8	0.4	24.7	100.0	72.6	1,460
4-5	58.3	2.7	2.3	0.5	1.6	0.1	34.5	100.0	63.2	904
6+	54.6	0.8	1.5	0.4	1.4	0.4	41.0	100.0	56.9	511
Place of delivery										
Health facility	74.6	4.4	1.5	0.4	1.8	0.5	16.8	100.0	80.5	2,677
Elsewhere	32.8	1.3	4.7	0.8	0.8	0.0	59.5	100.0	38.8	1,039
Residence										
Urban	74.1	4.1	1.9	0.5	1.6	0.3	17.6	100.0	80.0	1,161
Rural	57.8	3.4	2.6	0.6	1.5	0.4	33.8	100.0	63.8	2,555
Education										
No education	53.3	1.9	2.5	0.8	1.6	0.3	39.5	100.0	57.7	1,906
Primary	66.2	6.1	2.8	0.3	1.4	0.5	22.7	100.0	75.1	648
Middle	72.3	4.3	2.0	0.0	1.7	0.2	19.5	100.0	78.6	329
Secondary	79.4	3.2	2.4	0.0	0.7	0.2	14.2	100.0	84.9	384
Higher	77.8	6.6	1.9	0.6	1.8	0.6	10.6	100.0	86.3	448
Wealth quintile										
Lowest	48.0	1.4	4.0	0.8	1.3	0.4	44.2	100.0	53.3	825
Second	55.0	2.6	2.0	0.8	0.5	0.1	39.0	100.0	59.6	716
Middle	63.6	3.0	1.4	0.3	2.4	0.4	28.9	100.0	68.0	771
Fourth	71.4	6.7	2.8	0.5	1.3	0.4	16.9	100.0	81.0	757
Highest	79.9	4.5	1.5	0.4	2.1	0.4	11.2	100.0	85.9	646
Region										
Punjab[3]	72.7	4.8	3.0	0.4	1.4	0.3	17.4	100.0	80.5	1,915
Urban	78.0	5.1	1.4	0.5	1.7	0.1	13.3	100.0	84.4	612
Rural	70.3	4.7	3.8	0.3	1.2	0.4	19.3	100.0	78.7	1,303
Sindh	69.7	2.5	2.4	0.6	0.9	0.6	23.3	100.0	74.6	819
Urban	81.1	3.4	2.8	0.2	0.7	0.7	11.2	100.0	87.2	371
Rural	60.2	1.8	2.1	0.9	1.0	0.5	33.4	100.0	64.1	447
Khyber Pakhtunkhwa[4]	41.3	2.2	0.9	0.5	2.4	0.0	52.7	100.0	44.4	765
Urban	53.8	2.2	1.0	1.1	2.9	0.0	39.1	100.0	57.0	119
Rural	39.0	2.2	0.9	0.4	2.3	0.0	55.2	100.0	42.1	646
Balochistan	26.7	1.5	2.3	1.8	2.0	1.5	64.1	100.0	30.5	217
Urban	30.2	1.5	3.7	1.2	3.2	0.9	59.4	100.0	35.3	59
Rural	25.4	1.5	1.8	2.0	1.6	1.8	65.9	100.0	28.8	159
Total[5]	62.9	3.6	2.4	0.5	1.5	0.4	28.7	100.0	68.9	3,716
Azad Jammu and Kashmir	65.0	3.7	4.7	0.6	0.8	0.0	25.1	100.0	73.4	451
Urban	65.9	3.1	4.0	3.3	2.9	0.0	20.8	100.0	73.0	69
Rural	64.8	3.8	4.9	0.1	0.5	0.0	25.9	100.0	73.5	382
Gilgit Baltistan	34.3	4.1	2.9	0.7	1.2	0.0	56.8	100.0	41.3	455

[1] Includes women who received a check from an obstetrician/specialist, doctor, nurse, midwife, lady health visitor, community midwife, family welfare worker, lady health worker, or dai/traditional birth attendant
[2] Includes women who received a check after 41 days
[3] Punjab includes ICT.
[4] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[5] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.12 Type of provider of first postnatal check for the mother

Among ever-married women age 15-49 with a live birth or stillbirth in the 2 years preceding the survey, percent distribution by type of provider for the mother's first postnatal health check during the 2 days after the last live birth or stillbirth, according to background characteristics, Pakistan MMS 2019

| Background characteristic | Type of health provider of mother's first postnatal check | | | | | | No postnatal check during the first 2 days after the birth or stillbirth | Total | Percentage receiving postnatal care from a skilled provider[1] | Number of women |
	Obstetrician/ specialist	Doctor	Nurse/ midwife/ lady health visitor	Community midwife	Dai/TBA	Lady health worker				
Age at birth										
<20	14.3	20.4	20.7	0.0	10.6	0.0	33.9	100.0	55.4	379
20-34	22.5	16.2	20.9	0.2	10.2	0.0	30.0	100.0	59.8	2,967
35-49	19.1	15.9	20.7	0.0	8.3	0.0	36.0	100.0	55.7	463
Birth order										
1	27.0	23.4	18.3	0.1	6.4	0.0	24.7	100.0	68.8	768
2-3	23.7	17.4	21.4	0.1	9.4	0.0	28.0	100.0	62.6	1,328
4-5	17.4	13.9	22.6	0.1	13.3	0.0	32.6	100.0	54.1	962
6+	16.0	11.7	20.2	0.3	10.5	0.0	41.3	100.0	48.2	750
Place of delivery										
Health facility	29.1	22.7	27.6	0.1	1.1	0.0	19.4	100.0	79.5	2,752
Elsewhere	0.7	0.8	3.2	0.4	33.1	0.0	61.7	100.0	5.2	1,056
Residence										
Urban	30.0	19.4	23.3	0.2	6.9	0.0	20.1	100.0	73.0	1,189
Rural	17.3	15.4	19.7	0.1	11.4	0.0	36.1	100.0	52.5	2,619
Education										
No education	12.8	13.9	18.0	0.1	13.2	0.0	42.1	100.0	44.7	1,973
Primary	24.7	14.4	25.0	0.7	10.5	0.0	24.7	100.0	64.8	656
Middle	31.0	16.1	24.5	0.1	6.7	0.0	21.5	100.0	71.8	335
Secondary	29.9	28.4	23.3	0.0	3.4	0.0	15.0	100.0	81.6	393
Higher	38.5	21.8	22.6	0.0	3.3	0.0	13.9	100.0	82.8	452
Wealth quintile										
Lowest	10.2	9.5	16.6	0.1	17.7	0.0	45.8	100.0	36.4	859
Second	13.6	15.1	19.5	0.1	11.5	0.0	40.2	100.0	48.3	738
Middle	19.8	16.1	22.2	0.3	9.1	0.0	32.5	100.0	58.3	788
Fourth	31.1	21.4	22.4	0.2	5.7	0.0	19.1	100.0	75.1	769
Highest	34.5	22.7	24.6	0.0	4.1	0.0	14.0	100.0	81.8	654
Region										
Punjab[2]	27.9	13.9	24.9	0.2	13.5	0.0	19.6	100.0	67.0	1,953
Urban	38.5	12.6	25.4	0.2	7.5	0.0	15.8	100.0	76.7	629
Rural	22.9	14.6	24.6	0.2	16.3	0.0	21.4	100.0	62.3	1,324
Sindh	17.1	21.7	23.5	0.1	12.4	0.0	25.2	100.0	62.3	840
Urban	21.5	31.7	25.2	0.0	8.7	0.0	13.0	100.0	78.3	378
Rural	13.5	13.4	22.1	0.2	15.5	0.0	35.2	100.0	49.2	462
Khyber Pakhtunkhwa[3]	12.6	18.3	12.9	0.1	1.1	0.0	55.0	100.0	43.9	789
Urban	23.0	17.1	14.7	1.0	1.0	0.0	43.2	100.0	55.8	121
Rural	10.7	18.5	12.6	0.0	1.1	0.0	57.1	100.0	41.8	669
Balochistan	8.9	15.2	4.0	0.1	2.1	0.0	69.6	100.0	28.3	225
Urban	8.9	17.8	7.7	0.5	1.5	0.0	63.6	100.0	34.9	61
Rural	8.9	14.3	2.6	0.0	2.3	0.0	71.8	100.0	25.9	164
Total[4]	21.2	16.6	20.9	0.2	10.0	0.0	31.1	100.0	58.9	3,808
Azad Jammu and Kashmir	34.1	8.7	25.6	0.0	4.0	0.1	27.5	100.0	68.4	463
Urban	32.8	14.8	23.4	0.0	0.6	0.5	27.9	100.0	71.0	71
Rural	34.4	7.6	26.0	0.0	4.6	0.0	27.4	100.0	68.0	392
Gilgit Baltistan	9.8	12.7	16.9	0.0	1.4	0.4	58.8	100.0	39.4	457

TBA = Traditional birth attendant

[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.

[1] Punjab includes ICT.

[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.

[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 5.13 Combinations of antenatal care, assistance at delivery, and postnatal checks

Percent distribution of most recent live births or stillbirths in the 3 years preceding the survey by whether the mother received antenatal care (ANC) from a skilled provider, assistance at delivery from a skilled provider, and/or a postnatal check within 2 days after delivery, according to background characteristics, Pakistan MMS 2019

Background characteristic	ANC only	Assistance at delivery only	Postnatal check only	ANC and assistance at delivery only	ANC and postnatal check only	Assistance at delivery and postnatal check only	ANC, assistance at delivery, and postnatal check	None	Total	Number of live births or stillbirths
Mother's age at birth										
<20	9.1	1.4	0.6	18.5	9.2	2.8	53.7	4.7	100.0	462
20-34	11.2	1.5	1.5	13.3	8.6	0.9	58.6	4.3	100.0	3,764
35-49	15.0	2.1	1.8	13.1	6.9	1.5	53.3	6.4	100.0	644
Birth order										
1	6.6	1.0	0.2	14.0	6.5	0.6	68.6	2.5	100.0	917
2-3	9.2	1.2	1.6	13.8	8.1	1.4	60.5	4.2	100.0	1,680
4-5	12.3	2.2	2.1	13.4	10.1	1.1	53.5	5.3	100.0	1,253
6+	18.6	2.0	1.5	14.1	8.7	1.5	47.3	6.4	100.0	1,019
Number of months pregnant at time of first ANC visit										
No antenatal care	0.0	20.4	13.3	0.0	0.0	12.0	0.0	54.3	100.0	368
<4	8.0	0.0	0.1	14.2	6.4	0.3	70.7	0.2	100.0	2,740
4-5	15.1	0.1	1.4	16.8	12.8	0.0	53.2	0.6	100.0	971
6-7	23.2	0.2	0.7	13.0	14.5	1.0	45.1	2.2	100.0	572
8+	27.6	0.0	0.4	19.6	12.4	0.1	39.5	0.3	100.0	215
Residence										
Urban	6.7	0.7	0.9	11.4	5.6	1.4	71.6	1.6	100.0	1,593
Rural	13.8	2.0	1.7	15.0	9.8	1.1	50.5	6.1	100.0	3,276
Education										
No education	17.6	2.2	2.4	14.5	10.4	1.9	43.1	7.9	100.0	2,520
Primary	6.6	1.9	0.3	15.7	9.3	0.8	63.3	2.1	100.0	843
Middle	5.4	0.7	1.0	14.0	7.2	0.4	70.7	0.7	100.0	416
Secondary	4.1	0.2	0.4	11.0	4.0	0.3	79.0	1.1	100.0	508
Higher	2.9	0.4	0.0	10.2	3.2	0.1	83.0	0.2	100.0	581
Wealth quintile										
Lowest	21.8	2.1	4.4	11.4	12.6	2.1	33.5	12.2	100.0	1,063
Second	14.5	3.0	1.1	15.3	10.6	2.0	46.7	6.9	100.0	983
Middle	11.7	1.7	0.8	17.8	7.7	1.3	56.9	2.1	100.0	985
Fourth	4.4	0.8	0.2	13.7	5.7	0.4	74.2	0.6	100.0	991
Highest	3.0	0.2	0.4	10.6	4.7	0.0	80.9	0.2	100.0	847
Region										
Punjab[1]	7.0	0.5	1.2	10.7	12.1	0.5	66.4	1.5	100.0	2,470
Urban	5.3	0.5	1.0	10.0	7.1	0.6	75.2	0.4	100.0	842
Rural	7.9	0.6	1.3	11.1	14.7	0.4	61.9	2.0	100.0	1,628
Sindh	11.9	1.0	2.5	6.7	8.1	2.6	62.4	4.8	100.0	1,095
Urban	6.0	0.0	1.0	5.8	4.6	2.9	77.4	2.2	100.0	515
Rural	17.1	1.9	3.9	7.5	11.1	2.3	49.0	7.1	100.0	580
Khyber Pakhtunkhwa[2]	18.7	4.2	0.7	25.4	1.6	1.5	39.5	8.5	100.0	1,020
Urban	12.0	2.0	0.0	26.7	2.8	1.3	52.5	2.7	100.0	156
Rural	19.9	4.5	0.8	25.1	1.4	1.6	37.1	9.5	100.0	863
Balochistan	22.9	3.8	1.8	26.0	2.1	0.9	24.6	17.8	100.0	284
Urban	16.5	5.6	0.8	32.0	2.7	1.1	33.5	7.7	100.0	79
Rural	25.4	3.1	2.3	23.7	1.8	0.9	21.2	21.7	100.0	205
Total[3]	11.5	1.6	1.4	13.8	8.4	1.2	57.4	4.6	100.0	4,869
Azad Jammu and Kashmir	15.6	0.2	0.3	11.0	4.7	0.1	65.8	2.4	100.0	660
Urban	7.0	0.0	0.0	17.3	0.8	0.5	71.4	2.9	100.0	92
Rural	17.0	0.2	0.3	10.0	5.3	0.0	64.9	2.3	100.0	568
Gilgit Baltistan	18.1	2.1	0.4	26.6	2.0	1.4	38.8	10.6	100.0	575

Note: Total includes 3 women with missing information on number of months pregnant at time of first ANC visit.
[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

MATERNAL MORBIDITY

<div style="text-align:right">

6

</div>

Key Findings

- **_Complications during last pregnancy:_** The most common complications women reported during pregnancy were a feeling of extreme weakness (58%), body aches (44%), and lower abdominal pain and severe headache (42% each).

- **_Complications during last delivery:_** Major complications reported during delivery were prolonged labour pains (12%), laceration in the vagina (9%), and the baby not breathing and breech presentation of the baby (6% each).

- **_Complications during the postpartum period:_** A feeling of extreme weakness (48%), pallor (33%), and fever (32%) were the most common complications reported during the postpartum period.

- **_Morbidities before last pregnancy:_** 17% of women had severe anaemia and 11% had high blood pressure before their last pregnancy.

- **_Complications about which women were informed by a health provider:_** Women were most likely to be informed by health providers that they had high blood pressure (14%) and problems with the position of the baby (7%).

Health care services during pregnancy, during childbirth, and after delivery are important for the survival and well-being of both the mother and the baby. Pregnant women usually seek health care due to gestational hypertension, preeclampsia, superimposed hypertension, or chronic hypertension. Preeclampsia itself is a multi-organ disorder. Better management of hypertension at the facility level has greatly reduced the resultant mortality from this condition in pregnancy (Townsend and Khalil 2019; Backes et al. 2011; Megevand et al. 2019). There is substantial evidence that good antenatal care (ANC) during pregnancy saves lives among expectant mothers. The most important health services required to reduce the maternal mortality ratio to less than 70 per 100,000 births are ANC visits (four or more), in-facility deliveries, and skilled birth attendance (WHO 2016c; Kassebaum et al. 2016). In the post-devolution era, Pakistan's maternal, neonatal and child health (MNCH) programme, immunisation programme, nutrition programme, and National Programme for Family Planning and Primary Health Care, as well as the country's AIDS, tuberculosis, and malaria initiatives, all directly and indirectly address maternal health before and during pregnancy.

Currently, the federal government's Universal Health Coverage Benefit Package targets maternal health through evidence-based interventions at the community, primary, secondary, and tertiary health care levels (Kochhar et al. 2019; Asim et al. 2017; United Nations Foundation 2012). The 2019 PMMS asked women of reproductive age (15-49) about any major or minor morbidities or complications they experienced during pregnancy, delivery, or the postpartum period (within 42 days after the termination of pregnancy). Their treatment-seeking behaviour for these morbidities and complications was also explored. The

following section details information on women's self-reported symptoms and/or illnesses their health care provider informed them about. Women were also asked about any treatment they sought for those problems and whether they had experienced any complications or illnesses before the most recent pregnancy that occurred during the 3 years preceding the survey. A few small studies have shown that about 1 in 5 women in Pakistan reported a complication during their most recent pregnancy, including less than 1% who had severe anaemia and 15% who had moderate anaemia (Zafar et al. 2015; Majrooh et al. 2014; Baig-Ansari et al. 2008).

6.1 MATERNAL MORBIDITIES DURING PREGNANCY

Maternal morbidity

Defined as "any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman's wellbeing" (WHO 2013).

Sample: Women age 15-49 who had a live birth/stillbirth/miscarriage/abortion in the 3 years before the survey

Maternal health complications include any health problems reported by women during pregnancy, during childbirth, or within 42 days of the termination of a pregnancy. **Table 6.1** shows self-reported symptoms women experienced during their most recent pregnancy in the 3 years preceding the survey.

The most common complications experienced by women during their last pregnancy were a feeling of extreme weakness (58%), body aches (44%), lower abdominal pain and severe headache (42% each), and fever and shortness of breath after exercise or working (39% each).

Patterns by background characteristics

- The most commonly reported complication reported by both urban and rural women was a feeling of extreme weakness (56% and 59%, respectively).

- Differences in reported complications by urban-rural residence were generally small. Swelling of the ankles and feet was more common in urban areas (38%) than rural areas (32%). Conversely, blurring of vision was more common in rural areas (21% versus 14%), as were severe headache (44% versus 36%) and fever (41% versus 35%).

- Variations in health complications and morbidities were found among the regions. For example, 36% of women in Punjab reported having severe anaemia, compared with 24% in Balochistan. Shortness of breath after exercising or working was also relatively high in Punjab. Conversely, the percentage of women experiencing blurring of vision was higher in Balochistan (26%) than in Punjab (17%). Vaginal bleeding was reported less often by women in Balochistan (4%) than by women in the other regions (8-9%). Fever and cough were relatively high in Sindh, and excessive vomiting and body aches are relatively high in Khyber Pakhtunkhwa.

- The complication most often reported by women in Azad Jammu and Kashmir was a feeling of extreme weakness (61%). Lower abdominal pain was the most common complication mentioned by women in Gilgit Baltistan (59%).

- High blood pressure was reported least often by women in Gilgit Baltistan (11%) and most often by women in Azad Jammu and Kashmir (28%).

6.2 MATERNAL MORBIDITIES DURING DELIVERY

The 2019 PMMS results showed that maternal complications and morbidities were more common during pregnancy than during delivery overall. The most common complications during delivery were prolonged

labour pains (12%), laceration in the vagina (9%), the baby not breathing (6%), and breech presentation of the baby (6%) (**Table 6.2**).

Patterns by background characteristics

- The proportion of women who suffered from lacerations in the vagina was almost twice as high in urban areas (13%) as in rural areas (7%).

- The proportion of women who had prolonged labour pains was lowest in Sindh and Khyber Pakhtunkhwa (10% each) and by far the highest in Balochistan (23%).

- Excessive bleeding after delivery of the placenta is slightly higher among women in Balochistan and Sindh (6% each) than among women in Punjab and Khyber Pakhtunkhwa (4% each).

- The proportion of women with a breech presentation of the baby is higher in Punjab (7%) than in Sindh, Khyber Pakhtunkhwa, and Balochistan. Twelve percent of women in Azad Jammu and Kashmir had a breech presentation.

- The percentage of women who had a premature baby is highest in Sindh (7%), followed by Punjab (4%). This percentage is twice as high in Azad Jammu and Kashmir (10%) as in Gilgit Baltistan (5%).

6.3 MATERNAL MORBIDITIES DURING THE POSTPARTUM PERIOD

Table 6.3 presents 17 different types of self-reported health complications or morbidities during the first 40 days after delivery among ever-married women age 15-49 who had a live birth, stillbirth, miscarriage, or abortion during the 3 years preceding the survey. The four most common complications or morbidities are a feeling of extreme weakness (48%), pallor (33%), fever (32%), and increased frequency of urination (17%). Seven percent of women reported having heavy or excessive bleeding during the postpartum period, an important symptom of postpartum haemorrhage.

Patterns by background characteristics

- Women in Khyber Pakhtunkhwa were most likely to report a feeling of extreme weakness (56%), followed by women in Balochistan (50%), Punjab (48%), and Sindh (41%).

- Women in Khyber Pakhtunkhwa more often reported experiencing pallor than those in Sindh (45% versus 17%).

- Women in Balochistan more often reported heavy or excessive bleeding (9%) than women in the other regions. Women in Khyber Pakhtunkhwa were least likely to report this complication (4%).

- Eighteen percent of women in Gilgit Baltistan and 14% of women in Azad Jammu and Kashmir reported experiencing heavy or excessive bleeding during the postpartum period.

6.4 MATERNAL MORBIDITIES ABOUT WHICH WOMEN WERE INFORMED BY A HEALTH CARE PROVIDER

Table 6.4 shows the percentage of last live births, stillbirths, miscarriages, or abortions during the 3 years preceding the survey for which women were informed by a health care provider that they had complications at any time during pregnancy, during delivery, or within the first 40 days after delivery. Among all women, 14% were informed that they had high blood pressure, 7% that they had problems associated with the position of the baby, and 6% that there was slow intrauterine (inside the womb) growth of the baby (**Figure 6.1**).

Patterns by background characteristics

- The percentages of women informed about complications that they had by a health care provider are similar in urban and rural areas.

- Women in Punjab (17%) were more likely than women in Khyber Pakhtunkhwa (12%), Sindh (11%), and Balochistan (7%) to be informed by a health care provider that they had high blood pressure.

- The proportion of women who were informed by a health care provider that they had problems with the position of the baby was highest in Punjab (10%) and lowest in Sindh and Balochistan (4% each).

Figure 6.1 **Major maternal health complications that women were told by a health care provider that they had**

Percentage of last live births/stillbirths/ miscarriages/abortions in the 3 years preceding the survey

High blood pressure	14
Problems associated with position of baby	7
Slow growth of baby in womb	6
Uterine prolapse	4
Jaundice and/or hepatitis	3
Problem with placenta	3
Blood deficiency	3
Postpartum infections	2

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

- Women in Azad Jammu and Kashmir are almost three times as likely to be informed by a health care provider that they had high blood pressure as women in Gilgit Baltistan (21% versus 8%).

6.5 MORBIDITIES REPORTED BEFORE THE LAST PREGNANCY

Information about complications and morbidities before the last pregnancy among women age 15-49 who had a live birth, stillbirth, miscarriage, or abortion during the 3 years preceding the survey is presented in **Table 6.5**. Overall, women in Pakistan were most likely to have experienced severe anaemia (17%) and high blood pressure (11%) before their last pregnancy. Women in Azad Jammu and Kashmir were most likely to report severe anaemia, high blood pressure, and kidney problems (24%, 15%, and 14%, respectively).

Patterns by background characteristics

- Severe anaemia before pregnancy was higher among women in rural areas (18%) than women in urban areas (14%).

- The proportion of women who had a surgical operation other than a Caesarean section operation before their last pregnancy is higher in urban areas (8%) than in rural areas (5%).

- There are regional differences in the prevalence of severe anaemia, high blood pressure, and surgical operations. Women in Khyber Pakhtunkhwa (18%) were more likely to report having experienced

severe anaemia before their last pregnancy than women in Punjab (17%) and women in Balochistan and Sindh (14% each).

▪ Almost one-quarter of women in Azad Jammu and Kashmir (24%) reported having severe anaemia before their pregnancy, compared with 17% of women in Gilgit Baltistan.

6.6   MATERNAL COMPLICATIONS OR MORBIDITIES AND TREATMENT

Table 6.6 shows the percentage of women age 15-49 with a live birth, stillbirth, miscarriage, or abortion during the 3 years preceding the survey who reported one or more maternal complications or morbidities during pregnancy, delivery, or the postpartum period (up to 40 days after termination of the pregnancy). The table also presents information on complications diagnosed by a health care provider, treatment seeking behaviour for these complications, and women's experience of one or more complications before their last pregnancy.

A large proportion of women reported one or more complications during their last pregnancy (93%), delivery (34%), or postpartum period (73%). More than one-third (34%) of women experienced one or more complications at any time during pregnancy, delivery, or the postpartum period about which a health care provider informed them. Thirty-seven percent of women experienced one or more maternal health problems before conception.

Patterns by background characteristics

▪ There are considerable variations by region in women's experience of one or more complications. The proportion of women who experienced one or more complications during pregnancy or the postpartum period was highest among those in Khyber Pakhtunkhwa (95% and 76%, respectively) and lowest among those in Sindh (88% and 69%, respectively).

▪ The percentage of women reporting one or more complications during their last delivery was highest in Punjab (37%) and lowest in Khyber Pakhtunkhwa (29%). Forty-eight percent of women in Azad Jammu and Kashmir reported one or more complications during delivery, compared with 37% of women in Gilgit Baltistan.

▪ The percentage of women experiencing one or more complications before their last pregnancy increases with birth order, from 24% among women with first-order births to 42% among women with sixth- or higher-order births. The percentage of women who had one or more complications during their last delivery decreased from 41% among those with first-order births to 31% among those with second- or third-order births before increasing slightly to 35% among those with sixth- or higher-order births (**Figure 6.2**).

▪ Older women (age 35-49) were more likely than younger women (less than age 20) to report one or more complications before pregnancy (44% versus 27%).

***Figure 6.2* Complications during delivery by birth order**

Percentage of ever-married women who had a live birth/stillbirth in the 3 years before the survey

Birth order
1: 41
2-3: 31
4-5: 33
6+: 35
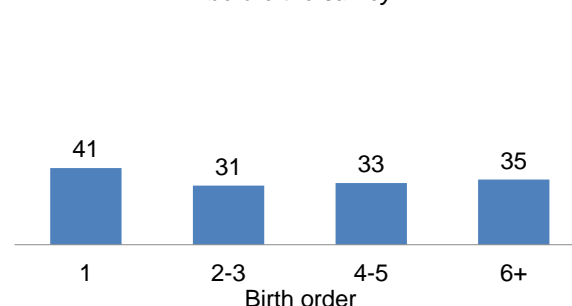
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

- Women in the lowest wealth quintile more often reported experiencing complications during the postpartum period (77%) than women in the highest wealth quintile (68%) (**Figure 6.3**).

- About two in five women with a middle education or higher were informed about one or more illnesses during pregnancy, delivery, or the postnatal period, compared with only 30% of women with no education. Women in the lowest wealth quintile were less likely (28%) than those in the highest quintile (39%) to report being told by a health care provider that they had one or more complications.

- Only 19% of women in Balochistan were informed about complications by a health care provider, compared with 41% of women in Punjab.

Figure 6.3 **Complications during the postpartum period by household wealth**

Percentage of ever-married women with live births/stillbirths/miscarriages/abortions in the 3 years before the survey
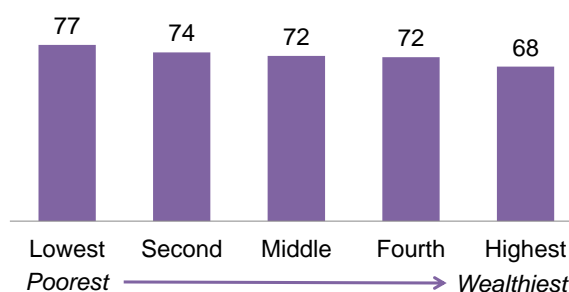
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

- Overall, 52% of women in Pakistan received treatment for one or more complications they experienced during pregnancy, delivery, or the postpartum period.

- The proportion of women who received treatment for one or more complications was relatively low among those with no education (48%), those in the lowest wealth quintile (44%), and those living in Balochistan (31%).

LIST OF TABLES

For more information on maternal morbidity, see the following tables:

- **Table 6.1**   **Maternal complications or morbidities reported by women during the last pregnancy**
- **Table 6.2**   **Maternal complications or morbidities reported by women during the last delivery**
- **Table 6.3**   **Maternal complications or morbidities reported by women during the postpartum period**
- **Table 6.4**   **Maternal health complications about which women were informed by a health care provider**
- **Table 6.5**   **Morbidities reported by women before the last pregnancy**
- **Table 6.6**   **Maternal complications or morbidities**

Table 6.1 Maternal complications or morbidities reported by women during the last pregnancy

Percentage of self-reported maternal health complications or morbidities during the last pregnancy among ever-married women age 15-49 who had a live birth/stillbirth/miscarriage/abortion during the 3-year period preceding the survey, by residence and region, Pakistan MMS 2019

Health complications and morbidities	Residence		Region					Azad Jammu and Kashmir	Gilgit Baltistan
	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtun-khwa[2]	Balochistan	Total[3]		
Feeling of extreme weakness	56.1	59.0	56.9	55.4	62.9	59.9	58.0	61.0	47.6
Body aches	47.5	42.9	45.1	37.1	51.3	40.6	44.4	59.7	56.8
Lower abdominal pain	39.2	42.7	39.7	40.1	47.8	40.4	41.5	45.7	58.8
Severe headache	36.2	44.2	41.8	41.8	39.5	45.1	41.5	44.4	45.8
Fever	34.6	40.9	36.2	46.3	38.0	35.7	38.8	39.0	27.0
Shortness of breath after exercise/working	41.9	37.3	43.1	34.8	34.4	31.9	38.8	41.7	34.4
Excessive vomiting	34.5	38.2	33.2	33.9	48.8	39.8	37.0	44.0	37.3
Severe anaemia	29.8	34.6	36.4	29.0	31.1	23.5	33.0	36.7	25.7
Swelling of ankles/feet	38.3	32.1	36.5	32.1	31.7	29.4	34.1	39.7	20.0
General abdominal pain	23.6	28.1	22.1	24.4	37.6	36.1	26.6	39.5	40.2
Burning micturition	22.6	23.3	23.9	21.1	24.1	19.3	23.1	41.6	29.5
Cough	21.2	20.0	20.4	27.2	14.0	17.8	20.4	25.2	11.9
High blood pressure	20.6	18.6	22.1	15.4	16.5	18.9	19.3	28.2	11.0
Blurring of vision	13.7	21.4	16.6	21.7	19.4	25.6	18.8	16.6	13.5
Shortness of breath even at rest	14.9	17.8	16.7	18.9	15.1	16.5	16.8	17.7	15.4
Difficulty in breathing	14.3	14.5	12.1	20.0	13.8	16.0	14.4	14.4	12.0
Loss of weight	10.6	10.5	8.1	12.8	13.5	12.7	10.5	10.6	15.4
Chest pain	8.3	10.4	9.4	10.9	8.7	11.3	9.7	10.9	16.0
Vaginal bleeding	8.8	7.8	8.7	8.0	8.0	3.7	8.1	6.8	7.8
Fits/seizures	0.5	1.0	0.7	1.4	0.5	0.6	0.8	0.6	0.3
Jaundice	3.0	2.8	3.0	3.5	1.4	4.3	2.8	2.0	2.5
Unconsciousness/coma	1.9	3.8	3.3	3.4	2.7	2.8	3.2	3.7	2.4
High sugar level diagnosed as diabetes	2.6	1.8	1.9	2.3	2.1	2.2	2.0	3.9	1.9
Unusually high weight gain	9.7	5.7	7.9	5.7	6.1	8.2	7.1	12.1	5.6
Blood or pus in urine	2.7	3.4	2.5	1.6	6.7	2.9	3.2	7.0	5.0
Swelling over face	20.6	20.4	21.8	20.1	16.8	23.2	20.4	24.0	11.7
Number of women	1,826	3,674	2,836	1,212	1,147	305	5,500	743	640

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 6.2 Maternal complications or morbidities reported by women during the last delivery

Percentage of self-reported maternal health complications or morbidities during the last delivery among ever-married women age 15-49 who had a live birth/stillbirth during the 3-year period preceding the survey, by residence and region, Pakistan MMS 2019

Health complications and morbidities	Residence		Region				Total[3]	Azad Jammu and Kashmir	Gilgit Baltistan
	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtun-khwa[2]	Balochistan			
Prolonged labour pains	10.5	12.1	11.4	10.3	10.3	23.2	11.6	17.5	13.3
Laceration in vagina	12.9	6.8	9.3	7.5	10.3	4.2	8.8	11.5	8.3
Baby did not breathe	6.0	5.6	6.5	7.0	3.6	2.2	5.8	11.1	2.0
Baby's presentation was breech	5.7	5.7	7.4	4.1	3.9	4.0	5.7	11.9	4.6
Excessive bleeding before baby came out	4.1	4.1	3.9	4.7	3.6	5.4	4.1	8.7	4.4
Excessive bleeding after baby came out	3.2	3.3	2.7	4.2	2.9	6.2	3.3	8.7	8.0
Excessive bleeding after delivery of placenta	4.7	4.1	3.8	5.7	3.5	6.2	4.3	8.3	12.5
Retained placenta	1.9	1.8	1.8	1.7	2.2	0.8	1.8	4.1	1.4
Umbilical cord was wrapped around baby's neck	4.4	4.6	4.8	5.3	2.9	4.7	4.5	10.2	1.5
Baby was premature	5.0	4.2	4.4	6.5	2.9	2.2	4.4	9.5	4.7
Baby's presentation was hand first	0.9	0.8	0.5	1.6	0.9	0.4	0.8	1.8	0.3
Number of women	1,593	3,276	2,470	1,095	1,020	284	4,869	660	575

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 6.3 Maternal complications or morbidities reported by women during the postpartum period

Percentage of self-reported maternal health complications or morbidities during the first 40 days after delivery among ever-married women age 15-49 who had a live birth/stillbirth/miscarriage/abortion during the 3-year period preceding the survey, by residence and region, Pakistan MMS 2019

Health complications and morbidities	Residence		Region				Total[3]	Azad Jammu and Kashmir	Gilgit Baltistan
	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtun-khwa[2]	Balochistan			
Feeling of extreme weakness	45.9	49.1	47.7	41.3	55.5	49.6	48.0	54.7	40.0
Pallor	31.0	33.3	34.3	17.4	45.3	28.1	32.5	45.3	39.6
Fever	30.0	33.1	32.0	39.6	25.1	29.0	32.0	28.4	15.7
Breast tenderness	17.1	14.1	18.5	11.0	11.8	12.5	15.1	20.9	18.6
Increased frequency of urination	14.4	17.9	16.8	10.6	22.4	19.7	16.7	23.8	20.2
Burning micturition	12.3	15.7	14.6	11.1	18.0	15.1	14.6	24.4	14.1
Shortness of breath	15.0	14.5	15.6	14.9	11.3	17.6	14.7	20.1	5.6
Swelling and pain in one or both legs	12.2	12.8	12.1	9.3	18.0	10.1	12.6	13.8	5.5
Foul-smelling vaginal discharge	9.9	12.3	12.8	11.2	7.5	16.4	11.5	14.2	5.8
Cough with difficulty in breathing	8.3	7.4	8.0	11.7	3.2	5.5	7.7	11.3	2.6
Heavy bleeding/excessive bleeding	6.8	7.0	7.5	7.6	4.2	9.1	6.9	13.8	17.5
Breast swelling	7.6	5.7	7.5	4.4	5.4	6.6	6.3	12.4	5.6
Seizures/fits	0.6	0.7	0.6	0.9	0.5	0.8	0.7	0.7	0.3
Jaundice	2.3	2.4	2.4	2.8	1.5	3.7	2.4	0.4	0.8
Breast infection	1.2	1.5	1.4	0.6	1.9	2.4	1.4	4.1	0.6
Tear/ulcer in breast	2.4	1.2	2.0	0.9	1.4	0.9	1.6	1.9	1.7
Fever related to wound (Caesarean section)	6.2	4.3	6.0	4.7	3.2	2.3	4.9	8.3	2.8
Number of women	1,826	3,674	2,836	1,212	1,147	305	5,500	743	640

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 6.4 Maternal health complications about which women were informed by a health care provider

Percentage of last live births/stillbirths/miscarriages/abortions in the 3-year period preceding the survey for which women were informed by a health care provider about complications they had during pregnancy, during delivery, or after delivery, by residence and region, Pakistan MMS 2019

| Health complications and morbidities | Residence | | Region | | | | | Azad Jammu and Kashmir | Gilgit Baltistan |
	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtun-khwa[2]	Balochistan	Total[3]		
High blood pressure	14.8	13.6	16.9	11.3	11.5	7.0	14.0	20.7	7.9
Problems associated with the position of the baby	7.8	7.3	10.2	4.2	4.8	4.3	7.4	12.4	6.5
Slow growth of the baby inside the womb	6.6	4.9	7.8	3.6	2.3	3.1	5.5	5.6	2.8
Uterine prolapse	4.2	4.3	4.1	3.7	4.8	5.7	4.3	5.8	6.6
Jaundice and/or hepatitis	2.8	3.0	3.2	3.3	1.7	3.4	2.9	2.2	1.2
Problems associated with the placenta	3.0	2.7	3.8	2.7	1.2	0.6	2.8	3.6	2.1
Blood deficiency	3.0	2.7	4.4	1.7	0.7	0.0	2.8	0.5	0.0
Postpartum infection/sepsis	3.0	2.0	2.5	1.6	3.2	0.6	2.4	8.2	0.9
Pneumonia	0.4	0.5	0.7	0.2	0.4	0.4	0.5	2.5	0.9
Embolism	0.4	0.6	0.6	0.3	0.1	1.6	0.5	4.0	4.7
Diabetes	1.1	1.1	1.1	1.3	1.0	0.0	1.1	2.3	1.0
Preeclampsia	1.3	1.7	1.3	0.8	2.9	1.2	1.5	4.3	0.7
Allergy	0.8	1.7	2.1	0.3	1.0	0.0	1.4	0.6	0.3
Low blood pressure	1.0	1.0	1.2	1.1	0.7	0.0	1.0	0.4	0.1
Weakness	0.3	0.6	0.4	0.0	1.6	0.0	0.5	0.0	0.0
Number of women	1,807	3,626	2,802	1,201	1,131	299	5,433	739	624

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 6.5 Morbidities reported by women before the last pregnancy

Maternal health complications or morbidities before the last pregnancy among ever-married women age 15-49 who had a live birth/stillbirth/miscarriage/abortion during the 3-year period preceding the survey, by residence and region, Pakistan MMS 2019

| Health conditions and morbidities | Residence | | Region | | | | | Azad Jammu and Kashmir | Gilgit Baltistan |
	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtun-khwa[2]	Balochistan	Total[3]		
Severe anaemia	14.1	17.7	17.0	14.1	18.2	14.2	16.5	24.4	17.3
High blood pressure	11.2	10.5	12.2	8.4	9.6	10.4	10.7	15.4	5.5
Kidney problems	4.1	7.3	5.1	3.1	12.1	7.3	6.3	14.0	11.3
Varicose veins	2.8	3.9	2.8	3.0	5.1	6.5	3.5	11.3	1.4
Diabetes	0.6	0.4	0.3	0.8	0.5	0.0	0.5	1.4	0.7
Obesity	4.7	2.2	3.8	1.0	3.2	2.9	3.0	6.3	1.4
Chest infection other than tuberculosis	0.5	0.4	0.6	0.3	0.3	0.3	0.4	1.0	0.3
Tuberculosis	0.6	0.6	0.3	1.1	0.9	0.5	0.6	1.8	2.4
Hepatitis	1.7	1.8	1.6	3.1	1.0	0.9	1.7	1.4	0.3
Epilepsy	0.1	0.2	0.1	0.3	0.2	0.1	0.1	0.5	0.2
Sexually transmitted disease	0.2	0.8	0.1	0.9	0.9	2.8	0.6	0.0	0.4
Low blood pressure	1.6	1.5	2.1	0.6	1.6	0.0	1.6	1.2	0.7
Other	2.2	1.9	2.1	1.7	2.2	1.0	2.0	1.2	1.4
Surgical operation (other than Caesarean section operation)	8.1	5.4	7.1	4.3	6.1	7.4	6.3	11.8	8.1
Number of women	1,826	3,674	2,836	1,212	1,147	305	5,500	743	640

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 6.6 Maternal complications or morbidities

Maternal health complications reported during pregnancy, during delivery, or after delivery; complications diagnosed by a health care provider; treatment seeking; and experience of complications before the last pregnancy among ever-married women age 15-49 who had a live birth/stillbirth/miscarriage/abortion during the 3-year period preceding the survey, by background characteristics, Pakistan MMS 2019

Background characteristic	Percentage who had one or more complications during the last pregnancy	Percentage who had one or more complications within the first 40 days of delivery	Percentage who sought treatment for one or more complications	Percentage who had one or more complications before the last pregnancy	Total number of ever-married women who had a live birth/stillbirth/ miscarriage/ abortion	Percentage who had one or more complications during the last delivery	Total number of ever-married women who had a live birth/stillbirth	Percentage who had one or more complications diagnosed by a health care provider	Total number of ever-married women informed by a health care provider
Age at birth									
<20	92.4	73.3	47.0	27.1	518	39.2	462	30.7	515
20-34	92.7	72.0	52.5	36.8	4,210	33.8	3,764	33.4	4,164
35-49	92.7	76.2	52.0	43.6	771	32.1	644	37.1	753
Birth order									
1	90.5	68.4	52.6	24.4	1,023	40.6	917	32.9	1,016
2-3	92.5	73.5	50.1	36.3	1,855	31.3	1,680	33.1	1,830
4-5	94.1	74.3	53.4	41.9	1,417	32.7	1,253	34.7	1,403
6+	93.2	73.4	52.4	42.2	1,204	34.5	1,019	34.1	1,185
Residence									
Urban	92.2	72.7	53.2	36.3	1,826	35.8	1,593	35.8	1,807
Rural	92.9	72.8	51.3	37.1	3,674	33.2	3,276	32.6	3,626
Education									
No education	92.1	73.9	47.6	37.2	2,799	31.9	2,520	29.8	2,764
Primary	93.7	72.7	58.8	39.2	969	34.3	843	35.1	957
Middle	94.5	71.0	56.9	38.7	475	41.9	416	40.6	463
Secondary	91.1	69.9	51.8	32.5	575	37.1	508	39.1	571
Higher	93.6	71.4	56.5	34.1	683	35.1	581	38.1	678
Wealth quintile									
Lowest	93.1	77.2	44.0	33.2	1,176	33.9	1,063	28.0	1,162
Second	93.7	73.9	52.5	39.1	1,090	32.4	983	31.6	1,077
Middle	90.9	72.4	52.4	41.2	1,130	34.9	985	34.6	1,113
Fourth	92.6	71.8	56.3	39.1	1,127	33.9	991	36.0	1,110
Highest	93.2	67.7	55.1	30.9	977	35.5	847	39.0	972
Region									
Punjab[1]	93.7	73.6	56.7	38.4	2,836	36.7	2,470	40.7	2,802
Urban	95.1	78.9	60.0	41.6	989	38.0	842	44.2	982
Rural	93.0	70.8	55.0	36.7	1,846	36.0	1,628	38.9	1,820
Sindh	88.4	68.5	43.7	29.1	1,212	33.4	1,095	26.1	1,201
Urban	86.7	62.6	43.0	26.2	578	31.5	515	24.7	571
Rural	90.0	73.9	44.2	31.7	634	35.0	580	27.3	629
Khyber Pakhtunkhwa[2]	95.4	76.1	54.3	41.8	1,147	28.5	1,020	28.3	1,131
Urban	95.4	73.4	57.7	40.1	170	35.7	156	32.6	167
Rural	95.4	76.6	53.7	42.1	977	27.2	863	27.6	964
Balochistan	89.7	68.8	31.0	34.5	305	33.8	284	18.6	299
Urban	90.0	66.6	34.9	36.2	88	39.7	79	20.5	87
Rural	89.6	69.7	29.4	33.8	217	31.5	205	17.8	212
Total[3]	92.7	72.7	51.9	36.8	5,500	34.1	4,869	33.7	5,433
Azad Jammu and Kashmir	96.0	75.3	58.7	48.2	743	48.0	660	44.6	739
Urban	94.9	68.6	53.9	49.2	107	44.3	92	41.9	106
Rural	96.2	76.4	59.5	48.0	636	48.6	568	45.0	633
Gilgit Baltistan	93.2	69.5	36.4	36.4	640	36.7	575	25.4	624

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

HEALTH CARE SEEKING BEHAVIOUR

7

Key Findings

- **Treatment for maternal complications:** The most common complications during pregnancy for which women received treatment were anaemia (27%), severe nausea/vomiting (19%), and high blood pressure (15%).

- **Health care for pregnancy complications:** 90% of women with complications during pregnancy received care from a skilled provider during any of their antenatal care visits.

- **Health care for delivery complications:** 81% of women with delivery complications were assisted during delivery by a skilled health care provider.

- **Health care for postpartum complications:** 63% of women with postpartum complications received care from a skilled provider during the postpartum period.

- **Differentials in care seeking**: 22% of women with pregnancy complications in Balochistan did not receive antenatal care, compared with 5% of women in Punjab.

Provision of quality health care services during pregnancy, during childbirth, and after delivery is important for the survival of the mother and the newborn. Available evidence shows that increasing skilled birth attendance at delivery can reduce maternal and neonatal morbidity. Similarly, seeking medical care for complications in pregnancy or delivery improves the chances of survival of both the mother and the baby (Campbell and Graham 2006).

Although Pakistan is a signatory of the Sustainable Development Goals (SDGs) 2015-2030, it is lagging behind in achieving the health-related SDGs, particularly SDG 3 (health for all). In April 2005, the government adopted a comprehensive national framework for maternal, neonatal, and child health (MNCH) that provided the vision and guidelines to develop MNCH interventions. In 2007, the government launched the National MNCH Programme to accelerate progress on MDGs 4 (reduce child mortality) and 5 (improve maternal health). The programme focused on two major areas: (1) improving access to skilled birth attendance by deploying community midwives and (2) promoting institutional delivery and emergency obstetric and neonatal care (Technical Resource Facility 2013). Primary health care services were also extended via the Lady Health Workers (LHWs) Programme to provide MNCH services through home visits in rural areas. LHWs promote and counsel about hygienic practices, contraceptive use, antenatal care (ANC), iron and folic acid supplementation during pregnancy, growth monitoring of children, and vaccination of pregnant women and children.

The 2019 PMMS aimed to understand women's health seeking behaviour in response to complications they faced during pregnancy, delivery, and the postpartum period. All women who reported one or more such complications were asked a series of questions concerning treatment seeking behaviour in relation to the most recent pregnancy during the last 3 years.

7.1 TREATMENT FOR MATERNAL HEALTH COMPLICATIONS

Women with one or more live births, stillbirths, miscarriages, or abortions in the 3 years preceding the survey who received antenatal care, delivery care, and routine postpartum care from a health provider were asked if the provider had informed them of any complications that could occur during pregnancy, during delivery, or in the postpartum period.

Table 7.1 shows the percentage of women by urban/rural residence and region who received treatment for complications identified by a health care provider during pregnancy. The most common complication for which treatment was received was anaemia (27%), followed by severe nausea and vomiting (19%) and high blood pressure (15%) (**Figure 7.1**).

Patterns by background characteristics

- There is almost no variations in the proportions of women receiving treatment for anaemia in urban and rural areas (27-28%).

- By region, the percentage of women receiving treatment for anaemia ranges from a high of 31% in Punjab to a low of 18% in Balochistan.

Figure 7.1 **Treatment for maternal health complications**

Percentage of last live births, stillbirths, miscarriages, and abortions in the 3 years preceding the survey for which women were informed about complications by a health care provider and received treatment

Complication	Percentage
Anaemia	27
Severe nausea and vomiting during pregnancy	19
High blood pressure	15
Fever	4
Urinary tract infection	3

Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan
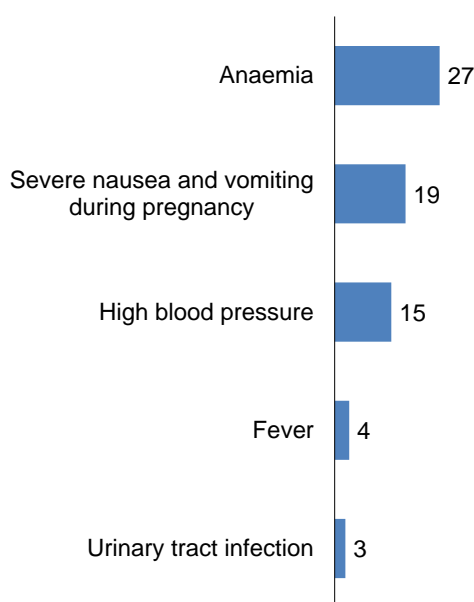
- Almost one-quarter of women in Khyber Pakhtunkhwa reported receiving treatment for severe nausea and vomiting during pregnancy (23%), compared with only 10% of women in Balochistan.

7.2 PLACE WHERE ANC WAS RECEIVED

Women who sought antenatal care for a pregnancy in the last 3 years were asked about the place from which care was sought. Nearly three out of four women received antenatal care from a private health facility (73%), while 33% received care at a public health facility and 4% received care at home (**Table 7.2**).

Patterns by background characteristics

- The proportion of women receiving ANC who visited private health facilities is higher among those less than age 20 (75%) than among those age 35-49 (69%).

- The proportion of women receiving ANC who visited a private facility decreases with birth order, from 78% among those with first-order births to 70% among those with sixth- or higher-order births.

- Women with a higher education (79%) were more likely to receive ANC from private sector facilities than women with no education (70%).

- The proportion of women receiving ANC who visited a private sector facility is 66% in the lowest wealth quintile and 80% in the highest quintile.

- Urban women who received ANC were more likely than rural women to receive ANC from a private sector facility (76% versus 72%), while rural women were more likely to receive ANC from a public sector facility (35% versus 29%).

7.3 PREGNANCY COMPLICATIONS AND RECEIVING ANC

Although some pregnancy complications are minor in nature and can be managed at home, many are serious and require immediate attention from a qualified provider at a health facility. Thus, it was important to determine whether there have been any improvements in the overall treatment seeking pattern for maternal complications and treatment seeking from a skilled health provider. This section presents information on women experiencing pregnancy complications with their last pregnancy in the 3 years prior to the survey and their status of receiving ANC.

Table 7.3 shows that 91% of women who experienced complications during pregnancy received ANC, with 90% receiving care from a skilled provider during their ANC visits. However, 9% of women who experienced complications did not receive any antenatal care.

Patterns by background characteristics

- Urban women with pregnancy complications (94%) are more likely than rural women (88%) to receive care from a skilled provider during their ANC visits.

- Receiving care for pregnancy complications from a skilled provider during ANC decreases with age, from 91% among women less than age 20 to 85% among women age 35-49. It also decreases with birth order, from 95% among women with first-order births to 85% among women with sixth- or higher-order births.

- The proportion of women with pregnancy complications receiving ANC from a skilled provider increases with increasing education (from 85% among those with no education to 97% among those with a higher education) and wealth (from 80% among those in the lowest wealth quintile to 97% among those in the highest quintile).

- The percentage of women with pregnancy complications who did not receive ANC decreases with wealth from 17% among those in the lowest wealth quintile to 2% among those in the highest wealth quintile.

- The percentage of women who experienced pregnancy complications who did not receive ANC was highest in Balochistan (22%) and lowest in Punjab (5%) (**Figure 7.2**).

Figure 7.2 Women with pregnancy complications who did not receive ANC by region

Percentage of ever-married women age 15-49 with a pregnancy in the 3 years before the survey who reported pregnancy complications and did not receive ANC
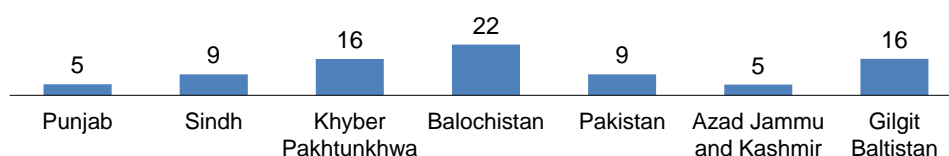
Note: Pakistan total excludes Azad Jammu and Kashmir and Gilgit Baltistan

7.4 HEALTH CARE PROVIDERS FOR PREGNANCY COMPLICATIONS DURING ANC VISITS

Care received from a skilled health care provider is important to monitor pregnancy and reduce morbidity and mortality risks for the mother and child during pregnancy, at delivery, and during the postpartum period.

Women who received antenatal care during their last pregnancy were asked if they had any health problems or complications associated with their pregnancy. Those who reported complications were asked from whom they received care.

Table 7.4 shows that half of women (51%) who experienced pregnancy complications received care from an obstetrician or specialist and 41% received care from a generalist physician.

Patterns by background characteristics

- Women age 20-34 are more likely (53%) than their older and younger counterparts to receive care for pregnancy complications from an obstetrician or specialist.

- Urban women are more likely than rural women to receive care from an obstetrician or specialist for pregnancy complications (60% and 45%, respectively).

- Disparities according to socioeconomic characteristics persist; women in the highest wealth quintile and the highest education category (67% and 69%, respectively) are more likely to receive care for pregnancy complications from an obstetrician or specialist than their counterparts in the lowest wealth quintile (39%) and those with no education (40%).

- Among the regions, receipt of care from an obstetrician or specialist is highest in Punjab (57%) and lowest in Khyber Pakhtunkhwa (40%).

- Notably, obstetricians or specialists are the major service providers used by women in Punjab and Balochistan, while doctors are most commonly reported as providers in Khyber Pakhtunkhwa (40%) and Sindh (45%). The main service providers used in Gilgit Baltistan are doctors (57%), followed closely by obstetricians or specialists (56%).

7.5 HEALTH CARE FOR COMPLICATIONS DURING DELIVERY

Women who reported complications during delivery were asked whether and from whom they received treatment for those complications. **Table 7.5** shows that 81% of women who had a delivery complication were assisted by a skilled provider during their delivery.

Patterns by background characteristics

- Ninety-two percent of urban women who reported having complications during delivery received care during delivery from a skilled provider, compared with 74% of rural women.

- The proportion of women with complications during delivery who were assisted by a skilled provider is lowest (73%) among those age 35-49.

- The percentage of women with complications during delivery who were assisted by a skilled provider is highest among those with first-order births (91%) and lowest among those with sixth- and higher-order births (69%).

- Women with a higher education (97%) were more likely than women with no education (68%) to receive care for delivery complications from a skilled provider (**Figure 7.3**).

- The proportion of women reporting delivery complications and receiving assistance from a skilled provider was lowest (55%) among those in the lowest wealth quintile and highest (97%) among those in the fourth wealth quintile (**Figure 7.4**).

- The proportion of women with delivery complications who received assistance from a skilled provider is highest in urban Sindh (96%) and lowest in rural Balochistan, where only 48% of women with delivery complications were assisted by a skilled provider.

- Urban women were more likely than rural women to receive assistance during delivery from obstetricians or other specialists (53% versus 35%), while rural women were more likely to receive assistance from nurses, midwives, or lady health visitors (16% versus 12%).

- The proportion of women with delivery complications who received assistance from an obstetrician or specialist was highest in urban Punjab (58%) and lowest in rural Balochistan (28%).

Figure 7.3 Skilled assistance during delivery complications by education

Percentage of ever-married women with a delivery in the 3 years before the survey who reported complications

No Education	Primary	Middle	Secondary	Higher
68	87	92	94	97
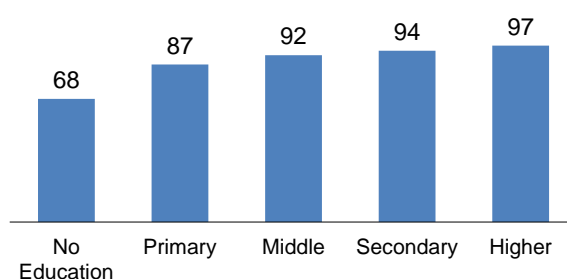
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

Figure 7.4 Skilled assistance during delivery complications by household wealth

Percentage of ever-married women with a delivery in the 3 years before the survey who reported complications

Lowest	Second	Middle	Fourth	Highest
55	75	83	97	95

Poorest ⟶ Wealthiest
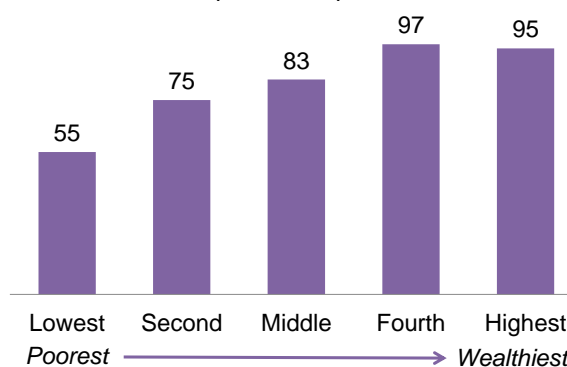
Note: Excludes Azad Jammu and Kashmir and Gilgit Baltistan

7.6   HEALTH CARE FOR COMPLICATIONS DURING THE POSTPARTUM PERIOD

Table 7.6 shows that 63% of women who reported complications during the postpartum period received care from a skilled provider.

Patterns by background characteristics

- The proportion of women with complications during the postpartum period who received care from a skilled provider is slightly higher among those less than age 20 (64%) than among those age 35-49 (60%).

- The likelihood of receiving care during the postpartum period from a skilled provider is much higher among women with a first-order birth (73%) than among women with a sixth- or higher-order birth (54%).

- Women with a higher education (84%) are more likely to receive care from a skilled provider during the postpartum period than women with no education (50%).

- The proportion of women experiencing complications during the postpartum period who received care from a skilled provider is twice as high among those in the highest wealth quintile as among those in the lowest wealth quintile (84% versus 42%).

- Urban women are more likely than rural women to receive care from a skilled provider during the postpartum period (76% versus 56%).

- There are prominent variations by region. The proportion of women with complications during the postpartum period who received postnatal care from a skilled provider is highest in urban Azad Jammu and Kashmir (80%) and urban Sindh and urban Punjab (79% each). The proportion is lowest in rural Balochistan (31%).

LIST OF TABLES

For more information on health care seeking behaviour, see the following tables:

Table 7.1 Treatment received for maternal complications about which women were informed by a health care provider

Percentage of last live births, stillbirths, miscarriages, or abortions in the 3 years preceding the survey for which women were informed by a health care provider about complications during pregnancy, during delivery, or after delivery and for which treatment was received, by residence and region, Pakistan MMS 2019

Health complications and morbidities	Residence		Region					Azad Jammu and Kashmir	Gilgit Baltistan
	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtun-khwa[2]	Balochistan	Total[3]		
Anaemia	27.5	27.4	31.1	21.8	26.7	17.5	27.4	34.3	19.8
High blood pressure	16.5	13.9	17.8	11.4	11.9	11.2	14.8	23.5	6.6
Severe nausea and vomiting during pregnancy	19.3	18.0	17.8	17.8	23.0	9.7	18.5	22.2	10.3
Diabetes	1.1	1.2	1.3	1.1	1.0	0.6	1.2	1.6	0.4
Chest infection	2.3	2.3	1.9	1.4	4.4	2.3	2.3	3.3	2.3
Any other infection	3.0	3.7	2.2	2.0	8.8	0.5	3.5	6.7	1.3
Preeclampsia	1.2	1.4	0.9	1.1	2.7	1.0	1.3	5.0	0.4
Premature foetus	3.0	2.0	3.2	2.1	0.8	0.6	2.3	1.9	1.6
Preterm labour	2.3	1.7	2.4	1.8	1.0	1.0	1.9	4.6	1.7
Urinary tract infection	3.5	2.8	1.6	2.7	7.5	1.3	3.0	6.5	5.9
Jaundice	1.2	1.9	1.4	2.3	1.6	1.9	1.7	1.8	1.5
Protein/albumin in urine	0.8	0.7	0.7	0.6	0.9	0.8	0.7	2.6	0.2
Uterus-related issues	0.2	0.4	0.5	0.2	0.1	0.0	0.3	0.1	0.3
Low blood pressure	1.3	1.9	1.9	1.3	2.0	0.0	1.7	0.8	0.3
Blood deficiency	0.2	0.2	0.5	0.0	0.0	0.0	0.2	0.0	0.0
Weakness	1.7	1.3	1.6	1.1	1.7	0.0	1.4	0.2	0.0
Fever	3.8	3.8	5.9	1.7	1.8	0.1	3.8	3.0	0.4
Other	4.3	3.7	5.2	3.1	2.5	0.3	3.9	1.8	1.4
Number of women	1,826	3,674	2,836	1,212	1,147	305	5,500	743	640

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 7.2 Place where ANC received

Percentage of ever-married women with a pregnancy in the last 3 years who received antenatal care by place where ANC was received, according to background characteristics, Pakistan MMS 2019

Background characteristic	Health facility		Home	Number of women
	Public sector	Private sector		
Age at birth				
<20	30.8	74.5	4.1	473
20-34	32.7	73.7	3.5	3,812
35-49	35.1	69.1	3.5	656
Birth order				
1	31.1	77.5	2.9	961
2-3	32.8	73.4	3.3	1,679
4-5	31.8	72.4	4.3	1,273
6+	36.0	69.6	3.6	1,028
Residence				
Urban	29.4	75.8	3.0	1,712
Rural	34.7	71.8	3.8	3,229
Education				
No education	35.0	70.3	5.3	2,402
Primary	35.4	73.6	2.6	882
Middle	33.4	73.1	1.1	448
Secondary	30.1	78.4	1.5	545
Higher	23.8	78.8	1.8	663
Wealth quintile				
Lowest	38.6	66.2	5.4	953
Second	35.0	70.6	5.4	940
Middle	33.3	73.6	3.2	1,036
Fourth	31.7	75.4	2.1	1,062
Highest	25.7	79.7	1.7	950
Region				
Punjab[1]	31.9	74.3	3.6	2,685
Urban	31.4	73.8	2.7	954
Rural	32.3	74.6	4.0	1,731
Sindh	32.6	74.3	4.2	1,071
Urban	23.8	81.0	3.9	530
Rural	41.2	67.7	4.5	541
Khyber Pakhtunkhwa[2]	38.1	68.1	2.1	954
Urban	37.8	70.6	1.5	154
Rural	38.1	67.6	2.2	799
Balochistan	23.4	74.8	6.2	231
Urban	27.4	73.9	5.0	73
Rural	21.5	75.2	6.7	158
Total[3]	32.9	73.2	3.5	4,941
Azad Jammu and Kashmir	39.4	67.8	0.4	706
Urban	47.5	61.4	0.6	102
Rural	38.1	68.9	0.4	604
Gilgit Baltistan	58.5	62.2	0.0	534

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 7.3 Pregnancy complications and receiving ANC

Percent distribution of ever-married women with a pregnancy in the last 3 years who reported pregnancy complications by their status of receiving ANC, and percentage of ever-married women with pregnancy complications who received ANC from a skilled provider, according to background characteristics, Pakistan MMS 2019

Background characteristic	Received ANC during the last pregnancy	No ANC visit	Total	Percentage who received ANC from a skilled provider[1]	Number of women
Age at birth					
<20	92.8	7.2	100.0	90.7	484
20-34	91.8	8.1	100.0	90.6	3,929
35-49	85.8	14.1	100.0	84.7	719
Birth order					
1	95.3	4.7	100.0	94.9	931
2-3	92.1	8.0	100.0	91.1	1,734
4-5	90.9	9.0	100.0	88.4	1,342
6+	86.4	13.6	100.0	85.2	1,125
Residence					
Urban	95.4	4.6	100.0	94.2	1,700
Rural	88.9	11.0	100.0	87.6	3,432
Education					
No education	87.5	12.5	100.0	85.3	2,590
Primary	91.9	8.1	100.0	91.6	913
Middle	94.5	5.4	100.0	93.9	455
Secondary	96.7	3.3	100.0	96.0	531
Higher	97.7	2.4	100.0	97.3	643
Wealth quintile					
Lowest	82.8	17.1	100.0	79.5	1,096
Second	87.4	12.7	100.0	86.2	1,025
Middle	93.4	6.5	100.0	92.3	1,042
Fourth	95.1	4.9	100.0	94.8	1,048
Highest	98.0	2.0	100.0	97.3	921
Region					
Punjab[2]	95.2	4.7	100.0	94.0	2,676
Urban	96.8	3.1	100.0	95.9	948
Rural	94.4	5.6	100.0	93.0	1,728
Sindh	91.0	9.0	100.0	89.3	1,082
Urban	95.2	4.9	100.0	93.2	509
Rural	87.1	12.8	100.0	85.8	573
Khyber Pakhtunkhwa[3]	84.3	15.6	100.0	83.4	1,099
Urban	91.3	8.7	100.0	91.0	163
Rural	83.1	16.8	100.0	82.0	936
Balochistan	78.2	21.8	100.0	75.9	275
Urban	87.4	12.5	100.0	86.4	79
Rural	74.4	25.6	100.0	71.6	195
Total[4]	91.0	8.9	100.0	89.8	5,132
Azad Jammu and Kashmir	95.4	4.6	100.0	94.8	717
Urban	95.2	4.9	100.0	93.8	102
Rural	95.3	4.6	100.0	95.0	615
Gilgit Baltistan	84.3	15.7	100.0	83.6	597

[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 7.4 Visits to health care providers for pregnancy complications

Percentage of ever-married women with a pregnancy in the last 3 years who reported any health problems or complications associated with their pregnancy during any ANC visit by health care provider visited, according to background characteristics, Pakistan MMS 2019

Background characteristic	Antenatal care provider						Number of women
	Obstetrician/ specialist	Doctor	Nurse/midwife/ lady health visitor	Community midwife	Dai/TBA	Other	
Age at birth							
<20	43.4	43.2	25.9	0.8	1.9	5.2	232
20-34	53.1	39.8	18.9	0.7	1.4	1.1	1,934
35-49	43.1	42.8	22.7	1.0	2.7	2.1	332
Birth order							
1	57.3	40.0	20.0	1.0	1.7	0.9	477
2-3	54.3	37.8	15.7	0.9	0.9	1.6	865
4-5	49.4	43.3	18.3	0.0	2.2	1.5	622
6+	41.4	42.0	29.3	1.0	2.2	2.4	534
Residence							
Urban	60.2	37.3	14.2	0.1	1.2	0.5	934
Rural	45.3	42.4	23.6	1.1	1.9	2.3	1,564
Education							
No education	40.0	45.5	26.7	1.2	2.4	2.6	1,199
Primary	52.0	41.3	23.3	0.7	1.8	0.2	434
Middle	61.0	35.2	12.0	0.0	0.4	0.0	241
Secondary	64.1	35.6	10.7	0.0	1.4	0.5	257
Higher	69.2	30.0	6.7	0.0	0.0	1.9	367
Wealth quintile							
Lowest	39.4	36.8	34.2	0.5	3.1	3.5	482
Second	37.4	47.8	28.3	3.2	1.6	1.4	471
Middle	45.7	48.0	19.2	0.1	2.6	1.7	519
Fourth	62.9	37.8	12.7	0.0	0.5	0.2	516
Highest	67.3	32.3	7.6	0.0	0.5	1.3	510
Region							
Punjab[1]	57.4	32.9	25.0	0.6	1.4	1.5	1,357
Urban	68.6	26.8	19.6	0.0	0.8	0.2	517
Rural	50.4	36.6	28.4	1.0	1.7	2.3	840
Sindh	45.0	51.6	12.4	0.2	2.1	2.8	622
Urban	49.8	51.6	6.2	0.0	1.6	1.2	317
Rural	40.1	51.5	18.9	0.5	2.7	4.6	305
Khyber Pakhtunkhwa[2]	39.8	48.4	17.3	1.7	1.0	0.5	458
Urban	50.1	45.8	11.9	1.1	1.0	0.0	80
Rural	37.6	48.9	18.4	1.9	1.0	0.6	378
Balochistan	50.3	37.8	9.7	0.2	8.0	0.0	61
Urban	46.7	50.4	10.3	0.7	6.5	0.1	19
Rural	51.9	32.0	9.4	0.0	8.7	0.0	41
Total[3]	50.9	40.5	20.1	0.7	1.6	1.6	2,498
Azad Jammu and							
Kashmir	77.6	27.1	6.2	0.0	0.6	0.0	193
Urban	87.2	18.3	0.0	0.0	0.0	0.0	25
Rural	76.2	28.5	7.1	0.0	0.7	0.0	167
Gilgit Baltistan	55.6	57.2	18.6	0.0	0.8	0.0	80

TBA = Traditional birth attendant
[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 7.5 Health care for delivery complications

Percent distribution of ever-married women who reported complications during the delivery of their most recent live birth or stillbirth in the 3 years preceding the survey by provider assisting during delivery, according to background characteristics, Pakistan MMS 2019

Background characteristic	Obste-trician/ specialist	Doctor	Nurse/ midwife/ lady health visitor	Com-munity midwife	Dai/TBA	Other	No one	Total	Percent-age assisted during delivery by a skilled provider[1]	Number of women
Age at birth										
<20	33.9	28.4	19.8	0.3	15.4	2.3	0.0	100.0	82.3	192
20-34	42.8	24.3	14.0	0.4	15.3	3.2	0.0	100.0	81.5	1,383
35-49	40.4	19.0	13.9	0.0	22.4	4.3	0.0	100.0	73.3	226
Birth order										
1	53.0	24.3	13.3	0.3	6.9	2.1	0.0	100.0	90.9	401
2-3	42.2	27.3	14.8	0.7	12.4	2.7	0.0	100.0	84.9	581
4-5	38.2	22.6	13.6	0.4	21.8	3.3	0.1	100.0	74.8	444
6+	32.1	20.6	16.8	0.0	25.4	5.2	0.0	100.0	69.4	373
Residence										
Urban	53.0	27.3	11.7	0.2	6.6	1.2	0.0	100.0	92.2	622
Rural	35.4	22.4	16.1	0.5	21.2	4.3	0.0	100.0	74.4	1,178
Education										
No education	29.8	21.4	16.2	0.4	26.6	5.4	0.0	100.0	67.9	852
Primary	46.4	23.8	16.2	0.4	13.0	0.2	0.0	100.0	86.8	327
Middle	44.5	27.4	18.9	1.1	4.6	3.5	0.0	100.0	91.9	188
Secondary	54.8	30.3	9.4	0.0	4.4	1.2	0.0	100.0	94.4	211
Higher	64.1	26.1	7.0	0.0	1.9	0.9	0.0	100.0	97.2	222
Wealth quintile										
Lowest	21.5	16.2	17.2	0.0	39.3	5.7	0.0	100.0	54.9	375
Second	29.3	25.1	19.6	0.9	20.4	4.5	0.0	100.0	75.0	347
Middle	41.5	24.1	16.5	0.8	13.3	3.8	0.0	100.0	82.9	376
Fourth	55.1	28.5	12.8	0.1	2.9	0.6	0.0	100.0	96.5	373
Highest	61.8	27.0	6.1	0.0	3.8	1.3	0.0	100.0	94.9	328
Region										
Punjab[2]	44.3	19.2	18.3	0.0	16.6	1.5	0.0	100.0	81.8	985
Urban	57.9	21.0	13.0	0.0	6.9	1.2	0.0	100.0	91.9	348
Rural	36.8	18.3	21.2	0.0	22.0	1.8	0.0	100.0	76.3	637
Sindh	44.5	26.2	9.8	0.3	18.0	1.1	0.0	100.0	80.9	397
Urban	51.4	35.3	9.0	0.0	3.9	0.5	0.0	100.0	95.7	180
Rural	38.8	18.7	10.5	0.6	29.8	1.6	0.1	100.0	68.6	217
Khyber Pakhtunkhwa[3]	32.9	37.0	12.1	1.6	6.8	9.5	0.1	100.0	83.6	317
Urban	41.0	36.0	13.5	1.3	6.4	1.5	0.3	100.0	91.7	60
Rural	31.0	37.2	11.8	1.7	6.9	11.4	0.0	100.0	81.7	257
Balochistan	29.6	22.7	4.9	0.4	34.0	8.4	0.0	100.0	57.7	100
Urban	32.5	33.8	9.1	1.1	18.4	5.0	0.0	100.0	76.5	33
Rural	28.2	17.2	2.9	0.0	41.7	10.0	0.0	100.0	48.3	67
Total[4]	41.5	24.1	14.6	0.4	16.2	3.2	0.0	100.0	80.6	1,800
Azad Jammu and Kashmir	56.3	19.7	8.0	0.0	10.7	5.2	0.1	100.0	84.0	332
Urban	57.9	22.1	13.6	0.0	2.2	3.2	1.0	100.0	93.6	43
Rural	56.1	19.3	7.2	0.0	12.0	5.5	0.0	100.0	82.5	289
Gilgit Baltistan	16.7	27.6	35.2	0.0	3.8	11.8	5.0	100.0	79.4	217

Note: If more than one provider was mentioned, only the provider with the highest qualifications is considered in this tabulation.
TBA = Traditional birth attendant
[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table 7.6 Health care for complications during the postpartum period

Percent distribution of ever-married women who reported complications during the postpartum period for their last live birth, stillbirth, or abortion/miscarriage in the 3 years preceding the survey by provider during postnatal care, according to background characteristics, Pakistan MMS 2019

Background characteristic	Obste-trician/ specialist	Doctor	Nurse/ midwife/ lady health visitor	Com-munity midwife	Dai/TBA	Other	Missing	No postnatal care received	Total	Percent-age who received care from a skilled provider[1]	Number of women
Age at birth											
<20	19.1	21.4	23.0	0.0	10.5	0.5	0.3	25.2	100.0	63.5	385
20-34	25.1	17.8	20.1	0.2	10.1	0.5	0.0	26.2	100.0	63.2	3,107
35-49	23.1	16.2	20.4	0.0	7.7	0.3	0.0	32.4	100.0	59.6	598
Birth order											
1	30.5	21.6	21.0	0.0	6.0	0.5	0.0	20.4	100.0	73.1	719
2-3	26.0	18.8	21.2	0.1	9.8	0.6	0.1	23.5	100.0	66.1	1,390
4-5	21.8	18.0	18.9	0.2	12.4	0.3	0.0	28.4	100.0	58.9	1,074
6+	19.6	13.4	20.7	0.3	9.5	0.5	0.0	35.9	100.0	54.0	907
Residence											
Urban	33.7	19.5	22.3	0.2	7.0	0.4	0.1	16.9	100.0	75.6	1,357
Rural	19.6	17.1	19.5	0.1	11.2	0.5	0.0	32.0	100.0	56.3	2,733
Education											
No education	16.2	15.5	17.9	0.1	13.2	0.5	0.0	36.5	100.0	49.6	2,107
Primary	27.3	16.8	24.7	0.5	9.7	0.5	0.0	20.5	100.0	69.3	724
Middle	29.9	21.8	24.3	0.1	6.0	0.4	0.0	17.6	100.0	76.1	347
Secondary	32.4	24.2	24.3	0.0	3.4	0.1	0.0	15.6	100.0	80.9	418
Higher	43.3	21.7	19.2	0.0	3.0	0.5	0.0	12.2	100.0	84.3	495
Wealth quintile											
Lowest	12.3	12.3	17.5	0.1	16.5	0.8	0.0	40.4	100.0	42.2	914
Second	18.1	15.6	20.0	0.0	11.6	0.4	0.0	34.3	100.0	53.7	826
Middle	22.0	19.0	21.8	0.4	8.7	0.4	0.1	27.6	100.0	63.2	834
Fourth	32.3	22.6	20.9	0.2	5.8	0.3	0.0	17.9	100.0	76.0	827
Highest	40.6	21.0	22.7	0.0	4.6	0.4	0.0	10.7	100.0	84.3	689
Region											
Punjab[2]	31.6	14.7	23.5	0.2	12.9	0.2	0.0	16.8	100.0	70.1	2,133
Urban	41.6	12.6	24.1	0.2	7.5	0.6	0.0	13.3	100.0	78.5	794
Rural	25.8	16.0	23.1	0.2	16.0	0.0	0.0	18.9	100.0	65.1	1,339
Sindh	19.0	24.3	23.4	0.0	11.6	0.8	0.1	20.7	100.0	66.8	847
Urban	22.2	34.6	22.1	0.0	7.7	0.1	0.3	13.0	100.0	78.9	376
Rural	16.4	16.2	24.5	0.0	14.6	1.4	0.0	26.9	100.0	57.0	471
Khyber Pakhtunkhwa[3]	14.1	19.8	14.0	0.2	2.1	0.9	0.0	49.0	100.0	48.0	894
Urban	26.9	17.1	16.2	1.3	3.3	0.0	0.0	35.3	100.0	61.5	127
Rural	12.0	20.2	13.6	0.0	1.9	1.0	0.0	51.3	100.0	45.8	767
Balochistan	14.1	16.0	5.3	0.2	3.9	0.0	0.0	60.6	100.0	35.5	217
Urban	14.7	20.1	12.1	0.6	2.7	0.0	0.0	49.9	100.0	47.4	60
Rural	13.8	14.4	2.7	0.0	4.4	0.0	0.0	64.7	100.0	30.9	156
Total[4]	24.3	17.9	20.4	0.1	9.8	0.5	0.0	27.0	100.0	62.7	4,090
Azad Jammu and Kashmir	36.3	11.2	24.2	0.0	3.1	0.7	0.0	24.5	100.0	71.7	570
Urban	37.6	20.1	22.0	0.0	0.5	0.5	0.0	19.3	100.0	79.7	75
Rural	36.0	9.9	24.5	0.0	3.5	0.7	0.0	25.3	100.0	70.4	495
Gilgit Baltistan	14.0	11.7	17.6	0.0	1.3	0.8	0.0	54.6	100.0	43.3	452

Note: If more than one provider was mentioned, only the provider with the highest qualifications is considered in this tabulation.
TBA = Traditional birth attendant
[1] Skilled provider includes obstetrician/specialist, doctor, nurse, midwife, lady health visitor, and community midwife.
[2] Punjab includes ICT.
[3] Khyber Pakhtunkhwa includes the merged districts of former FATA.
[4] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.

REFERENCES

Abou Zahr, C., and T. Wardlaw. 2004. *Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF and UNFPA*. Geneva, Switzerland: World Health Organization.

Asim, Muhammad, Nazia Malik, Saira Siddiqui, Waseem Nawaz, and Farman Ali. 2017. "Antenatal Health Care: A Literature Review of Antenatal and Postnatal Health Care Utilization in Pakistan." *The Professional Medical Journal*. https://doi.org/10.17957/tpmj/17.3803

Backes, Carl H., Kara Markham, Pamela Moorehead, Leandro Cordero, Craig A. Nankervis, and Peter J. Giannone. 2011. "Maternal Preeclampsia and Neonatal Outcomes." *Journal of Pregnancy*. https://doi.org/10.1155/2011/214365

Baig-Ansari, Naila, Salma Halai Badruddin, Rozina Karmaliani, Hillary Harris, Imtiaz Jehan, Omrana Pasha, et al. 2008. "Anemia Prevalence and Risk Factors in Pregnant Women in an Urban Area of Pakistan." *Food and Nutrition Bulletin*. https://doi.org/10.1177/156482650802900207

Campbell, O. M.R., and W. J. Graham. 2006. "Strategies for Reducing Maternal Mortality: Getting on with What Works." *Lancet* 1368(9543): 1284-1299.

Government of Pakistan. 2013. *Pakistan Millennium Development Goals Report 2013*. Islamabad, Pakistan: Ministry of Planning, Development and Reform.

Government of Pakistan. 2016. National Health Vision Pakistan 2016-2025. http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/pakistan/national_health_vision_2016-25_30-08-2016.pdf

Government of Pakistan. 2017. *Provisional Summary Results of 6th Population and Housing Census – 2017*. Islamabad, Pakistan: Ministry of Statistics, Statistics Division, Pakistan Bureau of Statistics. http://www.pbs.gov.pk/content/provisional-summary-results-6th-population-and-housing-census-2017-0

Government of Pakistan. 2019. *Pakistan Economic Survey 2018-19*. Islamabad, Pakistan: Economic Adviser's Wing, Finance Division.

Kassebaum, N. J., R. M. Barber, L. Dandona, S. I. Hay, H. J. Larson, S. S. Lim, et al. 2016. "Global, Regional and National Levels of Maternal Mortality, 1990-2015: A Systematic Analysis for the Global Burden of Disease Study 2015." *Lancet*. https://doi.org/10.1016/S0140-6736(16)31470-2

Kochhar, Sonali, Kathryn M. Edwards, Alba Maria Ropero Alvarez, Pedro L. Moro, and Justin R. Ortiz. 2019. "Introduction of New Vaccines for Immunization in Pregnancy – Programmatic, Regulatory, Safety and Ethical Considerations." *Vaccine*. https://doi.org/10.1016/j.vaccine.2019.04.075

Majrooh, Muhammad Ashraf, Seema Hasnain, Javaid Akram, Arif Siddiqui, and Zahid Ali Memon. 2014. "Coverage and Quality of Antenatal Care Provided at Primary Care Facilities in the Punjab Province of Pakistan." *PLoS One*. https://doi.org/10.1371/journal.pone.0113390

Megevand, Nicolas, Nadia Berkane, Begona Martinez De Tejada, and Antoinette Pechere-Bertschi. 2019. "Hypertensive Disorders of Pregnancy." *Revue Medicale Suisse*. https://doi.org/10.5005/jp/books/12492_29

National Institute of Population Studies (NIPS) [Pakistan]. 1992. *Pakistan Demographic and Health Survey 1990-91*. Islamabad, Pakistan: NIPS and Macro International Inc.

National Institute of Population Studies (NIPS) [Pakistan] and Macro International Inc. 2008. *Pakistan Demographic and Health Survey 2006-07*. Islamabad, Pakistan: NIPS and Macro International Inc.

National Institute of Population Studies (NIPS) [Pakistan] and ICF International. 2013. *Pakistan Demographic and Health Survey 2012-13*. Islamabad, Pakistan, and Calverton, Maryland, USA: NIPS and ICF International.

National Institute of Population Studies (NIPS) [Pakistan] and ICF. 2019. *Pakistan Demographic and Health Survey 2017-18*. Islamabad, Pakistan, and Rockville, Maryland, USA: NIPS and ICF.

Rosenfield, A., D. Maine, and L. Freedman. 2006. "Meeting MDG-5: An Impossible Dream?" *Lancet* 368(9542): 1133-1135.

Technical Resource Facility. 2013. *Pakistan National Maternal and Child Health Programme: Mid Term Evaluation Summary*. Islamabad, Pakistan: MNCH Programme. http://www.trfpakistan.org

Townsend, Rosemary, and Asma Khalil. 2019. "Hypertension in Pregnancy." In: *Maternal-Fetal and Neonatal Endocrinology: Physiology, Pathophysiology, and Clinical Management*. New York: Elsevier. https://doi.org/10.1016/B978-0-12-814823-5.00026-X

United Nations Foundation. 2012. *Family Planning 2020*. http://Summit2017.Familyplanning2020.Org/

United Nations. 2018. *Sustainable Development Goal 6 Synthesis Report 2018 on Water and Sanitation*. New York: United Nations.

World Health Organization (WHO). 2013. *The International Classification of Diseases 11th Revision*. Geneva: WHO. http://www.who.int/classifications/icd/revision/en/

World Health Organization (WHO). 2014. *WHO Recommendations on Postnatal Care of the Mother and Newborn 2013*. Geneva: WHO.

World Health Organization (WHO). 2015. *Strategies Towards Ending Preventable Maternal Mortality*. Geneva: WHO.

World Health Organization (WHO). 2016a. *International Statistical Classification of Diseases and Related Health Problems*, *10th Revision, Fifth Edition*. Geneva: WHO.

World Health Organization (WHO). 2016b. *World Health Statistics 2016: Monitoring Health for the Sustainable Development Goals*. Geneva: WHO.

World Health Organization (WHO). 2016c. *WHO Recommendation on Antenatal Care for Positive Pregnancy Experience*. Geneva: WHO.

Zafar, Shamsa, Rachel Jean-Baptiste, Atif Rahman, James P. Neilson, and Nynke R. Van Den Broek. 2015. "Non-Life Threatening Maternal Morbidity: Cross Sectional Surveys from Malawi and Pakistan." *PLoS One*. https://doi.org/10.1371/journal.pone.0138026

SAMPLE DESIGN

Appendix A

A.1   INTRODUCTION

The 2019 Pakistan Maternal Mortality Survey (2019 PMMS) was the first stand-alone maternal mortality survey conducted in Pakistan. A nationally representative sample of 1,396 primary sampling units were randomly selected. The survey was expected to result in about 14,000 interviews with ever-married women age 15-49. The survey's primary objective was to estimate levels of maternal mortality for Pakistan excluding Azad Jammu and Kashmir and Gilgit Baltistan, for the country's urban and rural areas, and for each of the following domains: Punjab (plus Islamabad Capital Territory), Sindh, Khyber Pakhtunkhwa (plus FATA), and Baluchistan. The survey was also designed to provide estimates for Azad Jammu and Kashmir and Gilgit Baltistan separately.

A.2   SAMPLE FRAME

The sampling frame used for the 2019 PMMS is a complete list of all enumeration blocks (EBs) created for the 2017 Pakistan General Population and Housing Census (Government of Pakistan 2017). The frame has 168,943 EBs in total, with 55,365 EBs in urban areas and 113,578 in rural areas. **Table A.1** shows the distribution of EBs according to region and residence. Punjab represents more than 50% of the EBs in Pakistan, with a total number of 87,006, while Gilgit Baltistan has only 1,246 EBs.

Table A.1 Number of enumeration blocks by region and by type of residence

Region	Number of enumeration blocks			Region share
	Urban	Rural	Total	
Punjab	26,958	60,048	87,006	0.515
Sindh	21,916	17,223	39,139	0.232
Khyber Pakhtunkhwa	3,221	18,777	21,998	0.130
Baluchistan	1,826	8,386	10,212	0.060
Islamabad	727	787	1,514	0.009
Gilgit Baltistan	148	1,098	1,246	0.007
Azad Jammu and Kashmir	526	3,496	4,022	0.024
FATA	43	3,763	3,806	0.023
Pakistan	55,365	113,578	168,943	1.000

* Source: Pakistan General Population and Housing Census 2017

A.3   SAMPLE DESIGN AND IMPLEMENTATION

The sample for the 2019 PMMS was a stratified sample selected in two stages and two phases from the 2017 PGPHC. Stratification was achieved by separating each of the eight regions into urban and rural areas. In total, 16 sampling strata were created. Samples were selected independently in every stratum through a two-stage and two-phase selection process. Implicit stratification was achieved at each of the lower administrative levels by sorting the sampling frame before sample selection, according to all administrative units within each explicit sampling stratum, and by using a probability proportional to size selection at the first stage of sampling. The implicit stratification also resulted in a proportional allocation of sample points at each of the lower administrative levels within each stratum.

In the first stage, 1,396 EBs were selected with probability proportional to EB size. EB size was the number of households in the EB at the time of the census. After the selection of EBs and before the main survey, a household listing operation was carried out in all of the selected EBs. The household listing operation consisted of visiting each of the 1,396 selected EBs, drawing a location map and a detailed sketch map, and recording on the household listing forms all occupied residential households found in the EB with the address and the name of the head of the household. The resulting list of households served as a

sampling frame for the selection of households in the second stage. In the second stage of selection, a fixed number of 110 households were randomly selected in every cluster by an equal probability systematic sampling procedure in the first phase. A household questionnaire was administered to identify all members of the household and all deaths and births occurring in the last 3 years. In the case of all female deaths in the 15-49 age group occurring in the last 3 years, verbal autopsy interviews were conducted to determine the cause of death. If a cluster had less than 110 households listed, all of the listed households were included in the sample. In the second phase, a subsample of 10 households were randomly selected from the households selected in the first phase. A detailed women's questionnaire was administered to every ever-married woman age 15-49 found in the household. The survey interviewers were asked to interview only the pre-selected households. No replacements and no changes of the pre-selected households were allowed in the implementing stages. Interviewers were trained in an effort to ensure that they would be able to conduct successful household and individual interviews.

Table A.2 shows the sample allocation of EBs and phase one households according to region and residence (with 110 households per cluster), which resulted in a total number of 153,560 sampled households for the phase one survey. Among the 1,396 selected clusters, 656 were in urban areas and 740 were in rural areas; among the 153,560 phase one sampled households, 72,160 were in urban areas and 81,400 were in rural areas. **Table A.3** shows the sample allocation of phase two households and the expected number of completed interviews among ever-married women age 15-49 by domain and residence. Calculations were based on the results of the 2017-18 PDHS, where one ever-married woman age 15-49 per selected household was interviewed. As noted, the survey was expected to result in about 14,000 interviews of ever-married women age 15-49.

Table A.2 Sample allocation of enumeration blocks and households by domain and by type of residence

	Allocation of clusters			Allocation of first phase households		
Domain	Urban	Rural	Total	Urban	Rural	Total
Punjab (+Islamabad)	216	220	436	23,760	24,200	47,960
Sindh	135	135	270	14,850	14,850	29,700
Khyber Pakhtunkhwa (+FATA)	105	125	230	11,550	13,750	25,300
Baluchistan	90	90	180	9,900	9,900	19,800
Total	**546**	**570**	**1,116**	**60,060**	**62,700**	**122,760**
Gilgit Baltistan	30	85	115	3,300	9,350	12,650
Azad Jammu and Kashmir	80	85	165	8,800	9,350	18,150
Overall total	**656**	**740**	**1,396**	**72,160**	**81,400**	**153,560**

Table A.3 Sample allocation of phase two households and expected number of interviews with women by domain and by type of residence

	Allocation of households			Allocation of ever-married women age 15-49		
Domain	Urban	Rural	Total	Urban	Rural	Total
Punjab (+Islamabad)	2,160	2,200	4,360	2,160	2,200	4,360
Sindh	1,350	1,350	2,700	1,350	1,350	2,700
Khyber Pakhtunkhwa (+FATA)	1,050	1,250	2,300	1,050	1,250	2,300
Baluchistan	900	900	1,800	900	900	1,800
Total	**5,460**	**5,700**	**11,160**	**5,460**	**5,700**	**11,160**
Gilgit Baltistan	300	850	1,150	300	850	1,150
Azad Jammu and Kashmir	800	850	1,650	800	850	1,650
Overall total	**6,560**	**7,400**	**13,960**	**6,560**	**7,400**	**13,960**

Table A.4 presents response rates for women by residence and region. **Table A.5** presents response rates for the short questionnaires, and **Table A.6** presents response rates for the long questionnaires.

Table A.4 Sample implementation: Women

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women, and overall women response rates, according to urban-rural residence and region (unweighted), Pakistan MMS 2019

| | Residence | | Region | | | | | | |
Result	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtunkhwa[2]	Balochistan	Total[3]	Azad Jammu and Kashmir	Gilgit Baltistan
Selected households									
Completed (C)	93.0	94.2	95.2	94.0	95.2	86.5	93.6	94.7	92.5
Household present but no competent respondent at home (HP)	1.1	0.5	1.0	0.7	0.4	1.1	0.8	0.5	0.1
Postponed (P)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (R)	0.6	0.2	0.3	0.4	0.1	1.2	0.4	0.2	1.0
Dwelling not found (DNF)	0.3	0.3	0.1	0.2	0.2	1.0	0.3	0.3	0.0
Household absent (HA)	1.5	1.3	0.8	1.1	0.8	4.6	1.4	1.9	2.7
Dwelling vacant/address not a dwelling (DV)	2.4	1.7	1.6	1.6	2.6	3.2	2.0	1.4	2.7
Dwelling destroyed (DD)	0.1	0.1	0.0	0.2	0.1	0.2	0.1	0.0	0.0
Other (O)	1.0	1.7	0.9	1.9	0.7	2.3	1.3	1.0	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	57,510	58,659	46,475	28,531	24,179	16,984	116,169	17,510	11,735
Household response rate (HRR)[4]	97.9	99.0	98.5	98.7	99.3	96.3	98.4	99.0	98.8
Eligible women									
Completed (EWC)	96.4	97.7	97.1	97.5	97.9	95.1	97.1	97.6	96.6
Not at home (EWNH)	2.8	1.9	2.5	2.0	1.8	3.4	2.4	1.9	2.6
Postponed (EWP)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
Refused (EWR)	0.5	0.2	0.2	0.2	0.0	1.3	0.3	0.1	0.3
Partly completed (EWPC)	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Incapacitated (EWI)	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.3
Other (EWO)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	5,747	6,470	4,519	2,931	2,896	1,871	12,217	1,707	1,219
Eligible women response rate (EWRR)[5]	96.4	97.7	97.1	97.5	97.9	95.1	97.1	97.6	96.6
Overall women response rate (OWRR)[6]	94.4	96.7	95.7	96.2	97.2	91.6	95.6	96.6	95.5

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[4] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[5] The eligible women response rate (EWRR) is equivalent to the percentage of interviews completed (EWC).
[6] The overall women response rate (OWRR) is calculated as:

$$OWRR = HRR * EWRR/100$$

Table A.5 Sample implementation (Short Household Questionnaire)

Percent distribution of households by results of the household interviews, and household response rates, according to urban-rural residence and region (unweighted), Pakistan MMS 2019

	Residence		Region						
Result	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtunkhwa[2]	Balochistan	Total[3]	Azad Jammu and Kashmir	Gilgit Baltistan
Selected households									
Completed (C)	93.0	94.0	95.2	93.8	95.1	86.2	93.5	94.8	92.4
Household present but no competent respondent at home (HP)	1.0	0.5	0.9	0.7	0.4	1.1	0.8	0.4	0.1
Postponed (P)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (R)	0.6	0.2	0.3	0.4	0.1	1.2	0.4	0.2	1.0
Dwelling not found (DNF)	0.3	0.3	0.1	0.2	0.2	1.0	0.3	0.3	0.0
Household absent (HA)	1.5	1.3	0.8	1.0	0.8	4.6	1.4	1.9	2.8
Dwelling vacant/address not a dwelling (DV)	2.4	1.7	1.6	1.6	2.5	3.2	2.0	1.4	2.8
Dwelling destroyed (DD)	0.1	0.1	0.0	0.2	0.1	0.2	0.1	0.0	0.0
Other (O)	1.0	1.8	1.0	2.1	0.8	2.5	1.5	1.0	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	52,120	52,969	42,115	25,831	21,889	15,254	105,089	15,860	10,613
Household response rate (HRR)[4]	97.9	98.9	98.6	98.7	99.3	96.3	98.4	99.0	98.8

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[4] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

Table A.6 Sample implementation (Long Household Questionnaire): Women

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women, and overall women response rates, according to urban-rural residence and region (unweighted), Pakistan MMS 2019

| | Residence | | Region | | | | | | |
Result	Urban	Rural	Punjab[1]	Sindh	Khyber Pakhtunkhwa[2]	Balochistan	Total[3]	Azad Jammu and Kashmir	Gilgit Baltistan
Selected households									
Completed (C)	93.4	95.7	95.3	96.3	95.6	88.9	94.6	94.5	93.7
Household present but no competent respondent at home (HP)	1.2	0.5	1.1	0.6	0.4	1.1	0.8	0.7	0.2
Refused (R)	0.8	0.2	0.5	0.4	0.1	1.1	0.5	0.4	0.9
Dwelling not found (DNF)	0.1	0.2	0.0	0.0	0.2	0.6	0.2	0.1	0.1
Household absent (HA)	1.7	1.4	0.9	1.3	0.7	4.4	1.5	2.5	2.5
Dwelling vacant/address not a dwelling (DV)	2.4	1.8	2.0	1.1	2.8	3.2	2.1	1.6	2.2
Dwelling destroyed (DD)	0.1	0.1	0.0	0.1	0.0	0.2	0.1	0.0	0.0
Other (O)	0.1	0.3	0.2	0.1	0.2	0.5	0.2	0.2	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	5,390	5,690	4,360	2,700	2,290	1,730	11,080	1,650	1,140
Household response rate (HRR)[4]	97.7	99.1	98.3	99.0	99.2	96.9	98.4	98.9	98.8
Eligible women									
Completed (EWC)	96.4	97.7	97.1	97.5	97.9	95.1	97.1	97.6	96.6
Not at home (EWNH)	2.8	1.9	2.5	2.0	1.8	3.4	2.4	1.9	2.6
Postponed (EWP)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
Refused (EWR)	0.5	0.2	0.2	0.2	0.0	1.3	0.3	0.1	0.3
Partly completed (EWPC)	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Incapacitated (EWI)	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.3
Other (EWO)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	5,747	6,470	4,519	2,931	2,896	1,871	12,217	1,707	1,219
Eligible women response rate (EWRR)[5]	96.4	97.7	97.1	97.5	97.9	95.1	97.1	97.6	96.6
Overall women response rate (OWRR)[6]	94.2	96.8	95.4	96.5	97.2	92.1	95.6	96.5	95.5

[1] Punjab includes ICT.
[2] Khyber Pakhtunkhwa includes merged districts of former FATA.
[3] Total excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[4] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[5] The eligible women response rate (EWRR) is equivalent to the percentage of interviews completed (EWC).
[6] The overall women response rate (OWRR) is calculated as:

$$OWRR = HRR * EWRR/100$$

A.4   SAMPLE PROBABILITIES AND SAMPLING WEIGHTS

Due to the non-proportional allocation of the sample to the different regions and to their urban-rural areas, sampling weights will be required for any analysis using the 2019 PMMS data to ensure the actual representativeness of the sample at the national level as well as at the domain levels. Since the 2019 PMMS sample is a two-stage and two-phase stratified cluster sample, sampling weights were calculated based on sampling probabilities separately for each sampling stage and phase for each cluster. The following notations were used:

P_{1hi}:   first-stage sampling probability of the ith cluster in stratum h
P_{2hi}:   second-stage sampling probability in phase one within the ith cluster (households)
P_{3hi}:   second-stage sampling probability in phase two within the ith cluster (households)

Let n_h be the number of clusters selected in stratum h, M_{hi} the number of households according to the sampling frame in the ith cluster, and $\sum M_{hi}$ the total number of households in the stratum. The probability of selecting the ith cluster in the 2019 PMMS sample is calculated as follows:

$$\frac{n_h\, M_{hi}}{\sum M_{hi}}$$

Let s_{hi} be the proportion of households in the selected segment relative to the total number of households in cluster i in stratum h if the cluster is segmented; otherwise, $s_{hi} = 1$. Then the probability of selecting cluster i in stratum h in the sample is:

$$P_{1hi} = \frac{n_h\, M_{hi}}{\sum M_{hi}} \times s_{hi}$$

Let L_{hi} be the number of households listed in the household listing operation in cluster i in stratum h, and let m_{hi}^1 and m_{hi}^2 be the number of households selected in phase one and phase two in cluster i. The second stage's selection probability for each household in phase one and phase two is calculated as follows:

$$P_{2hi} = \frac{m_{hi}^1}{L_{hi}} \;,\; P_{3hi} = \frac{m_{hi}^2}{L_{hi}}$$

The overall selection probability of each household in cluster i of stratum h is therefore the product of the two-stage selection probabilities for phase one and phase two, respectively:

$$P_{hi}^1 = P_{1hi} \times P_{2hi} \;,\; P_{hi}^2 = P_{1hi} \times P_{3hi}$$

The sampling weight for each household in cluster i of stratum h is the inverse of its overall selection probability for phase one and phase two, respectively:

$$W_{hi}^1 = 1/P_{hi}^1 \;,\; W_{hi}^2 = 1/P_{hi}^2$$

A spreadsheet containing all sampling parameters and selection probabilities was developed to facilitate the calculation of the design weights. Design weights were adjusted for cluster-level non-response, household-level non-response, and individual non-response to obtain sampling weights for households and individual surveys. The differences in the household sampling weights and the individual sampling weights were introduced by individual non-response. The final sampling weights were normalised to obtain the total number of unweighted cases equal to the total number of weighted cases at the national level for both household weights and individual weights. Three sets of weights were calculated:

- one set for all households selected for the phase one survey
- one set for households selected for the phase two women's survey
- one set for women's individual survey

It is important to note that the normalised weights are relative weights that are valid for estimating means, proportions, and ratios but are not valid for estimating population totals or pooled data. Also, the number of weighted cases obtained using the normalised weight has no direct relation to survey precision because it is relative, especially for oversampled areas. The number of weighted cases is much smaller than the number of unweighted cases; the latter is directly related to survey precision.

Sampling errors were calculated for selected indicators for the national sample, for urban and rural areas separately, and for each of the survey domains.

ESTIMATES OF SAMPLING ERRORS

Appendix **B**

T he estimates from a sample survey are affected by two types of errors: nonsampling errors and sampling errors. Nonsampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2019 Pakistan Maternal Mortality Survey (2019 PMMS) to minimise this type of error, nonsampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2019 PMMS is only one of many samples that could have been selected from the same population, using the same design and sample size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability among all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

Sampling error is usually measured in terms of the *standard error* for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95% of all possible samples of identical size and design.

If the sample of respondents had been selected by simple random sampling, it would have been possible to use straightforward formulas for calculating sampling errors. However, the 2019 PMMS sample was the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulas. Sampling errors are computed using SAS programmes developed by ICF. These programmes use the Taylor linearisation method to estimate variances for survey estimates that are means, proportions, or ratios and use the Jackknife repeated replication method for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearisation method treats any linear statistic such as a percentage or mean as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2} \sum_{h=1}^{H} \left[\frac{m_h}{m_h - 1} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi} \text{ and } z_h = y_h - rx_h$$

where h represents the stratum, which varies from 1 to H;

   m_h is the total number of clusters selected in the hth stratum;

   y_{hi} is the sum of the weighted values of variable y in the ith cluster in the hth stratum;

   x_{hi} is the sum of the weighted number of cases in the ith cluster in the hth stratum; and

   f is the overall sampling fraction, which is so small that it is ignored.

In addition to the standard error, the design effect (DEFT) for each estimate is also calculated. The design effect is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sampling, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. Relative standard errors and confidence limits for the estimates are also calculated.

Sampling errors for the 2019 PMMS are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for Pakistan without Azad Jammu and Kashmir and Gilgit Baltistan, for the country's urban and rural areas, for each of the four regions and their urban and rural areas separately, and for Azad Jammu and Kashmir and Gilgit Baltistan and their urban and rural areas separately. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in **Table B.1**. **Tables B.2** through **B.22** present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95% confidence limits (R±2SE) for each variable. The sampling errors for mortality rates are presented for the 5-year period preceding the survey for the national sample and the urban and rural samples and for the 10-year period preceding the survey at other domain levels. The DEFT is considered undefined when the standard error considering a simple random sample is zero (when the estimate is close to 0 or 1).

The confidence interval (e.g., as calculated for *secondary education or higher*) can be interpreted as follows: the overall proportion of ever-married women age 15-49 with a secondary education or higher from the national sample without Azad Jammu and Kashmir and Gilgit Baltistan is 0.228, and its standard error is 0.009. Therefore, to obtain the 95% confidence limits, one adds and subtracts twice the standard error to the sample estimate, that is, $0.228 \pm 2 \times 0.009$. There is a high probability (95%) that the true proportion of ever-married women age 15-49 with a secondary education or higher is between 0.210 and 0.246.

For the total sample, the value of the DEFT, averaged over all women, is 2.050. This means that, due to multi-stage clustering of the sample, the average standard error is increased by a factor of 2.050 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Pakistan MMS 2019

Variable	Estimate	Base population
WOMEN		
Urban residence	Proportion	Women 15-49
No education	Proportion	Women 15-49
Secondary education or higher	Proportion	Women 15-49
Ever-married women currently married/in union	Proportion	Ever-married women 15-49
Mothers received antenatal care for last live birth from skilled provider	Proportion	Women with a live birth in last 3 years
Mothers protected against tetanus for last live birth or stillbirth	Proportion	Women with a live birth in last 3 years
Births with skilled attendant at delivery	Proportion	Births occurring in last 3 years
Assistance during abortion and miscarriage by skilled attendant	Proportion	Abortion/miscarriage occurring in last 3 years
Delivery by caesarean section	Proportion	Births occurring in last 3 years
Miscarriage in the last 3 years	Proportion	Pregnancies occurring in last 3 years
Mothers received postnatal care after delivery	Proportion	Women with a live birth in last 2 years

Table B.2 Sampling errors: Total sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.370	0.019	11,859	11,859	4.360	0.052	0.331	0.408
No education	0.517	0.012	11,859	11,859	2.551	0.023	0.494	0.540
Secondary education or higher	0.228	0.009	11,859	11,859	2.326	0.039	0.210	0.246
Ever-married women currently married/in union	0.952	0.003	11,859	11,859	1.547	0.003	0.946	0.958
Mothers received antenatal care for last live birth from skilled provider	0.912	0.007	4,861	4,756	1.607	0.007	0.898	0.925
Mothers protected against tetanus for last live birth or stillbirth	0.704	0.012	4,992	4,869	1.801	0.017	0.680	0.727
Births with skilled attendant at delivery	0.737	0.012	4,861	4,756	1.829	0.016	0.714	0.761
Assistance during abortion and miscarriage by skilled attendant	0.737	0.027	587	631	1.480	0.037	0.683	0.791
Delivery by caesarean section	0.231	0.010	4,861	4,756	1.662	0.044	0.210	0.251
Miscarriage in the last 3 years	0.119	0.006	7,487	7,463	1.435	0.048	0.108	0.131
Mothers received postnatal care after delivery	0.689	0.013	3,726	3,716	1.752	0.019	0.662	0.715

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table B.3 Sampling errors: Urban sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	1.000	0.000	5,540	4,386	na	0.000	1.000	1.000
No education	0.336	0.015	5,540	4,386	2.414	0.046	0.305	0.367
Secondary education or higher	0.387	0.014	5,540	4,386	2.127	0.036	0.359	0.414
Ever-married women currently married/in union	0.606	0.022	9,587	6,917	1.323	0.036	0.562	0.650
Mothers received antenatal care for last live birth from skilled provider	0.954	0.008	2,099	1,559	1.672	0.008	0.938	0.970
Mothers protected against tetanus for last live birth or stillbirth	0.783	0.016	2,154	1,593	1.754	0.021	0.751	0.815
Births with skilled attendant at delivery	0.849	0.013	2,099	1,559	1.572	0.015	0.824	0.875
Assistance during abortion and miscarriage by skilled attendant	0.792	0.033	289	233	1.360	0.041	0.727	0.857
Delivery by caesarean section	0.344	0.016	2,099	1,559	1.488	0.046	0.312	0.376
Miscarriage in the last 3 years	0.134	0.009	3,251	2,405	1.427	0.068	0.116	0.152
Mothers received postnatal care after delivery	0.800	0.018	1,582	1,161	1.683	0.022	0.765	0.835

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
na= Not applicable

Table B.4 Sampling errors: Rural sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.000	0.000	6,319	7,473	na	na	0.000	0.000
No education	0.623	0.014	6,319	7,473	2.306	0.023	0.595	0.651
Secondary education or higher	0.136	0.009	6,319	7,473	2.118	0.067	0.117	0.154
Ever-married women currently married/in union	0.638	0.015	9,435	11,131	1.533	0.023	0.608	0.667
Mothers received antenatal care for last live birth from skilled provider	0.891	0.009	2,762	3,197	1.487	0.010	0.873	0.909
Mothers protected against tetanus for last live birth or stillbirth	0.665	0.015	2,838	3,276	1.698	0.023	0.635	0.696
Births with skilled attendant at delivery	0.683	0.016	2,762	3,197	1.770	0.023	0.651	0.714
Assistance during abortion and miscarriage by skilled attendant	0.705	0.037	298	398	1.381	0.052	0.632	0.778
Delivery by caesarean section	0.175	0.012	2,762	3,197	1.616	0.067	0.152	0.199
Miscarriage in the last 3 years	0.112	0.007	4,236	5,058	1.395	0.065	0.098	0.127
Mothers received postnatal care after delivery	0.638	0.017	2,144	2,555	1.605	0.026	0.605	0.671

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
na= Not applicable

Table B.5 Sampling errors: Punjab sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.377	0.030	4,387	6,308	4.088	0.079	0.317	0.437
No education	0.417	0.018	4,387	6,308	2.368	0.042	0.382	0.452
Secondary education or higher	0.264	0.014	4,387	6,308	2.066	0.052	0.237	0.292
Ever-married women currently married/in union	0.639	0.023	6,189	9,267	1.617	0.036	0.593	0.685
Mothers received antenatal care for last live birth from skilled provider	0.964	0.007	1,629	2,426	1.600	0.008	0.949	0.978
Mothers protected against tetanus for last live birth or stillbirth	0.806	0.016	1,662	2,470	1.724	0.020	0.773	0.839
Births with skilled attendant at delivery	0.780	0.017	1,629	2,426	1.706	0.022	0.745	0.814
Assistance during abortion and miscarriage by skilled attendant	0.776	0.039	243	366	1.465	0.051	0.697	0.855
Delivery by caesarean section	0.307	0.017	1,629	2,426	1.497	0.055	0.273	0.340
Miscarriage in the last 3 years	0.123	0.009	2,579	3,900	1.351	0.073	0.105	0.140
Mothers received postnatal care after delivery	0.805	0.019	1,256	1,915	1.788	0.024	0.767	0.844

Table B.6 Sampling errors: Punjab urban sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	1.000	0.000	2,089	2,379	na	0.000	1.000	1.000
No education	0.272	0.021	2,089	2,379	2.113	0.076	0.231	0.313
Secondary education or higher	0.406	0.019	2,089	2,379	1.761	0.047	0.368	0.443
Ever-married women currently married/in union	0.952	0.006	2,089	2,379	1.218	0.006	0.940	0.963
Mothers received antenatal care for last live birth from skilled provider	0.976	0.008	728	823	1.479	0.009	0.959	0.993
Mothers protected against tetanus for last live birth or stillbirth	0.833	0.025	747	842	1.820	0.030	0.783	0.883
Births with skilled attendant at delivery	0.859	0.017	728	823	1.349	0.020	0.825	0.894
Assistance during abortion and miscarriage by skilled attendant	0.825	0.041	121	147	1.184	0.050	0.742	0.907
Delivery by caesarean section	0.403	0.022	728	823	1.199	0.054	0.360	0.447
Miscarriage in the last 3 years	0.137	0.014	1,144	1,288	1.344	0.105	0.108	0.165
Mothers received postnatal care after delivery	0.844	0.025	540	612	1.614	0.030	0.794	0.894

na= Not applicable

Table B.7 Sampling errors: Punjab rural sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.000	0.000	2,298	3,929	na	na	0.000	0.000
No education	0.505	0.023	2,298	3,929	2.191	0.045	0.459	0.551
Secondary education or higher	0.179	0.015	2,298	3,929	1.925	0.086	0.148	0.210
Ever-married women currently married/in union	0.931	0.007	2,298	3,929	1.377	0.008	0.916	0.946
Mothers received antenatal care for last live birth from skilled provider	0.957	0.010	901	1,603	1.529	0.011	0.937	0.977
Mothers protected against tetanus for last live birth or stillbirth	0.792	0.021	915	1,628	1.611	0.027	0.750	0.835
Births with skilled attendant at delivery	0.739	0.024	901	1,603	1.660	0.032	0.691	0.786
Assistance during abortion and miscarriage by skilled attendant	0.743	0.057	122	219	1.420	0.076	0.630	0.857
Delivery by caesarean section	0.257	0.021	901	1,603	1.475	0.082	0.215	0.299
Miscarriage in the last 3 years	0.116	0.011	1,435	2,613	1.312	0.099	0.093	0.138
Mothers received postnatal care after delivery	0.787	0.026	716	1,303	1.724	0.032	0.736	0.838

na= Not applicable

Table B.8 Sampling errors: Sindh sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.552	0.033	2,857	2,697	3.574	0.060	0.485	0.618
No education	0.571	0.022	2,857	2,697	2.408	0.039	0.526	0.615
Secondary education or higher	0.241	0.018	2,857	2,697	2.251	0.075	0.205	0.277
Ever-married women currently married/in union	0.659	0.016	4,340	3,940	1.203	0.025	0.626	0.692
Mothers received antenatal care for last live birth from skilled provider	0.890	0.014	1,163	1,067	1.457	0.015	0.863	0.917
Mothers protected against tetanus for last live birth or stillbirth	0.657	0.020	1,195	1,095	1.404	0.030	0.618	0.696
Births with skilled attendant at delivery	0.724	0.021	1,163	1,067	1.586	0.029	0.682	0.766
Assistance during abortion and miscarriage by skilled attendant	0.716	0.049	131	117	1.231	0.068	0.618	0.813
Delivery by caesarean section	0.247	0.018	1,163	1,067	1.407	0.073	0.211	0.283
Miscarriage in the last 3 years	0.121	0.009	1,781	1,625	1.091	0.076	0.103	0.140
Mothers received postnatal care after delivery	0.746	0.024	899	819	1.608	0.032	0.698	0.794

Table B.9 Sampling errors: Sindh urban sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	1.000	0.000	1,356	1,488	na	0.000	1.000	1.000
No education	0.365	0.028	1,356	1,488	2.167	0.078	0.308	0.422
Secondary education or higher	0.403	0.027	1,356	1,488	2.023	0.067	0.349	0.457
Ever-married women currently married/in union	0.958	0.007	1,356	1,488	1.203	0.007	0.945	0.971
Mothers received antenatal care for last live birth from skilled provider	0.939	0.018	471	506	1.648	0.020	0.902	0.976
Mothers protected against tetanus for last live birth or stillbirth	0.787	0.024	478	515	1.289	0.031	0.738	0.836
Births with skilled attendant at delivery	0.861	0.025	471	506	1.556	0.029	0.810	0.911
Assistance during abortion and miscarriage by skilled attendant	0.752	0.062	62	63	1.128	0.083	0.628	0.877
Delivery by caesarean section	0.357	0.030	471	506	1.351	0.085	0.296	0.417
Miscarriage in the last 3 years	0.140	0.014	716	766	1.072	0.101	0.112	0.168
Mothers received postnatal care after delivery	0.872	0.028	354	371	1.555	0.032	0.816	0.929

na= Not applicable

Table B.10 Sampling errors: Sindh rural sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.000	0.000	1,501	1,209	na	na	0.000	0.000
No education	0.824	0.017	1,501	1,209	1.706	0.020	0.790	0.857
Secondary education or higher	0.041	0.008	1,501	1,209	1.604	0.200	0.025	0.058
Ever-married women currently married/in union	0.968	0.005	1,501	1,209	1.096	0.005	0.958	0.978
Mothers received antenatal care for last live birth from skilled provider	0.845	0.020	692	561	1.426	0.023	0.806	0.885
Mothers protected against tetanus for last live birth or stillbirth	0.542	0.026	717	580	1.385	0.047	0.490	0.593
Births with skilled attendant at delivery	0.601	0.029	692	561	1.573	0.049	0.542	0.659
Assistance during abortion and miscarriage by skilled attendant	0.673	0.076	69	54	1.326	0.113	0.521	0.825
Delivery by caesarean section	0.148	0.017	692	561	1.256	0.115	0.114	0.182
Miscarriage in the last 3 years	0.105	0.012	1,065	859	1.138	0.117	0.080	0.129
Mothers received postnatal care after delivery	0.641	0.032	545	447	1.545	0.049	0.578	0.704

na= Not applicable

Table B.11 Sampling errors: Khyber Pakhtunkhwa sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.151	0.022	2,836	2,271	3.238	0.145	0.107	0.194
No education	0.668	0.020	2,836	2,271	2.285	0.030	0.627	0.708
Secondary education or higher	0.149	0.014	2,836	2,271	2.164	0.097	0.120	0.178
Ever-married women currently married/in union	0.670	0.025	4,094	3,288	1.728	0.037	0.620	0.719
Mothers received antenatal care for last live birth from skilled provider	0.850	0.019	1,271	988	1.830	0.022	0.813	0.888
Mothers protected against tetanus for last live birth or stillbirth	0.618	0.031	1,306	1,020	2.277	0.050	0.556	0.680
Births with skilled attendant at delivery	0.702	0.028	1,271	988	2.125	0.039	0.646	0.757
Assistance during abortion and miscarriage by skilled attendant	0.690	0.052	134	127	1.291	0.075	0.586	0.794
Delivery by caesarean section	0.069	0.013	1,271	988	1.772	0.186	0.043	0.094
Miscarriage in the last 3 years	0.115	0.012	1,901	1,529	1.537	0.108	0.090	0.140
Mothers received postnatal care after delivery	0.444	0.026	964	765	1.620	0.059	0.392	0.496

Table B.12 Sampling errors: Khyber Pakhtunkhwa urban sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	1.000	0.000	1,259	342	na	0.000	1.000	1.000
No education	0.485	0.035	1,259	342	2.514	0.073	0.414	0.556
Secondary education or higher	0.301	0.029	1,259	342	2.204	0.095	0.244	0.358
Ever-married women currently married/in union	0.967	0.007	1,259	342	1.432	0.008	0.952	0.981
Mothers received antenatal care for last live birth from skilled provider	0.939	0.017	543	154	1.636	0.018	0.906	0.972
Mothers protected against tetanus for last live birth or stillbirth	0.697	0.037	555	156	1.908	0.052	0.624	0.770
Births with skilled attendant at delivery	0.823	0.028	543	154	1.747	0.034	0.767	0.880
Assistance during abortion and miscarriage by skilled attendant	0.689	0.078	54	13	1.218	0.113	0.534	0.845
Delivery by caesarean section	0.114	0.021	543	154	1.557	0.184	0.072	0.156
Miscarriage in the last 3 years	0.093	0.016	810	232	1.368	0.167	0.062	0.124
Mothers received postnatal care after delivery	0.570	0.037	414	119	1.534	0.064	0.496	0.643

na= Not applicable

Table B.13 Sampling errors: Khyber Pakhtunkhwa rural sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.000	0.000	1,577	1,929	na	na	0.000	0.000
No education	0.700	0.022	1,577	1,929	1.912	0.032	0.656	0.744
Secondary education or higher	0.122	0.015	1,577	1,929	1.850	0.125	0.092	0.153
Ever-married women currently married/in union	0.970	0.005	1,577	1,929	1.249	0.006	0.959	0.980
Mothers received antenatal care for last live birth from skilled provider	0.834	0.022	728	834	1.525	0.026	0.791	0.877
Mothers protected against tetanus for last live birth or stillbirth	0.603	0.036	751	863	1.968	0.060	0.531	0.676
Births with skilled attendant at delivery	0.679	0.032	728	834	1.810	0.048	0.614	0.744
Assistance during abortion and miscarriage by skilled attendant	0.690	0.057	80	114	1.101	0.083	0.575	0.804
Delivery by caesarean section	0.060	0.015	728	834	1.598	0.241	0.031	0.089
Miscarriage in the last 3 years	0.119	0.014	1,091	1,297	1.312	0.120	0.090	0.148
Mothers received postnatal care after delivery	0.421	0.030	550	646	1.405	0.072	0.360	0.481

na= Not applicable

Table B.14 Sampling errors: Balochistan sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.303	0.049	1,779	582	4.430	0.160	0.206	0.400
No education	0.762	0.030	1,779	582	2.928	0.039	0.703	0.821
Secondary education or higher	0.089	0.012	1,779	582	1.760	0.133	0.066	0.113
Ever-married women currently married/in union	0.647	0.045	2,589	881	2.335	0.070	0.556	0.738
Mothers received antenatal care for last live birth from skilled provider	0.758	0.037	798	275	2.458	0.048	0.685	0.831
Mothers protected against tetanus for last live birth or stillbirth	0.302	0.030	829	284	1.922	0.099	0.242	0.362
Births with skilled attendant at delivery	0.547	0.046	798	275	2.639	0.083	0.455	0.638
Assistance during abortion and miscarriage by skilled attendant	0.456	0.089	79	21	1.569	0.196	0.278	0.635
Delivery by caesarean section	0.076	0.029	798	275	3.167	0.384	0.018	0.134
Miscarriage in the last 3 years	0.096	0.014	1,226	409	1.574	0.146	0.068	0.124
Mothers received postnatal care after delivery	0.305	0.039	607	217	2.159	0.127	0.228	0.383

Table B.15 Sampling errors: Balochistan urban sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	1.000	0.000	836	177	na	0.000	1.000	1.000
No education	0.665	0.033	836	177	2.025	0.050	0.598	0.731
Secondary education or higher	0.156	0.022	836	177	1.778	0.143	0.112	0.201
Ever-married women currently married/in union	0.970	0.009	836	177	1.487	0.009	0.952	0.987
Mothers received antenatal care for last live birth from skilled provider	0.850	0.028	357	76	1.494	0.033	0.793	0.907
Mothers protected against tetanus for last live birth or stillbirth	0.387	0.042	374	79	1.667	0.109	0.303	0.472
Births with skilled attendant at delivery	0.719	0.038	357	76	1.594	0.053	0.643	0.795
Assistance during abortion and miscarriage by skilled attendant	0.686	0.073	52	9	1.117	0.106	0.540	0.831
Delivery by caesarean section	0.086	0.020	357	76	1.366	0.238	0.045	0.126
Miscarriage in the last 3 years	0.147	0.022	581	120	1.484	0.149	0.103	0.191
Mothers received postnatal care after delivery	0.353	0.044	274	59	1.519	0.125	0.265	0.442

na= Not applicable

Table B.16 Sampling errors: Balochistan rural sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.000	0.000	943	406	na	na	0.000	0.000
No education	0.804	0.042	943	406	3.237	0.052	0.720	0.888
Secondary education or higher	0.060	0.014	943	406	1.774	0.229	0.033	0.088
Ever-married women currently married/in union	0.982	0.006	943	406	1.310	0.006	0.971	0.993
Mothers received antenatal care for last live birth from skilled provider	0.722	0.052	441	199	2.513	0.073	0.618	0.827
Mothers protected against tetanus for last live birth or stillbirth	0.269	0.038	455	205	1.855	0.140	0.193	0.344
Births with skilled attendant at delivery	0.480	0.067	441	199	2.864	0.139	0.347	0.614
Assistance during abortion and miscarriage by skilled attendant	0.272	0.106	27	11	1.204	0.390	0.060	0.484
Delivery by caesarean section	0.072	0.040	441	199	3.311	0.556	0.000	0.152
Miscarriage in the last 3 years	0.075	0.017	645	289	1.527	0.230	0.040	0.109
Mothers received postnatal care after delivery	0.288	0.053	333	159	2.235	0.183	0.182	0.393

na= Not applicable

Table B.17 Sampling errors: Gilgit Baltistan sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.172	0.033	1,178	1,178	3.029	0.194	0.106	0.239
No education	0.501	0.029	1,178	1,178	2.003	0.058	0.443	0.559
Secondary education or higher	0.276	0.024	1,178	1,178	1.828	0.086	0.229	0.324
Ever-married women currently married/in union	0.627	0.043	1,764	1,823	1.141	0.068	0.541	0.712
Mothers received antenatal care for last live birth from skilled provider	0.855	0.030	556	572	2.009	0.035	0.796	0.914
Mothers protected against tetanus for last live birth or stillbirth	0.672	0.037	560	575	1.904	0.056	0.597	0.746
Births with skilled attendant at delivery	0.691	0.037	556	572	1.908	0.053	0.617	0.765
Assistance during abortion and miscarriage by skilled attendant	0.710	0.057	62	65	0.975	0.080	0.596	0.823
Delivery by caesarean section	0.113	0.018	556	572	1.341	0.157	0.078	0.149
Miscarriage in the last 3 years	0.114	0.014	827	854	1.215	0.125	0.085	0.143
Mothers received postnatal care after delivery	0.413	0.034	441	455	1.455	0.081	0.345	0.480

Table B.18 Sampling errors: Azad Jammu and Kashmir sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	0.161	0.024	1,666	1,666	2.707	0.151	0.113	0.210
No education	0.283	0.019	1,666	1,666	1.691	0.066	0.245	0.320
Secondary education or higher	0.342	0.021	1,666	1,666	1.818	0.062	0.299	0.384
Ever-married women currently married/in union	0.623	0.044	2,771	2,546	0.721	0.070	0.536	0.710
Mothers received antenatal care for last live birth from skilled provider	0.971	0.008	603	647	1.244	0.008	0.954	0.987
Mothers protected against tetanus for last live birth or stillbirth	0.852	0.021	615	660	1.550	0.025	0.809	0.895
Births with skilled attendant at delivery	0.776	0.031	603	647	1.908	0.040	0.714	0.839
Assistance during abortion and miscarriage by skilled attendant	0.731	0.065	91	83	1.382	0.089	0.601	0.861
Delivery by caesarean section	0.319	0.026	603	647	1.396	0.080	0.268	0.371
Miscarriage in the last 3 years	0.112	0.015	909	935	1.428	0.138	0.081	0.143
Mothers received postnatal care after delivery	0.734	0.031	440	451	1.513	0.043	0.672	0.797

Table B.19 Sampling errors: Azad Jammu and Kashmir urban sample, Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
			Number of cases				Confidence limits	
Urban residence	1.000	0.000	777	269	na	0.000	1.000	1.000
No education	0.163	0.015	777	269	1.111	0.091	0.133	0.192
Secondary education or higher	0.506	0.027	777	269	1.498	0.053	0.452	0.560
Ever-married women currently married/in union	0.956	0.007	777	269	0.986	0.008	0.941	0.971
Mothers received antenatal care for last live birth from skilled provider	0.970	0.022	256	90	2.057	0.022	0.926	1.014
Mothers protected against tetanus for last live birth or stillbirth	0.801	0.027	262	92	1.092	0.033	0.748	0.855
Births with skilled attendant at delivery	0.895	0.032	256	90	1.695	0.036	0.831	0.960
Assistance during abortion and miscarriage by skilled attendant	0.679	0.069	47	16	1.005	0.102	0.541	0.818
Delivery by caesarean section	0.377	0.034	256	90	1.123	0.090	0.309	0.444
Miscarriage in the last 3 years	0.128	0.016	408	143	0.976	0.126	0.096	0.160
Mothers received postnatal care after delivery	0.730	0.051	195	69	1.615	0.070	0.628	0.832

na= Not applicable

Table B.20 Sampling errors: Azad Jammu and Kashmir rural sample, Pakistan MMS 2019

			Number of cases				Confidence limits	
Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
Urban residence	0.000	0.000	889	1,397	na	na	0.000	0.000
No education	0.306	0.022	889	1,397	1.415	0.072	0.262	0.350
Secondary education or higher	0.310	0.024	889	1,397	1.533	0.077	0.262	0.358
Ever-married women currently married/in union	0.951	0.007	889	1,397	0.984	0.007	0.937	0.965
Mothers received antenatal care for last live birth from skilled provider	0.971	0.009	347	557	0.996	0.009	0.953	0.989
Mothers protected against tetanus for last live birth or stillbirth	0.860	0.024	353	568	1.338	0.028	0.811	0.909
Births with skilled attendant at delivery	0.757	0.036	347	557	1.593	0.048	0.685	0.830
Assistance during abortion and miscarriage by skilled attendant	0.743	0.078	44	68	1.169	0.105	0.586	0.899
Delivery by caesarean section	0.310	0.029	347	557	1.193	0.094	0.251	0.369
Miscarriage in the last 3 years	0.109	0.018	501	793	1.232	0.166	0.073	0.145
Mothers received postnatal care after delivery	0.735	0.036	245	382	1.281	0.049	0.663	0.808

na= Not applicable

Table B.21 Sampling errors for pregnancy-related mortality rates/ratios (PRMR), Pakistan MMS 2019

			Number of cases				Confidence limits	
Variable	Value (R)	Standard error (SE)	Un-weighted (N)	Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Lower (R-2SE)	Upper (R+2SE)
Age-specific PRMR								
15-19	0.128	0.045	121,515	117,365	1.378	0.355	0.037	0.219
20-24	0.253	0.056	103,629	100,449	1.106	0.219	0.142	0.364
25-29	0.325	0.079	94,446	90,591	1.316	0.243	0.167	0.482
30-34	0.543	0.122	70474	68,283	1.367	0.224	0.299	0.787
35-39	0.673	0.181	62,985	61,286	1.730	0.269	0.310	1.035
40-44	0.297	0.144	44,988	44,828	1.774	0.486	0.008	0.586
45-49	0.031	0.025	42,194	41,395	0.911	0.809	0.000	0.080
15-49 (age-adjusted)	0.313	0.036	540,229	524,197	1.315	0.115	0.241	0.384
PREGNANCY-RELATED MORTALITY RATIOS (PRM RATIO)								
Type of residence								
Urban	219	41	271,072	199,897	1.275	0.189	136	301
Rural	269	38	269,157	324,300	1.28	0.142	193	349
Region								
Punjab	219	44	204,056	278,770	1.379	0.200	131	307
Sindh	345	66	197,286	186,299	1.215	0.191	213	477
Khyber Pakhtunkhwa	174	41	201,269	155,656	0.922	0.233	93	255
Balochistan	362	94	83,360	28,987	1.369	0.260	174	550
Pakistan[1]	251	29	540,229	524,197	1.315	0.115	193	309
Azad Jammu and Kashmir	179	54	80,516	81,048	1.154	0.301	71	287
Gilgit Baltistan	196	59	56,480	56,225	1.110	0.301	78	314
PREGNANCY-RELATED MORTALITY RATIOS (PRM RATIO): DIRECT ESTIMATES								
Type of residence								
Urban	220	40	29,561	20,333	1.347	0.181	140	299
Rural	273	40	36,220	43,290	1.429	0.145	194	352
Region								
Punjab	230	45	21,884	31,753	1.426	0.197	139	321
Sindh	364	75	15,202	13,786	1.499	0.206	214	514
Khyber Pakhtunkhwa	170	40	17,571	14,075	1.284	0.234	90	249
Balochistan	391	83	11,124	4,010	1.449	0.213	224	558
Pakistan[1]	256	30	65,781	63,623	1.478	0.116	196	315
Azad Jammu and Kashmir	188	59	7,975	8,501	1.264	0.316	69	307
Gilgit Baltistan	202	57	7,443	7,712	1.118	0.283	88	317

Note: As the confidence intervals were calculated using different methods, the results in this table might differ slightly from the chapter tables.
[1] Pakistan excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table B.22 Sampling errors for maternal mortality rates/ratios (MMR), Pakistan MMS 2019

Variable	Value (R)	Standard error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits Lower (R-2SE)	Confidence limits Upper (R+2SE)
Age-specific MMR								
15-19	0.100	0.042	121,515	117,365	1.454	0.425	0.015	0.184
20-24	0.191	0.048	103,629	100,449	1.104	0.252	0.095	0.287
25-29	0.265	0.069	94,446	90,591	1.278	0.261	0.127	0.403
30-34	0.439	0.110	70,474	68,283	1.372	0.251	0.219	0.659
35-39	0.503	0.142	62,985	61,286	1.569	0.283	0.219	0.787
40-44	0.081	0.036	44,988	44,828	0.842	0.442	0.009	0.152
45-49	0.031	0.025	42,194	41,395	0.911	0.809	0.000	0.080
15-49 (age-adjusted)	0.232	0.029	540,231	524,197	1.219	0.124	0.174	0.290
MATERNAL MORTALITY RATIOS (MM RATIO)								
Type of residence								
Urban	159	33	271,072	199,897	1.227	0.211	92	226
Rural	202	31	425,492	511,732	1.093	0.153	140	263
Region								
Punjab	157	37	204,056	278,770	1.327	0.235	83	230
Sindh	223	41	197,286	186,299	1.037	0.182	142	305
Khyber Pakhtunkhwa	165	39	128,475	99,292	0.918	0.237	87	243
Balochistan	300	86	83,360	28,987	1.353	0.289	127	472
Pakistan[1]	187	24	539,171	523,103	1.219	0.128	139	235
Azad Jammu and Kashmir	103	41	80,516	81,048	1.209	0.402	20	186
Gilgit Baltistan	157	55	56,480	56,225	1.119	0.351	47	267
MATERNAL MORTALITY RATIOS (MM RATIO): DIRECT ESTIMATES								
Type of residence								
Urban	159	34	29,561	20,333	1.348	0.214	91	227
Rural	204	31	36,220	43,290	1.301	0.153	142	266
Region								
Punjab	165	40	21,884	31,753	1.469	0.241	85	244
Sindh	237	39	15,202	13,786	0.974	0.166	158	315
Khyber Pakhtunkhwa	161	39	17,571	14,075	1.306	0.244	82	239
Balochistan	324	84	11,124	4,010	1.606	0.260	156	493
Pakistan[1]	189	24	65,781	63,623	1.371	0.126	142	237
Azad Jammu and Kashmir	108	42	7,975	8,501	1.186	0.391	24	193
Gilgit Baltistan	162	54	7,443	7,712	1.178	0.334	54	270

Note: As the confidence intervals were calculated using different methods, the results in this table might differ slightly from the chapter tables.
[1] Pakistan excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table C.1.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Pakistan MMS 2019

	Male		Female			Male		Female	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	11,010	3.0	10,182	2.8	37	2,993	0.8	3,254	0.9
1	9,710	2.7	9,565	2.6	38	4,217	1.2	4,913	1.4
2	10,446	2.9	9,963	2.7	39	2,828	0.8	3,433	0.9
3	9,381	2.6	9,045	2.5	40	5,908	1.6	5,048	1.4
4	11,193	3.1	10,015	2.8	41	2,142	0.6	2,614	0.7
5	11,147	3.1	10,320	2.8	42	3,487	1.0	3,514	1.0
6	10,246	2.8	9,543	2.6	43	2,468	0.7	2,460	0.7
7	10,794	3.0	10,494	2.9	44	1,887	0.5	2,157	0.6
8	10,927	3.0	10,465	2.9	45	4,708	1.3	4,033	1.1
9	8,738	2.4	8,107	2.2	46	2,510	0.7	2,799	0.8
10	10,524	2.9	9,517	2.6	47	2,023	0.6	2,336	0.6
11	7,219	2.0	6,711	1.8	48	3,043	0.8	3,473	1.0
12	10,308	2.8	9,496	2.6	49	2,108	0.6	2,450	0.7
13	8,343	2.3	8,094	2.2	50	3,817	1.0	2,778	0.8
14	8,489	2.3	8,113	2.2	51	1,903	0.5	1,837	0.5
15	8,063	2.2	8,152	2.2	52	2,598	0.7	2,682	0.7
16	8,292	2.3	8,499	2.3	53	1,770	0.5	2,008	0.6
17	7,224	2.0	6,975	1.9	54	1,638	0.4	1,792	0.5
18	10,207	2.8	9,898	2.7	55	3,086	0.8	2,714	0.7
19	6,281	1.7	6,645	1.8	56	1,764	0.5	1,790	0.5
20	8,147	2.2	8,977	2.5	57	1,290	0.4	1,359	0.4
21	4,789	1.3	5,544	1.5	58	1,664	0.5	1,884	0.5
22	7,227	2.0	7,794	2.1	59	1,184	0.3	1,102	0.3
23	5,032	1.4	6,002	1.6	60	3,652	1.0	2,863	0.8
24	5,641	1.5	6,490	1.8	61	1,211	0.3	1,141	0.3
25	7,048	1.9	7,775	2.1	62	1,727	0.5	1,461	0.4
26	5,639	1.5	6,541	1.8	63	1,195	0.3	1,044	0.3
27	4,669	1.3	5,651	1.6	64	951	0.3	824	0.2
28	6,080	1.7	7,219	2.0	65	2,452	0.7	1,986	0.5
29	3,771	1.0	4,768	1.3	66	912	0.3	706	0.2
30	7,566	2.1	7,987	2.2	67	776	0.2	612	0.2
31	3,198	0.9	3,590	1.0	68	1,059	0.3	1,031	0.3
32	5,082	1.4	5,501	1.5	69	695	0.2	594	0.2
33	3,239	0.9	3,711	1.0	70+	9,260	2.5	7,536	2.1
34	3,455	0.9	3,704	1.0	Don't know	3	0.0	5	0.0
35	6,301	1.7	6,042	1.7					
36	3,979	1.1	4,471	1.2	Total	364,337	100.0	363,798	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table C.1.2 Household age distribution: Short Household Questionnaire

Single-year age distribution of the de facto household population by sex (weighted), Pakistan MMS 2019

	Male		Female			Male		Female	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	9,934	3.0	9,140	2.8	37	2,701	0.8	2,928	0.9
1	8,786	2.7	8,611	2.6	38	3,864	1.2	4,432	1.4
2	9,441	2.9	8,988	2.7	39	2,577	0.8	3,060	0.9
3	8,389	2.5	8,143	2.5	40	5,383	1.6	4,673	1.4
4	10,125	3.1	9,052	2.8	41	1,923	0.6	2,356	0.7
5	10,162	3.1	9,305	2.8	42	3,149	1.0	3,136	1.0
6	9,226	2.8	8,516	2.6	43	2,253	0.7	2,203	0.7
7	9,715	3.0	9,518	2.9	44	1,713	0.5	1,854	0.6
8	9,868	3.0	9,430	2.9	45	4,275	1.3	3,735	1.1
9	7,872	2.4	7,310	2.2	46	2,285	0.7	2,563	0.8
10	9,541	2.9	8,589	2.6	47	1,815	0.6	2,108	0.6
11	6,521	2.0	6,028	1.8	48	2,777	0.8	3,084	0.9
12	9,363	2.8	8,516	2.6	49	1,896	0.6	2,189	0.7
13	7,455	2.3	7,316	2.2	50	3,422	1.0	2,669	0.8
14	7,670	2.3	7,306	2.2	51	1,710	0.5	1,678	0.5
15	7,343	2.2	7,320	2.2	52	2,329	0.7	2,361	0.7
16	7,475	2.3	7,646	2.3	53	1,585	0.5	1,782	0.5
17	6,526	2.0	6,325	1.9	54	1,468	0.4	1,546	0.5
18	9,276	2.8	8,970	2.7	55	2,787	0.8	2,487	0.8
19	5,652	1.7	6,011	1.8	56	1,562	0.5	1,592	0.5
20	7,367	2.2	8,095	2.5	57	1,167	0.4	1,218	0.4
21	4,264	1.3	5,001	1.5	58	1,524	0.5	1,637	0.5
22	6,562	2.0	7,062	2.2	59	1,029	0.3	1,000	0.3
23	4,541	1.4	5,478	1.7	60	3,298	1.0	2,613	0.8
24	5,138	1.6	5,853	1.8	61	1,103	0.3	1,024	0.3
25	6,416	1.9	7,035	2.1	62	1,569	0.5	1,298	0.4
26	5,059	1.5	5,926	1.8	63	1,092	0.3	921	0.3
27	4,231	1.3	5,068	1.5	64	843	0.3	732	0.2
28	5,497	1.7	6,535	2.0	65	2,191	0.7	1,821	0.6
29	3,426	1.0	4,268	1.3	66	790	0.2	626	0.2
30	6,871	2.1	7,306	2.2	67	690	0.2	568	0.2
31	2,904	0.9	3,175	1.0	68	948	0.3	906	0.3
32	4,602	1.4	5,035	1.5	69	625	0.2	538	0.2
33	2,871	0.9	3,336	1.0	70+	8,374	2.5	6,750	2.1
34	3,127	0.9	3,274	1.0	Don't know	0	0.0	3	0.0
35	5,679	1.7	5,554	1.7					
36	3,594	1.1	4,081	1.2	Total	329,208	100.0	328,216	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table C.1.3 Household age distribution: Long Household Questionnaire

Single-year age distribution of the de facto household population by sex (weighted), Pakistan MMS 2019

Age	Male Number	Male Percent	Female Number	Female Percent	Age	Male Number	Male Percent	Female Number	Female Percent
0	1,076	3.1	1,043	2.9	37	292	0.8	326	0.9
1	923	2.6	954	2.7	38	353	1.0	481	1.4
2	1,006	2.9	975	2.7	39	252	0.7	372	1.0
3	991	2.8	902	2.5	40	525	1.5	375	1.1
4	1,068	3.0	962	2.7	41	219	0.6	258	0.7
5	984	2.8	1,015	2.9	42	339	1.0	378	1.1
6	1,020	2.9	1,027	2.9	43	214	0.6	257	0.7
7	1,079	3.1	975	2.7	44	174	0.5	303	0.9
8	1,059	3.0	1,035	2.9	45	433	1.2	298	0.8
9	866	2.5	797	2.2	46	225	0.6	236	0.7
10	983	2.8	928	2.6	47	208	0.6	228	0.6
11	698	2.0	683	1.9	48	266	0.8	389	1.1
12	945	2.7	981	2.8	49	213	0.6	261	0.7
13	888	2.5	778	2.2	50	395	1.1	109	0.3
14	819	2.3	806	2.3	51	193	0.5	159	0.4
15	720	2.0	831	2.3	52	269	0.8	321	0.9
16	817	2.3	853	2.4	53	185	0.5	226	0.6
17	699	2.0	651	1.8	54	170	0.5	247	0.7
18	931	2.7	928	2.6	55	299	0.9	227	0.6
19	630	1.8	634	1.8	56	202	0.6	199	0.6
20	779	2.2	882	2.5	57	122	0.3	141	0.4
21	525	1.5	543	1.5	58	140	0.4	247	0.7
22	666	1.9	732	2.1	59	155	0.4	103	0.3
23	492	1.4	524	1.5	60	354	1.0	250	0.7
24	502	1.4	637	1.8	61	109	0.3	117	0.3
25	632	1.8	740	2.1	62	157	0.4	164	0.5
26	579	1.6	615	1.7	63	103	0.3	122	0.3
27	438	1.2	583	1.6	64	108	0.3	92	0.3
28	583	1.7	684	1.9	65	261	0.7	165	0.5
29	345	1.0	501	1.4	66	122	0.3	80	0.2
30	695	2.0	681	1.9	67	86	0.2	44	0.1
31	294	0.8	415	1.2	68	111	0.3	125	0.4
32	480	1.4	466	1.3	69	70	0.2	56	0.2
33	369	1.0	375	1.1	70+	886	2.5	786	2.2
34	328	0.9	430	1.2	Don't know	3	0.0	2	0.0
35	622	1.8	487	1.4					
36	384	1.1	390	1.1	Total	35,129	100.0	35,582	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table C.1.4 Household age distribution: Azad Jammu and Kashmir

Single-year age distribution of the de facto household population by sex (weighted), Pakistan MMS 2019

	Male		Female			Male		Female	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	1,508	3.1	1,341	2.5	37	299	0.6	610	1.1
1	1,291	2.7	1,221	2.3	38	539	1.1	741	1.4
2	1,443	3.0	1,402	2.6	39	315	0.6	580	1.1
3	1,121	2.3	1,058	2.0	40	712	1.5	798	1.5
4	1,369	2.8	1,201	2.2	41	268	0.6	452	0.8
5	1,388	2.9	1,219	2.2	42	445	0.9	555	1.0
6	1,218	2.5	1,160	2.1	43	279	0.6	400	0.7
7	1,437	3.0	1,320	2.4	44	215	0.4	413	0.8
8	1,402	2.9	1,316	2.4	45	646	1.3	700	1.3
9	1,143	2.4	1,135	2.1	46	340	0.7	455	0.8
10	1,372	2.8	1,304	2.4	47	281	0.6	336	0.6
11	1,019	2.1	1,056	2.0	48	377	0.8	587	1.1
12	1,415	2.9	1,387	2.6	49	282	0.6	399	0.7
13	1,241	2.6	1,237	2.3	50	558	1.2	534	1.0
14	1,256	2.6	1,151	2.1	51	240	0.5	308	0.6
15	1,021	2.1	1,198	2.2	52	366	0.8	387	0.7
16	1,171	2.4	1,206	2.2	53	238	0.5	320	0.6
17	1,009	2.1	1,083	2.0	54	212	0.4	270	0.5
18	1,370	2.8	1,394	2.6	55	481	1.0	535	1.0
19	769	1.6	951	1.8	56	265	0.5	291	0.5
20	941	1.9	1,206	2.2	57	197	0.4	184	0.3
21	651	1.3	791	1.5	58	238	0.5	279	0.5
22	905	1.9	1,152	2.1	59	159	0.3	191	0.4
23	668	1.4	968	1.8	60	657	1.4	564	1.0
24	777	1.6	1,100	2.0	61	159	0.3	212	0.4
25	806	1.7	1,207	2.2	62	272	0.6	283	0.5
26	708	1.5	985	1.8	63	186	0.4	192	0.4
27	521	1.1	726	1.3	64	154	0.3	116	0.2
28	672	1.4	1,016	1.9	65	474	1.0	367	0.7
29	443	0.9	739	1.4	66	172	0.4	98	0.2
30	817	1.7	1,203	2.2	67	141	0.3	114	0.2
31	381	0.8	590	1.1	68	149	0.3	175	0.3
32	607	1.3	828	1.5	69	82	0.2	127	0.2
33	405	0.8	620	1.1	70+	2,174	4.5	1,809	3.3
34	391	0.8	599	1.1	Don't know	2	0.0	0	0.0
35	797	1.6	991	1.8					
36	446	0.9	732	1.4	Total	48,471	100.0	54,176	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C.1.5 Household age distribution (short questionnaire): Azad Jammu and Kashmir

Single-year age distribution of the de facto household population by sex (weighted), Pakistan MMS 2019

Age	Male Number	Male Percent	Female Number	Female Percent	Age	Male Number	Male Percent	Female Number	Female Percent
0	1,348	3.1	1,219	2.5	37	278	0.6	543	1.1
1	1,182	2.7	1,117	2.3	38	496	1.1	685	1.4
2	1,300	3.0	1,257	2.6	39	290	0.7	510	1.0
3	1,003	2.3	949	1.9	40	632	1.4	722	1.5
4	1,255	2.9	1,079	2.2	41	251	0.6	404	0.8
5	1,261	2.9	1,095	2.2	42	408	0.9	505	1.0
6	1,103	2.5	1,047	2.1	43	246	0.6	363	0.7
7	1,287	2.9	1,232	2.5	44	190	0.4	361	0.7
8	1,282	2.9	1,205	2.5	45	586	1.3	653	1.3
9	1,035	2.4	1,039	2.1	46	306	0.7	405	0.8
10	1,261	2.9	1,179	2.4	47	259	0.6	298	0.6
11	921	2.1	946	1.9	48	344	0.8	537	1.1
12	1,280	2.9	1,284	2.6	49	239	0.5	334	0.7
13	1,121	2.6	1,093	2.2	50	506	1.2	502	1.0
14	1,141	2.6	1,030	2.1	51	222	0.5	265	0.5
15	933	2.1	1,100	2.2	52	329	0.8	346	0.7
16	1,040	2.4	1,090	2.2	53	219	0.5	281	0.6
17	907	2.1	994	2.0	54	182	0.4	237	0.5
18	1,256	2.9	1,264	2.6	55	437	1.0	474	1.0
19	677	1.5	849	1.7	56	233	0.5	251	0.5
20	851	1.9	1,091	2.2	57	172	0.4	171	0.3
21	569	1.3	712	1.5	58	215	0.5	255	0.5
22	815	1.9	1,031	2.1	59	141	0.3	172	0.4
23	606	1.4	877	1.8	60	598	1.4	535	1.1
24	699	1.6	1,010	2.1	61	145	0.3	195	0.4
25	740	1.7	1,097	2.2	62	249	0.6	258	0.5
26	607	1.4	912	1.9	63	172	0.4	167	0.3
27	474	1.1	669	1.4	64	144	0.3	103	0.2
28	620	1.4	914	1.9	65	434	1.0	331	0.7
29	402	0.9	675	1.4	66	154	0.4	91	0.2
30	748	1.7	1,096	2.2	67	128	0.3	98	0.2
31	351	0.8	525	1.1	68	131	0.3	162	0.3
32	530	1.2	758	1.5	69	79	0.2	109	0.2
33	374	0.9	565	1.2	70+	1,943	4.4	1,617	3.3
34	365	0.8	534	1.1	Don't know	2	0.0	0	0.0
35	735	1.7	906	1.8					
36	417	1.0	668	1.4	Total	43,855	100.0	49,047	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C.1.6 Household age distribution (long questionnaire): Azad Jammu and Kashmir

Single-year age distribution of the de facto household population by sex (weighted), Pakistan MMS 2019

Age	Male		Female		Age	Male		Female	
	Number	Percent	Number	Percent		Number	Percent	Number	Percent
0	160	3.5	122	2.4	37	21	0.4	67	1.3
1	109	2.4	105	2.0	38	43	0.9	56	1.1
2	143	3.1	145	2.8	39	25	0.5	70	1.4
3	118	2.6	109	2.1	40	80	1.7	76	1.5
4	114	2.5	122	2.4	41	18	0.4	48	0.9
5	127	2.7	124	2.4	42	36	0.8	50	1.0
6	115	2.5	113	2.2	43	33	0.7	36	0.7
7	150	3.2	89	1.7	44	26	0.6	52	1.0
8	120	2.6	111	2.2	45	60	1.3	47	0.9
9	108	2.3	95	1.9	46	34	0.7	50	1.0
10	111	2.4	125	2.4	47	21	0.5	38	0.7
11	98	2.1	111	2.2	48	32	0.7	50	1.0
12	134	2.9	103	2.0	49	43	0.9	64	1.3
13	120	2.6	143	2.8	50	52	1.1	32	0.6
14	115	2.5	121	2.4	51	18	0.4	43	0.8
15	89	1.9	98	1.9	52	37	0.8	42	0.8
16	131	2.8	117	2.3	53	19	0.4	39	0.8
17	103	2.2	89	1.7	54	31	0.7	33	0.6
18	114	2.5	130	2.5	55	45	1.0	61	1.2
19	92	2.0	102	2.0	56	32	0.7	40	0.8
20	90	1.9	115	2.2	57	25	0.5	14	0.3
21	83	1.8	79	1.5	58	23	0.5	24	0.5
22	89	1.9	121	2.4	59	18	0.4	19	0.4
23	62	1.4	91	1.8	60	59	1.3	29	0.6
24	78	1.7	90	1.8	61	13	0.3	17	0.3
25	66	1.4	109	2.1	62	23	0.5	26	0.5
26	101	2.2	73	1.4	63	14	0.3	25	0.5
27	47	1.0	56	1.1	64	10	0.2	13	0.3
28	52	1.1	102	2.0	65	39	0.9	35	0.7
29	41	0.9	64	1.2	66	18	0.4	7	0.1
30	69	1.5	107	2.1	67	13	0.3	16	0.3
31	30	0.6	66	1.3	68	18	0.4	13	0.3
32	76	1.7	70	1.4	69	4	0.1	18	0.4
33	31	0.7	55	1.1	70+	231	5.0	193	3.8
34	27	0.6	66	1.3					
35	63	1.4	85	1.7					
36	29	0.6	63	1.2	Total	4,616	100.0	5,129	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C.1.7 Household age distribution: Gilgit Baltistan

Single-year age distribution of the de facto household population by sex (weighted), Pakistan MMS 2019

Age	Male Number	Male Percent	Female Number	Female Percent	Age	Male Number	Male Percent	Female Number	Female Percent
0	1,328	3.2	1,234	2.9	37	300	0.7	335	0.8
1	1,236	3.0	1,077	2.6	38	426	1.0	478	1.1
2	1,352	3.3	1,255	3.0	39	310	0.8	340	0.8
3	1,077	2.6	971	2.3	40	624	1.5	576	1.4
4	1,441	3.5	1,307	3.1	41	272	0.7	339	0.8
5	1,432	3.5	1,197	2.8	42	379	0.9	343	0.8
6	1,297	3.2	1,171	2.8	43	195	0.5	245	0.6
7	1,337	3.3	1,225	2.9	44	216	0.5	249	0.6
8	1,215	3.0	1,224	2.9	45	480	1.2	420	1.0
9	1,076	2.6	1,003	2.4	46	222	0.5	268	0.6
10	1,187	2.9	1,125	2.7	47	225	0.5	244	0.6
11	940	2.3	879	2.1	48	316	0.8	336	0.8
12	1,232	3.0	1,274	3.0	49	248	0.6	203	0.5
13	992	2.4	1,041	2.5	50	405	1.0	296	0.7
14	1,048	2.6	1,149	2.7	51	194	0.5	212	0.5
15	1,110	2.7	1,178	2.8	52	195	0.5	225	0.5
16	1,024	2.5	1,095	2.6	53	134	0.3	186	0.4
17	887	2.2	914	2.2	54	141	0.3	199	0.5
18	1,070	2.6	1,143	2.7	55	255	0.6	227	0.5
19	659	1.6	726	1.7	56	136	0.3	192	0.5
20	782	1.9	967	2.3	57	138	0.3	165	0.4
21	477	1.2	643	1.5	58	154	0.4	207	0.5
22	664	1.6	738	1.8	59	136	0.3	117	0.3
23	509	1.2	659	1.6	60	431	1.1	314	0.7
24	499	1.2	710	1.7	61	173	0.4	176	0.4
25	626	1.5	885	2.1	62	163	0.4	146	0.3
26	548	1.3	660	1.6	63	103	0.3	108	0.3
27	439	1.1	561	1.3	64	111	0.3	114	0.3
28	555	1.4	712	1.7	65	252	0.6	181	0.4
29	347	0.8	537	1.3	66	94	0.2	99	0.2
30	729	1.8	874	2.1	67	128	0.3	129	0.3
31	330	0.8	466	1.1	68	155	0.4	195	0.5
32	453	1.1	476	1.1	69	130	0.3	103	0.2
33	315	0.8	365	0.9	70+	1,557	3.8	1,106	2.6
34	316	0.8	424	1.0					
35	635	1.6	645	1.5					
36	382	0.9	442	1.1	Total	40,942	100.0	42,029	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C.1.8 Household age distribution (short questionnaire): Gilgit Baltistan

Single-year age distribution of the de facto household population by sex (weighted), Pakistan MMS 2019

	Male		Female			Male		Female	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	1,201	3.3	1,096	2.9	37	269	0.7	311	0.8
1	1,101	3.0	962	2.5	38	381	1.0	431	1.1
2	1,235	3.3	1,130	3.0	39	282	0.8	307	0.8
3	963	2.6	884	2.3	40	572	1.6	531	1.4
4	1,306	3.5	1,194	3.2	41	245	0.7	304	0.8
5	1,287	3.5	1,079	2.8	42	335	0.9	310	0.8
6	1,153	3.1	1,032	2.7	43	179	0.5	216	0.6
7	1,220	3.3	1,101	2.9	44	185	0.5	215	0.6
8	1,098	3.0	1,085	2.9	45	449	1.2	386	1.0
9	951	2.6	914	2.4	46	208	0.6	232	0.6
10	1,072	2.9	1,009	2.7	47	202	0.5	220	0.6
11	836	2.3	803	2.1	48	284	0.8	298	0.8
12	1,118	3.0	1,154	3.0	49	208	0.6	181	0.5
13	898	2.4	943	2.5	50	361	1.0	287	0.8
14	949	2.6	1,039	2.7	51	171	0.5	197	0.5
15	1,013	2.7	1,073	2.8	52	171	0.5	195	0.5
16	933	2.5	988	2.6	53	122	0.3	165	0.4
17	778	2.1	826	2.2	54	133	0.4	167	0.4
18	977	2.7	1,027	2.7	55	234	0.6	207	0.5
19	584	1.6	653	1.7	56	125	0.3	163	0.4
20	715	1.9	879	2.3	57	123	0.3	144	0.4
21	424	1.2	577	1.5	58	129	0.3	183	0.5
22	580	1.6	662	1.7	59	119	0.3	99	0.3
23	464	1.3	581	1.5	60	391	1.1	280	0.7
24	453	1.2	645	1.7	61	155	0.4	160	0.4
25	564	1.5	807	2.1	62	148	0.4	136	0.4
26	491	1.3	596	1.6	63	94	0.3	98	0.3
27	383	1.0	514	1.4	64	95	0.3	102	0.3
28	497	1.3	626	1.7	65	226	0.6	164	0.4
29	319	0.9	478	1.3	66	87	0.2	92	0.2
30	658	1.8	820	2.2	67	116	0.3	111	0.3
31	290	0.8	425	1.1	68	139	0.4	174	0.5
32	400	1.1	433	1.1	69	119	0.3	89	0.2
33	283	0.8	322	0.8	70+	1,392	3.8	1,001	2.6
34	288	0.8	367	1.0					
35	574	1.6	591	1.6					
36	357	1.0	399	1.1	Total	36,860	100.0	37,870	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C.1.9 Household age distribution (long questionnaire): Gilgit Baltistan

Single-year age distribution of the de facto household population by sex (weighted), Pakistan MMS 2019

Age	Male Number	Percent	Female Number	Percent	Age	Male Number	Percent	Female Number	Percent
0	127	3.1	139	3.3	37	31	0.8	23	0.6
1	135	3.3	116	2.8	38	44	1.1	47	1.1
2	117	2.9	125	3.0	39	28	0.7	33	0.8
3	113	2.8	87	2.1	40	51	1.3	46	1.1
4	136	3.3	113	2.7	41	27	0.7	35	0.8
5	145	3.6	119	2.9	42	44	1.1	32	0.8
6	143	3.5	139	3.3	43	16	0.4	29	0.7
7	116	2.9	124	3.0	44	31	0.8	34	0.8
8	116	2.8	139	3.3	45	31	0.7	35	0.8
9	125	3.1	90	2.2	46	14	0.4	36	0.9
10	115	2.8	116	2.8	47	23	0.6	24	0.6
11	104	2.6	76	1.8	48	32	0.8	37	0.9
12	114	2.8	120	2.9	49	40	1.0	22	0.5
13	94	2.3	98	2.4	50	43	1.1	9	0.2
14	98	2.4	110	2.6	51	23	0.6	15	0.4
15	97	2.4	106	2.5	52	25	0.6	30	0.7
16	91	2.2	107	2.6	53	12	0.3	21	0.5
17	109	2.7	87	2.1	54	8	0.2	32	0.8
18	94	2.3	116	2.8	55	20	0.5	20	0.5
19	76	1.9	73	1.7	56	11	0.3	30	0.7
20	67	1.6	88	2.1	57	15	0.4	21	0.5
21	53	1.3	66	1.6	58	25	0.6	24	0.6
22	84	2.1	76	1.8	59	16	0.4	17	0.4
23	46	1.1	78	1.9	60	40	1.0	34	0.8
24	47	1.1	66	1.6	61	18	0.4	16	0.4
25	62	1.5	78	1.9	62	15	0.4	10	0.2
26	58	1.4	64	1.5	63	10	0.2	10	0.3
27	56	1.4	47	1.1	64	16	0.4	13	0.3
28	58	1.4	86	2.1	65	26	0.6	17	0.4
29	28	0.7	59	1.4	66	7	0.2	7	0.2
30	70	1.7	55	1.3	67	12	0.3	18	0.4
31	40	1.0	41	1.0	68	15	0.4	21	0.5
32	53	1.3	43	1.0	69	11	0.3	14	0.3
33	32	0.8	43	1.0	70+	165	4.0	105	2.5
34	28	0.7	57	1.4					
35	61	1.5	55	1.3					
36	26	0.6	43	1.0	Total	4,082	100.0	4,159	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C.2.1 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, number and percent distribution of interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by 5-year age groups, Pakistan MMS 2019

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percentage	
10-14	4,175	na	na	na
15-19	3,897	596	5.0	98.4
20-24	3,318	1,848	15.6	98.0
25-29	3,123	2,462	20.8	96.5
30-34	2,366	2,163	18.3	97.6
35-39	2,057	1,939	16.4	97.8
40-44	1,570	1,488	12.6	97.1
45-49	1,412	1,346	11.4	96.8
50-54	1,060	na	na	na
15-49	17,744	11,840	100.0	97.3

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both the household population of women and interviewed women are household weights. Age is based on the Household Questionnaire. Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
na = Not applicable

Table C.2.2 Age distribution of eligible and interviewed women: Azad Jammu and Kashmir

De facto household population of women age 10-54, number and percent distribution of interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by 5-year age groups, Pakistan MMS 2019

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percentage	
10-14	602	na	na	na
15-19	536	41	2.4	100.0
20-24	496	216	12.6	98.4
25-29	404	322	18.8	98.2
30-34	363	328	19.1	96.9
35-39	341	309	18.0	97.0
40-44	263	258	15.1	99.3
45-49	250	241	14.0	97.3
50-54	189	na	na	na
15-49	2,654	1,716	100.0	97.8

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both the household population of women and interviewed women are household weights. Age is based on the Household Questionnaire.
na = Not applicable

Table C.2.3 Age distribution of eligible and interviewed women: Gilgit Baltistan

De facto household population of women age 10-54, number and percent distribution of interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by 5-year age groups, Pakistan MMS 2019

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percentage	
10-14	519	na	na	na
15-19	489	56	4.6	94.5
20-24	373	195	15.9	95.9
25-29	334	266	21.7	97.3
30-34	239	210	17.1	97.0
35-39	201	190	15.5	98.3
40-44	176	167	13.6	97.0
45-49	154	144	11.7	95.2
50-54	108	na	na	na
15-49	1,967	1,228	100.0	96.8

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both the household population of women and interviewed women are household weights. Age is based on the Household Questionnaire.
na = Not applicable

Table C.3.1 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Pakistan MMS 2019

Subject	Percentage with information missing	Number of cases
Birth date		
Births in the 15 years preceding the survey		
Day only	3.05	28,425
Month only	0.72	28,425
Month and year	0.04	28,425
Age at death		
Deceased children born in the 15 years preceding the survey	0.00	2,354
Respondent's education		
Women age 15-49	0.00	11,859

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.

Table C.3.2 Completeness of reporting: Azad Jammu and Kashmir

Percentage of observations missing information for selected demographic and health questions (weighted), Pakistan MMS 2019

Subject	Percentage with information missing	Number of cases
Birth date		
Births in the 15 years preceding the survey		
Day only	1.67	3,450
Month only	0.76	3,450
Month and year	0.06	3,450
Age at death		
Deceased children born in the 15 years preceding the survey	0.00	219
Respondent's education		
Women age 15-49	0.00	1,666

Table C.3.3 Completeness of reporting: Gilgit Baltistan

Percentage of observations missing information for selected demographic and health questions (weighted), Pakistan MMS 2019

Subject	Percentage with information missing	Number of cases
Birth date		
Births in the 15 years preceding the survey		
Day only	0.01	3,280
Month only	0.37	3,280
Month and year	0.02	3,280
Age at death		
Deceased children born in the 15 years preceding the survey	0.00	207
Respondent's education		
Women age 15-49	0.00	1,178

Table C.4.1 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living, dead, and total children (weighted), Pakistan MMS 2019

Calendar year	Number of births			Percentage with year and month of birth given			Sex ratio at birth[1]			Calendar year ratio[2]		
	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
2019	516	34	550	100.0	100.0	100.0	90.6	332.1	97.5	na	na	na
2018	2,114	146	2,260	99.8	99.2	99.8	101.4	131.3	103.1	na	na	na
2017	1,759	117	1,876	99.5	97.2	99.4	104.7	131.9	106.2	88.0	82.9	87.6
2016	1,883	138	2,021	99.9	100.0	99.9	100.2	120.7	101.5	102.8	105.9	103.0
2015	1,907	143	2,050	99.8	99.5	99.8	112.8	68.4	109.0	100.9	104.4	101.1
2014	1,897	136	2,033	99.5	94.9	99.2	106.2	101.8	105.9	98.7	82.1	97.4
2013	1,937	188	2,125	99.5	99.7	99.5	95.4	112.6	96.8	102.8	121.1	104.2
2012	1,871	175	2,046	99.6	100.0	99.6	103.1	96.2	102.5	98.5	103.9	98.9
2011	1,862	149	2,011	99.0	97.9	99.0	111.6	85.9	109.5	98.9	81.6	97.4
2010	1,894	189	2,083	98.4	100.0	98.6	97.2	78.6	95.4	111.9	117.3	112.4
2015-2019	8,180	578	8,757	99.8	99.1	99.8	103.7	115.0	104.4	na	na	na
2010-2014	9,460	836	10,296	99.2	98.8	99.2	102.5	94.2	101.8	na	na	na
2005-2009	7,487	816	8,303	99.2	96.5	98.9	105.0	107.4	105.3	na	na	na
2000-2004	5,838	630	6,469	99.2	96.9	98.9	103.9	135.8	106.6	na	na	na
Before 2000	5,486	920	6,406	98.9	97.0	98.7	101.8	91.1	100.2	na	na	na
All	36,451	3,780	40,231	99.3	97.6	99.1	103.4	105.3	103.6	na	na	na

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
na = Not applicable
[1] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively
[2] [2Bx/(Bx-1+Bx+1)]x100, where Bx is the number of births in calendar year x

Table C.4.2 Births by calendar years: Azad Jammu and Kashmir

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living, dead, and total children (weighted), Pakistan MMS 2019

Calendar year	Number of births			Percentage with year and month of birth given			Sex ratio at birth[1]			Calendar year ratio[2]		
	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
2019	92	3	95	100.0	100.0	100.0	139.8	135.2	139.7	na	na	na
2018	245	7	252	100.0	100.0	100.0	112.2	75.3	110.9	na	na	na
2017	219	12	231	99.9	95.3	99.6	92.3	73.9	91.2	85.7	102.4	86.5
2016	267	16	283	100.0	100.0	100.0	114.3	99.1	113.4	117.8	134.9	118.6
2015	234	12	245	98.5	100.0	98.6	100.8	83.8	99.9	99.5	66.1	97.1
2014	203	20	223	100.0	89.7	99.1	100.3	38.1	92.6	86.4	155.8	89.9
2013	237	13	250	99.4	100.0	99.4	103.0	179.9	106.1	113.2	76.6	110.4
2012	215	15	230	99.1	100.0	99.1	126.2	176.8	129.0	98.9	82.6	97.6
2011	198	24	222	99.4	100.0	99.4	119.5	172.5	124.2	92.7	202.3	98.5
2010	213	8	221	99.3	100.0	99.3	100.7	437.2	105.5	111.5	53.7	107.2
2015-2019	1,056	50	1,106	99.6	98.9	99.6	107.7	87.1	106.7	na	na	na
2010-2014	1,066	81	1,147	99.4	97.5	99.3	109.3	131.2	110.7	na	na	na
2005-2009	978	73	1,051	99.4	93.3	99.0	94.4	181.0	98.7	na	na	na
2000-2004	829	62	891	99.0	93.0	98.6	97.8	158.1	101.1	na	na	na
Before 2000	922	125	1,047	98.7	96.0	98.4	113.3	73.8	107.7	na	na	na
All	4,852	391	5,243	99.3	95.7	99.0	104.5	112.8	105.1	na	na	na

na = Not applicable
[1] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively
[2] [2Bx/(Bx-1+Bx+1)]x100, where Bx is the number of births in calendar year x

Table C.4.3 Births by calendar years: Gilgit Baltistan

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living, dead, and total children (weighted), Pakistan MMS 2019

Calendar year	Number of births			Percentage with year and month of birth given			Sex ratio at birth[1]			Calendar year ratio[2]		
	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
2019	99	5	104	100.0	100.0	100.0	75.4	224.2	79.6	na	na	na
2018	252	7	259	100.0	100.0	100.0	112.4	66.2	110.8	na	na	na
2017	210	11	221	100.0	86.7	99.3	111.8	122.7	112.3	92.0	118.0	93.0
2016	204	12	215	99.3	100.0	99.3	107.8	160.5	110.1	100.5	107.8	100.9
2015	195	11	206	99.7	100.0	99.7	109.4	14.6	100.9	88.2	92.8	88.4
2014	240	11	251	100.0	100.0	100.0	131.0	47.7	125.3	111.6	81.6	109.8
2013	234	17	251	99.4	100.0	99.4	109.4	78.5	107.0	99.5	120.7	100.7
2012	231	17	247	100.0	100.0	100.0	101.7	217.9	106.8	100.8	103.3	101.0
2011	223	15	239	100.0	100.0	100.0	103.3	111.6	103.8	103.1	99.0	102.8
2010	203	14	217	100.0	85.5	99.0	110.6	72.4	107.5	92.0	103.0	92.6
2015-2019	960	45	1,005	99.8	96.8	99.6	106.2	86.1	105.2	na	na	na
2010-2014	1,130	74	1,205	99.9	97.2	99.7	110.9	96.6	110.0	na	na	na
2005-2009	874	81	955	99.4	99.5	99.4	100.8	101.1	100.8	na	na	na
2000-2004	677	66	744	99.6	100.0	99.6	90.6	53.0	86.5	na	na	na
Before 2000	594	96	690	99.8	100.0	99.8	98.5	136.6	103.1	na	na	na
All	4,235	364	4,598	99.7	98.9	99.6	102.5	94.8	101.9	na	na	na

na = Not applicable
[1] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively
[2] [2Bx/(Bx-1+Bx+1)]x100, where Bx is the number of births in calendar year x

Table C.5.1 Reporting of age at death in days

Distribution of reported deaths under age 1 month by age at death in days and percentage of neonatal deaths reported to occur at age 0-6 days, for 5-year periods preceding the survey (weighted), Pakistan MMS 2019

| Age at death (days) | Number of years preceding the survey | | | | Total |
	0-4	5-9	10-14	15-19	0-19
<1	145	165	156	96	560
1	64	91	65	37	257
2	36	59	38	26	158
3	51	46	38	24	160
4	20	43	11	9	83
5	24	23	15	12	74
6	14	16	21	14	66
7	16	11	7	18	51
8	16	12	13	13	54
9	2	1	4	4	10
10	9	2	15	13	38
11	4	7	1	2	14
12	3	3	2	2	10
13	0	2	5	1	8
14	1	2	0	7	10
15	7	11	5	6	29
16	3	6	4	0	13
17	1	2	5	1	9
18	1	0	6	0	7
19	0	3	1	1	5
20	10	8	4	4	26
21	2	0	2	0	4
22	2	4	4	0	11
24	0	1	3	1	5
25	4	2	2	1	9
26	0	0	0	1	1
27	0	1	1	1	4
29	3	2	0	0	5
30	0	1	0	2	3
Total 0-30	440	524	428	295	1,688
Percentage early neonatal[1]	80.4	84.6	80.5	74.0	80.6

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[1] 0-6 days/0-30 days

Table C.5.2 Reporting of age at death in days: Azad Jammu and Kashmir

Distribution of reported deaths under age 1 month by age at death in days and percentage of neonatal deaths reported to occur at age 0-6 days, for 5-year periods preceding the survey (weighted), Pakistan MMS 2019

| Age at death (days) | Number of years preceding the survey | | | | Total |
	0-4	5-9	10-14	15-19	0-19
<1	9	18	19	7	53
1	7	2	8	4	21
2	4	4	5	3	16
3	5	8	4	2	19
4	5	2	2	0	9
5	3	1	3	0	7
6	1	0	2	1	3
7	0	1	1	2	4
8	5	2	0	0	7
10	0	2	0	1	2
11	0	0	0	0	1
12	1	2	0	0	3
16	0	0	0	0	1
17	0	0	0	1	1
18	1	0	0	1	2
19	0	0	2	0	2
20	1	1	0	0	2
22	0	0	2	0	2
25	1	0	0	0	1
28	0	0	0	0	0
29	0	0	1	0	1
Total 0-30	44	41	50	23	158
Percentage early neonatal[1]	77.4	84.3	84.7	76.9	81.4

[1] 0-6 days/0-30 days

Table C.5.3 Reporting of age at death in days: Gilgit Baltistan

Distribution of reported deaths under age 1 month by age at death in days and percentage of neonatal deaths reported to occur at age 0-6 days, for 5-year periods preceding the survey (weighted), Pakistan MMS 2019

Age at death (days)	Number of years preceding the survey				Total 0-19
	0-4	5-9	10-14	15-19	
<1	15	22	12	10	59
1	2	6	8	6	21
2	4	2	2	1	9
3	5	6	7	8	25
4	0	0	1	1	2
5	0	1	3	0	3
6	0	0	2	1	3
7	1	4	2	0	7
8	0	0	1	0	1
9	0	2	2	1	5
10	0	2	0	2	4
11	2	1	0	0	3
15	1	0	1	1	3
16	0	0	0	1	1
17	0	1	0	0	1
20	1	0	0	0	1
Total 0-30	32	46	40	31	149
Percentage early neonatal[1]	81.2	79.7	84.8	83.6	82.2

[1] 0-6 days/0-30 days

Table C.6.1 Reporting of age at death in months

Distribution of reported deaths under age 2 by age at death in months and percentage of infant deaths reported to occur under age 1 month, for 5-year periods preceding the survey (weighted), Pakistan MMS 2019

Age at death (months)	Number of years preceding the survey				Total 0-19
	0-4	5-9	10-14	15-19	
<1[a]	440	524	428	295	1,688
1	34	45	43	28	150
2	37	40	52	26	155
3	21	42	35	25	122
4	7	18	11	11	47
5	21	11	17	11	61
6	23	22	18	15	77
7	6	7	5	11	30
8	7	12	7	11	37
9	7	8	17	15	47
10	7	6	8	2	22
11	3	6	9	5	22
12	19	15	22	21	76
13	2	6	1	6	16
14	1	1	0	1	3
15	10	1	2	0	13
16	1	0	1	5	8
17	0	1	4	0	4
18	1	7	5	1	15
19	1	1	0	0	2
20	0	0	1	3	4
21	2	0	0	0	2
22	0	0	1	0	2
23	0	2	1	0	2
Total 0-11	612	741	651	455	2,459
Percentage neonatal[1]	71.8	70.8	65.7	65.0	68.6

Note: Table excludes Azad Jammu and Kashmir and Gilgit Baltistan.
[a] Includes deaths under 1 month reported in days
[1] Under 1 month/under 1 year

Table C.6.2 Reporting of age at death in months: Azad Jammu and Kashmir

Distribution of reported deaths under age 2 by age at death in months and percentage of infant deaths reported to occur under age 1 month, for 5-year periods preceding the survey (weighted), Pakistan MMS 2019

Age at death (months)	Number of years preceding the survey				Total 0-19
	0-4	5-9	10-14	15-19	
<1[a]	44	41	50	23	158
1	7	4	1	3	15
2	3	2	1	2	8
3	0	1	3	2	6
4	3	0	1	1	4
5	2	3	0	0	5
6	1	1	2	2	5
7	0	0	2	0	2
9	0	2	2	0	4
10	1	0	0	0	1
12	0	5	9	3	17
13	0	2	0	0	2
14	2	0	0	0	2
16	0	0	3	0	3
17	0	0	0	0	0
18	0	2	2	1	5
22	2	0	0	0	2
Total 0-11	60	54	63	32	208
Percentage neonatal[1]	73.3	77.1	80.2	71.7	76.1

[a] Includes deaths under 1 month reported in days
[1] Under 1 month/under 1 year

Table C.6.3 Reporting of age at death in months: Gilgit Baltistan

Distribution of reported deaths under age 2 by age at death in months and percentage of infant deaths reported to occur under age 1 month, for 5-year periods preceding the survey (weighted), Pakistan MMS 2019

Age at death (months)	Number of years preceding the survey				Total 0-19
	0-4	5-9	10-14	15-19	
<1[a]	32	46	40	31	149
1	5	7	7	3	23
2	1	2	5	2	9
3	2	3	3	7	16
4	1	2	1	0	5
5	1	0	4	1	7
6	3	1	2	1	7
7	1	0	0	1	1
8	0	1	2	0	3
9	2	0	0	4	6
10	0	1	0	0	1
11	0	0	0	0	0
12	0	2	0	1	3
13	0	2	0	0	2
14	0	0	1	0	1
15	0	0	1	0	1
16	0	0	0	1	1
17	0	2	0	1	3
18	1	0	0	1	2
20	0	0	0	0	0
Total 0-11	49	64	64	50	227
Percentage neonatal[1]	64.5	72.5	62.7	62.1	65.7

[a] Includes deaths under 1 month reported in days
[1] Under 1 month/under 1 year

INTERNATIONAL CLASSIFICATION OF DISEASES (ICD-10) CODES

Appendix **D**

Obstetric codes used	ICD-10 codes	Obstetric codes used	ICD-10 codes
Pregnancy with abortive outcome		**Obstetric haemorrhage**	
Ectopic pregnancy	O00.0	Complete placenta previa with hemorrhage	O44.1
Other ectopic pregnancy without intrauterine pregnancy	O00.8	Other premature separation of placenta	O45.8
Hydatidiform mole	O01.9	Premature separation of placenta	O45.9
Spontaneous abortion: incomplete, complicated by delayed or excessive haemorrhage	O03.1	Other antepartum haemorrhage	O46.8
Genital tract and pelvic infection following complete or unspecified spontaneous abortion	O03.5	Antepartum haemorrhage, unspecified	O46.9
Unspecified abortion	O06	Intrapartum haemorrhage with coagulation defect	O67.0
Unspecified abortion: complete or unspecified	O06.3	Rupture of uterus during labour	O71.1
Unspecified abortion: complete or unspecified, with other and unspecified complications	O06.8	Postpartum haemorrhage	O72
Failed attempted abortion	O07	Third-stage haemorrhage	O72.0
Failed medical abortion, complicated by genital tract and pelvic infection	O07.0	Other immediate postpartum haemorrhage	O72.1
Other and unspecified failed attempted abortion, complicated by genital tract and pelvic infection	O07.5	Delayed and secondary postpartum haemorrhage	O72.2
Hypertensive disorders in pregnancy, childbirth, and the puerperium		**Other obstetric complications**	
Pre-existing hypertensive heart disease complicating pregnancy, childbirth, or the puerperium	O10.1	Hyperemesis gravidarum with metabolic disturbance	O21.1
Pre-eclampsia superimposed on chronic hypertension	O11	Long labor	O63.9
Gestational [pregnancy-induced] hypertension	O13	Obstructed labor	O66.9
Severe pre-eclampsia	O14.1	Retained portions of placenta and membranes	O73.1
Eclampsia in pregnancy	O15.0	Complication of labour and delivery, unspecified	O75.9
Eclampsia in the puerperium	O15.2	Deep phlebothrombosis in the puerperium	O87.1
Eclampsia, unspecified as to time period	O15.9	Thromboembolism in pregnancy	O88.2
Non-obstetric complications		Disruption of cesarean delivery wound	O90.0
Gestational diabetes mellitus in childbirth	O24.4	Complication of the puerperium	O90.9
Anaemia complicating pregnancy, childbirth, and the puerperium	O99.0		
Diseases of the circulatory system complicating childbirth	O99.4	**Pregnancy-related infection**	
		Deep phlebothrombosis in pregnancy	O22.3
		Puerperal sepsis	O85

PERSONS INVOLVED IN THE 2019 PAKISTAN MATERNAL MORTALITY SURVEY

Appendix **E**

NIPS Technical and Administrative Staff

Project Directors
Khizar Hayat Khan
Pervaiz Ahmed Junejo

Team Leader/Director (Research and Survey)
Azra Aziz

Deputy Project Director/Senior Fellow
Aysha Sheraz, PhD

Senior Fellow
Saima Mukhtar

Research Fellow
Ali Anwar Buriro

Master Trainer/Research Fellow
Rabia Zafar

Principal Investigator
Tauseef Ahmed, PhD

Advisor (Operations)
Zafar Zahir

Dr. Farid Midhet (Honorary)
Team Leader, DAFPAK, The Palladium Group

Research Associates
Rizwana Timsal, Junaid Khan

Office Coordinators
Asif Mehmood, Maida Umar

Data Processing Staff

Muhammad Ali Raza	Gulnaz Mushtaq	Faisal Zeb

NIPS Administrative Staff

Zafar Iqbal Niazi	Mohammad Arif	Asif Amin Khan
Suba Khan	Muhammad Aslam	Muhammed Imran

PMMS Administrative and Support Staff

Mian Muhammad Arif	Muhammad Wajahat	Asghar Ali
Shaukat Saleem	Shah Nazar Khan	Daud Ahmed
Saleem Yaqoob		

DATA ENTRY OPERATORS

Aamir Rahman
Adnan Ahmed
Asad Farooq
Ayesha khan
Dilnawaz
Farman Ali
Ibrar Ahmed
Kamran Manzoor

Malik Hammad
Mudahair Rahman
Muhammad Adnan Khan
Muhammad Imtiaz
Muhammad Nisar
Muhammad Saeed Tariq
Qamer Ur Rasool
Qaisar Ali

Rana Abbas Akram
Syed Zulfiqar Shah
Umar Farooq
Usman Afzal
Waqar Hussain Shah
Zaeem Raza

LISTING/MAPPING SUPERVISORS

Zia Ullah
Syed Mohammed Ismail Bukhari
Wali Qadar
Ghulam Rasool
Muhammad Ashraf

Saqib Shakeel
Arbab Khan
Irfanullah
Ahmed Ali
Tanveer Ahmed

Nasir Fida
Khalid Latif
Imtiaz Ahmed
Syed Azhar Hussain Kazmi
Muhammad Asif Khan

HOUSEHOLD LISTING STAFF

Abdul Ghafar Solangi
Abdul Manan
Abdul Samad Bin
Abdul Sattar
Abid Aziz Khan
Aftab Ahmed Mangi
Ahtesham Khan
Ali Raza
Allawuddin
Amanullah
Ansar Iqbal
Anwar Ali
Arshad Ali
Asad Ali
Asif Shahzad
Asif Tariq
Ata Tahir
Atif Khan
Atif Riaz
Azmat Ali
Bilal Nadeem
Burhan Khan
Dilshad Hussain
Fahad Iqbal
Farhat Faiz
Farman
Fasih Qazi
Ghulam Haider
Ghulam Mustafa
Ghulam Shabir
Hafiz Amjad Ali
Haris Mustafa
Haseebur Rahman
Hidayat Ullah
Hidayat Ullah Shah
Ihsan Ullah

Ikram Ullah
Imad Ullah
Inayat Shah
Inyat Ullah Khan
Irshad Muhammad
Ishtiaq Ahmed
Jameel Ahmed
Junaid Noman
Junaidur Rehman
Kaleem Ullah
Karrar Hussain
Khalid Hussain
Khushdil Khan
Lal Jan
Makhdoom
Mansoor Khan
Masood Khan
Mazhar Hussain
Meer Baz Khan
Mohammad Qasim
Mohsin Khan Niazi
Muhammad Aamir Khan
Muhammad Abdul Wahab
Muhammad Ashraf
Muhammad Asif
Muhammad Awais
Muhammad Azam
Muhammad Azhar
Muhammad Babar
Muhammad Bilal
Muhammad Hassan
Muhammad Imran
Muhammad Iqbal
Muhammad Irfan Ali Anjum
Muhammad Kamran
Muhammad Kashif Saeed

Muhammad Mubashir
Shahzad
Muhammad Muneer Anjum
Muhammad Munir Awais
Muhammad Nadeem Khan
Muhammad Riasat
Muhammad Shahzad
Muhammad Shahzad Khan
Muhammad Sohaib
Muhammad Umar
Muhammad Usman
Muhammad Zaheer Khan
Muhammad Zohaib Hassan
Nadeem Ahmed
Nadeem Ahmed
Nadir Ali
Naikzada
Nazeer Ahmed
Nihal Yousaf
Oan Muhammad
Parvez Ahmad Jumani
Qaiser Ismail
Rahmat Zeb
Sabz Ali
Sadam Hussain Panhwar
Sajid Ali
Salah Uddin
Salman Ishaq
Samee Ullah
Sami Ullah Khan
Sana Ullah
Sarmad Hussain
Sarmand
Sarwar Khan
Shahid Hussain
Shahid Rasool

Shakeel Ahmad
Shaukat Ali
Sheraz Fareed
Sheraz Karim
Shoaib Abbas
Shunaid Ahmad Khan
Siddiqui
Sohaib Ali Mastoi
Sohail Iqbal
Syed Asif Naeem
Syed Azmat Bukhari
Syed Numan Haider
Syed Tabish Sajjad
Talha Jahangir

Tauseef Asmat
Tufail Ahmed
Waheed Gul
Waqar Ali Nasir
Waseem Adil
Wasim Raza Khan
Wasim Ullah Khan
Yasir Abbas
Yasir Nazir
Yawar Hussain
Zaheer Abbas
Zaheer Abbas
Zeeshan Khan
Zohaib Hassan Shahzad

Zulfiqar Ali
Zulfiqar Ali
Zulfiqar Ali Bijoro
Zulfiqar Ali Soomro

PROVINCIAL FIELD COORDINATORS

Saad Alam
Farman Ali

Farrukh Bilal
Muhammad Ishtiaq

Zeeshan Ali

QUALITY CONTROL STAFF

Samina Abbas
Fakhara Rashid
Ahmed Sumaira Naz
Rubina Shah

Tahira Naz
Muhammad Naeem Khan
Muhammad Awais
Chughtai

Muhammad Imtiaz,
Afzal
Imran Ullah

FIELD SUPERVISORS

Abdul Rauf Khan
Adnan Akbar
Adnan Khan
Ahmed Ali
Allahyar Khan
Ammad Afzal
Asif Ali
Atiqur Rehman Khan
Fayaz Hussain Sangi
Ghulam Mustafa Malah
Habib Ullah
Hassan Khan
Imran Rathore

Inayat Ullah Khan
Iqrar Hussain
Ishtiaque Ahmed Soomro
Karrar Hussain
Khawaja M. Kashif
Manzoor Ahmad
Muhammad Ashraf
Muhamamd Ismail
Muhammad Jafari
Muhammad Sajid Khan
Muhammad Shafiq
Muhammad Shahid Rafiq
Muhammad Shahzad

Muhammad Usman Sarfraz
Munawar Abbas
Naveed ur Rehman
Niamat Maqsood
Pervaiz Hameed Lehri
Qaisar Abbas
Rashid Mahmood
Shahzaib Baloch
Wahab Hassan
Zahid Ali
Zia-ur-Rehman
Zulfiqar Ali Ujjan

FIELD EDITORS

Alia Batool
Aneela Rani
Anees Zehra
Asia
Asia Baloch
Asma Shaheen
Ayesha Naz
Bezan Baloch
Fareeda Malook
Farhana Naz
Fozia Shah

Haseena Sultan
Jameela Yousaf
Kaneez Fatima
Kashmala Zaki
Kousar Parveen
Maryum Solangi
Muhammad Akbar
Mukhtiar Bibi
Mumtaz Shaikh
Nadeem Ahmed
Om-i-Zarah Shafique

Robina Bibi
Sabeeha Zeb
Safina Hayat
Saira Malik
Saira Mursileen
Sakina Luqmani
Saleha Aslam
Shabnam Nazir
Shaista
Shamsa Tabassum

Shumaila Yaseen
Sitara Khan
Sumaira Bangash

Sumyra Akram
Tanzeela Imtiaz
Uzma Kanwal

Zainab Bibi

INTERVIEWERS

Aamira Abbas
Amber Shahzadi
Ammtul Fatima
Amna Ghaffar
Aneela Ali
Aneela Anwar
Aneela Gohar
Aneesa Khursheed
Anila Baig
Anmol
Anum Mehmood
Arisha Zia
Asfa Usman
Asiya Zulfiqar
Asma Kanwal
Asma Rubab
Asma Wasti Shaheen
Aziza Faheem
Azra Parveen
Bano Arbab
Bibi Zahida
Bushra Bibi
Darya Khatoon
Dilfroz Khaliq
Farhat Arra
Farhat Majeed
Fariha Ahmed
Farzana Manzoor
Fehmeeda Iftikhar
Fehmida Bibi
Fozia Marri
Ghazala
Haleema Baloch
Hasina
Iffat Shaheen
Iqra Tariq
Iram Naseem
Irum
Ishrat Jabeen
Kainat Baloch

Kalsoom Magsi
Kashif Miraj
Kazbano Asif
Khalida Kanwal
Khalida Manzoor
Kinzatul Urooj
Laila Gul
Lubna Gul
Madiha Bibi
Mah Noor Ghazal
Mehrunisa
Misbah Aman
Muqadas Haidari
Musarat Shaheen
Nabila
Nadia Asghar
Nageen Sultan
Nasreen Amir
Navida Naz
Nazar Khatoon
Nazia Hameed
Nazia Mahmood
Nazia Malik
Nazia Murtaza
Nazia Noureen
Neelofar Qureshi
Nilufar
Noor Jahan
Nuzhat Munawar
Rabia Latif
Rabia Tabasum
Rafia Rehman
Raheela
Rashida Kakar
Rizwan Altaf
Roomie
Sabeen Farooq
Sadaf Abid
Sadia Mazari
Saima Feroz

Saima Rashid
Sajida Khair
Salma Asif Awan
Samia Shah
Samina Begum
Samina Khan
Samreen Bano
Sanam Hameed
Seemab
Sehrash Afreen
Shabana
Shabana Hanif
Shabum Afzal
Shagufta Naz
Shagufta Shaheen
Shaira Bano
Shaista Naz
Shaista Qaisar
Shakeela
Shakeela Nasir
Shamim Aftaar
Shazaia Iqbal
Shazia Parveen
Shazia Syed
Shehrish
Shehzadi Khursheed
Sher Bano
Shukria Nazir
Shumaila Abbasi
Soomal
Sumaira Saeed
Surhi Neelam
Tamseela Mumtaz
Tania Mobeen
Tanzila Kousar
Urooj Azhar
Zarina Ansari
Zohra Azmat
Zoya Farman

HEALTH PROFESSIONALS AND REVIEWERS

Prof. Sadiqua N. Jafarey
Dr. Azra Ahsan
Dr. Sadiah Ahsan Pal
Prof. Anjum Afshan
Dr. Shahida Zaidi
Dr. Mabel Zaki
Dr. Farah Naz Raza
Dr. Luna Vellozo

Dr. Mehnaz Dilawar Memon
Dr. Paras Nadeem
Dr. Humera Mansoor
Dr. Marium Waqas
Dr. Yasmin Soomro
Dr. Rakhshanda Jabeen
Dr. Anam Jamal
Dr. Mohd. Owais Khan

Dr. Sana Shaikh
Dr. Sanam
Dr. Suwaiba Azim
Dr. Mabel Mamsa
Prof. Haleema Yasmin
Dr. Farah Naz Raza
Dr. Mariam Iqbal

ICF Staff

Chrystelle Jean	Survey Manager/Communication Specialist
Anjushree Pradhan	Senior Survey Coordinator
Dr. Fred Arnold	Technical Deputy Director
Dr. Tom Pullum	Director, Research and Data Analysis
Dr. Ruilin Ren	Sampling Specialist
Dr. Hemed Yusuf	Consultant (ICD-10 coding)
Ruben Hume	Data Processing Specialist
Natalie Shattuck	Production Specialist
Chris Gramer	Production Specialist
Greg Edmondson	Editor
Tom Fish	GIS Specialist
Sally Zweimueller	Communication Specialist
Erica Nybro	Senior Advisor for Communication
Sarah Balian	Communication Specialist

PAKISTAN MATERNAL MORTALITY SURVEY 2019
SHORT HOUSEHOLD QUESTIONNAIRE
PAKISTAN
NATIONAL INSTITUTE OF POPULATION STUDIES

IDENTIFICATION

PROVINCE/REGION (PUNJAB=1; SINDH=2; KP=3; BALOCHISTAN=4; GB=5; AJK=6) . . . .

DISTRICT _____

TEHSIL _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . .

HOUSEHOLD NUMBER . . . .

IS HOUSEHOLD SELECTED FOR (SHORT=1; LONG=2) . . . .

INTERVIEWER VISITS

	1	2	3	FINAL VISIT		
DATE	_____	_____	_____	DAY		
				MONTH		
				YEAR		
INTERVIEWER'S NAME	_____	_____	_____	INT. NO.		
RESULT*	_____	_____	_____	RESULT*		
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS		
TIME	_____	_____				

*RESULT CODES:

1. COMPLETED
2. NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3. ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4. POSTPONED
5. REFUSED
6. DWELLING VACANT OR ADDRESS NOT A DWELLING
7. DWELLING DESTROYED
8. DWELLING NOT FOUND
9. OTHER _____ (SPECIFY)

TOTAL PERSONS IN HOUSEHOLD

NO. OF FEMALE DEATHS AGE 15-49 FROM Q.38

LINE NO. OF RESPONDENT TO HOUSEHOLD SCHEDULE

LANGUAGE OF QUESTIONNAIRE**	**0** **1**	LANGUAGE OF INTERVIEW**		NATIVE LANGUAGE OF RESPONDENT**		TRANSLATOR USED (YES = 1, NO = 2)	

LANGUAGE OF QUESTIONNAIRE** **ENGLISH** _____

**LANGUAGE CODES:
01 ENGLISH   03 SINDHI   05 SARAIKI
02 URDU   04 PUNJABI   06 BALUCHI
                          07 PUSHTO
                          08 OTHER

SUPERVISOR		FIELD EDITOR		KEYED BY
NAME	NUMBER	NAME	NUMBER	NUMBER

THIS PAGE IS INTENTIONALLY BLANK

<u>INTRODUCTION AND CONSENT</u>

Asalum-o-Alaikum. My name is _____. I am working with National Institute of Population Studies. We are conducting a survey about health and other topics all over Pakistan. The information we collect will help the government to plan health services. Your household was selected for the survey. I would like to ask you some questions about your household. The questions usually take about 25 to 30 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time. In case you need more information about the survey, you may contact the person listed on this card.

GIVE CARD WITH CONTACT INFORMATION

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER _____   DATE _____

RESPONDENT AGREES
TO BE INTERVIEWED . .   1

RESPONDENT DOES NOT AGREE
TO BE INTERVIEWED   . .   2 ⟶ END

| 100 | RECORD THE TIME. | HOURS . . . . | | |
| | | MINUTES . . . . | | |

							IF AGE 15 OR OLDER	IF AGE 5 YEARS OR OLDER	
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	EVER ATTENDED SCHOOL	
1	2	3	4	5	6	7	8	16	17
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-17 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF AGE LESS THAN 1-YEAR RECORD '00' IF 95 OR MORE, RECORD '95'.	What is (NAME)'s current marital status? 1 = CURRENTLY MARRIED 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER- MARRIED	Has (NAME) ever attended school?	What is the highest class (NAME) has completed? SEE CODES BELOW.
01		☐☐	M 1 F 2	Y 1 N 2	Y 1 N 2	IN YEARS ☐☐	☐	Y 1 N 2 → NEXT LINE	CLASS ☐☐
02		☐☐	1 2	1 2	1 2	☐☐	☐	1 2 → NEXT LINE	☐☐
03		☐☐	1 2	1 2	1 2	☐☐	☐	1 2 → NEXT LINE	☐☐
04		☐☐	1 2	1 2	1 2	☐☐	☐	1 2 → NEXT LINE	☐☐
05		☐☐	1 2	1 2	1 2	☐☐	☐	1 2 → NEXT LINE	☐☐
06		☐☐	1 2	1 2	1 2	☐☐	☐	1 2 → NEXT LINE	☐☐
07		☐☐	1 2	1 2	1 2	☐☐	☐	1 2 → NEXT LINE	☐☐
08		☐☐	1 2	1 2	1 2	☐☐	☐	1 2 → NEXT LINE	☐☐
09		☐☐	1 2	1 2	1 2	☐☐	☐	1 2 → NEXT LINE	☐☐
10		☐☐	1 2	1 2	1 2	☐☐	☐	1 2 → NEXT LINE	☐☐

2A) Just to make sure that I have a complete listing: are there any other people such as small children or infants that we have not listed? YES ☐ → ADD TC TABLE NO ☐

2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here? YES ☐ → ADD TC TABLE NO ☐

2C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed? YES ☐ → ADD TC TABLE NO ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HH
01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = BROTHER/SISTER-IN-LAW
10 = NEICE/NEPHEW
11 = GRAND PARENTS
12 = AUNTS/UNCLE
13 = OTHER RELATIVE
14 = ADOPTED/STEPCHILD
15 = NOT RELATED
16 = DOMESTIC SERVANT
98 = DON'T KNOW

CODES FOR Q. 17: EDUCATION CLASS
00 = LESS THAN CLASS 1 COMPLETED
01 - 10 = CLASS 1 - CLASS 10 (MATRIC)
11 - 12 = CLASS 11 - 12
13 -15 = BACHELORS DEGREE
16 = MASTER'S DEGREE OR MBBS, PhD, MPHIL, BSc (4 YEARS)
98 = DON'T KNOW

								IF AGE 15 OR OLDER	IF AGE 5 YEARS OR OLDER	
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE		MARITAL STATUS	EVER ATTENDED SCHOOL	
1	2	3	4	5	6	7		8	16	17
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-17 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF AGE LESS THAN 1-YEAR RECORD '00' IF 95 OR MORE, RECORD '95'.		What is (NAME)'s current marital status? 1 = CURRENTLY MARRIED 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER- MARRIED	Has (NAME) ever attended school?	What is the highest class (NAME) has completed? SEE CODES BELOW.
			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS			Y N 1 2 ↓ NEXT LINE	CLASS
11										
12			1 2	1 2	1 2				1 2 ↓ NEXT LINE	
13			1 2	1 2	1 2				1 2 ↓ NEXT LINE	
14			1 2	1 2	1 2				1 2 ↓ NEXT LINE	
15			1 2	1 2	1 2				1 2 ↓ NEXT LINE	
16			1 2	1 2	1 2				1 2 ↓ NEXT LINE	
17			1 2	1 2	1 2				1 2 ↓ NEXT LINE	
18			1 2	1 2	1 2				1 2 ↓ NEXT LINE	
19			1 2	1 2	1 2				1 2 ↓ NEXT LINE	
20			1 2	1 2	1 2				1 2 ↓ NEXT LINE	

TICK HERE IF CONTINUATION SHEET ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HH

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = BROTHER/SISTER-IN-LAW
10 = NEICE/NEPHEW
11 = GRAND PARENTS
12 = AUNTS/UNCLE
13 = OTHER RELATIVE
14 = ADOPTED/STEPCHILD
15 = NOT RELATED
16 = DOMESTIC SERVANT
98 = DON'T KNOW

CODES FOR Q. 17: EDUCATION CLASS

00 = LESS THAN CLASS 1 COMPLETED
01 - 10 = CLASS 1 - CLASS 10 (MATRIC)
11 - 12 = CLASS 11 - 12
13 -15 = BACHELORS DEGREE
16 = MASTER'S DEGREE OR MBBS, PhD, MPHIL, BSc (4 YEARS)
98 = DON'T KNOW

INFORMATION ABOUT BIRTHS AND DEATHS IN THE HOUSEHOLD IN THE PREVIOUS 3 YEARS

18	Now I would like to ask you about all the <u>births</u> that occurred in this household <u>in the last 3 years</u>, whether they were born alive or dead. Since 1st January 2016, did any woman who was a usual resident of this household at the time give birth? I am interested in any birth, even stillbirth & children who didn't survive.	**YES** . . . . . . 1 **NO** . . . . 2 ⟶ 27

19	How many births occurred in this household <u>in the last 3 years</u>?	☐☐

NO	What are the names of the babies born in the last 3 years? IF STILL BORN WRITE 'BABY'.	Is (NAME) a boy or a girl?	In what month and year was (NAME) born? **IF MONTH DON'T KNOW RECORD '98'**	Was (NAME) born alive?	Is (NAME) still alive?	LINE NUMBER FROM HOUSEHOLD ROSTER (RECORD '00' IF CHILD NOT LISTED IN HH ROSTER)
20	21	22	23	24	25	26
01		BOY 1 GIRL 2	MONTH ☐☐ YR [2][0][1]☐	YES . . . . 1 NO . . . . 2 NEXT ⤶	YES . . . . 1 NO . . . . 2 NEXT ⤶	☐☐ NEXT ⤶
02		BOY 1 GIRL 2	MONTH ☐☐ YR [2][0][1]☐	YES . . . . 1 NO . . . . 2 NEXT ⤶	YES . . . . 1 NO . . . . 2 NEXT ⤶	☐☐ NEXT ⤶
03		BOY 1 GIRL 2	MONTH ☐☐ YR [2][0][1]☐	YES . . . . 1 NO . . . . 2 NEXT ⤶	YES . . . . 1 NO . . . . 2 NEXT ⤶	☐☐ NEXT ⤶
04		BOY 1 GIRL 2	MONTH ☐☐ YR [2][0][1]☐	YES . . . . 1 NO . . . . 2 NEXT ⤶	YES . . . . 1 NO . . . . 2 NEXT ⤶	☐☐ NEXT ⤶
05		BOY 1 GIRL 2	MONTH ☐☐ YR [2][0][1]☐	YES . . . . 1 NO . . . . 2 NEXT ⤶	YES . . . . 1 NO . . . . 2 NEXT ⤶	☐☐ NEXT ⤶
06		BOY 1 GIRL 2	MONTH ☐☐ YR [2][0][1]☐	YES . . . . 1 NO . . . . 2 NEXT ⤶	YES . . . . 1 NO . . . . 2 NEXT ⤶	☐☐ NEXT ⤶
07		BOY 1 GIRL 2	MONTH ☐☐ YR [2][0][1]☐	YES . . . . 1 NO . . . . 2 NEXT ⤶	YES . . . . 1 NO . . . . 2 NEXT ⤶	☐☐ NEXT ⤶
08		BOY 1 GIRL 2	MONTH ☐☐ YR [2][0][1]☐	YES . . . . 1 NO . . . . 2 NEXT ⤶	YES . . . . 1 NO . . . . 2 NEXT ⤶	☐☐ NEXT ⤶

INFORMATION ABOUT BIRTHS AND DEATHS IN THE HOUSEHOLD IN THE PREVIOUS 3 YEARS

27	Now I would like to ask you about any deaths that occurred in this household in the last 3 years Since 1st January 2016, God forbid, has any usual member of this household died?		YES .... 1 NO .... 2 → 38				
28	How many deaths occurred to usual residents in this household in the last 3 years?						

NO	What were the names of the people who died in the last 3 years?	Was (NAME) Male or Female?	In what month and year did (NAME) die? **IF MONTH DON'T KNOW RECORD '98'**	How old was(NAME) when He/She died? RECORD DAYS IF LESS THAN 1 MONTHS' MONTHS IF LESS THAN 2 YEARS' OR YEARS	**CHECK 31 AND 33 WAS THIS A WOMAN AGE 15-49 WHEN SHE DIED?**	Female, 15 - 49 years old		
						Was (NAME) pregnant when she died	Did (NAME) die during childbirth?	Did (NAME) die within 6 weeks after delivery?
29	30	31	32	33	34	35	36	37
01	____	MALE .... 1 FEMALE... 2	MONTH YR 2 0 1	DAYS 1 MONTH 2 YRS 3	YES ... 1 NO ... 2 NEXT ←	YES ... 1 NEXT ← NO ... 2	YES ... 1 NEXT ← NO ... 2	YES ... 1 NEXT ← NO ... 2
02	____	MALE .... 1 FEMALE... 2	MONTH YR 2 0 1	DAYS 1 MONTH 2 YRS 3	YES ... 1 NO ... 2 NEXT ←	YES ... 1 NEXT ← NO ... 2	YES ... 1 NEXT ← NO ... 2	YES ... 1 NEXT ← NO ... 2
03	____	MALE .... 1 FEMALE... 2	MONTH YR 2 0 1	DAYS 1 MONTH 2 YRS 3	YES ... 1 NO ... 2 NEXT ←	YES ... 1 NEXT ← NO ... 2	YES ... 1 NEXT ← NO ... 2	YES ... 1 NEXT ← NO ... 2
04	____	MALE .... 1 FEMALE... 2	MONTH YR 2 0 1	DAYS 1 MONTH 2 YRS 3	YES ... 1 NO ... 2 NEXT ←	YES ... 1 NEXT ← NO ... 2	YES ... 1 NEXT ← NO ... 2	YES ... 1 NEXT ← NO ... 2

38	CHECK COLUMN 32 AND 34: NUMBER OF DEATHS TO WOMEN AGE 15-49 YEARS OLD IN JANUARY 2016 OR AFTER	
39	RECORD THE TIME.	HOURS .... MINUTES ....

(A) INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT INTERVIEW:

_____

_____

_____

_____

_____

_____

COMMENTS ON SPECIFIC QUESTIONS:

_____

_____

_____

_____

_____

_____

ANY OTHER COMMENTS:

_____

_____

_____

_____

_____

_____

(B) SUPERVISOR'S OBSERVATIONS

_____

_____

_____

_____

(C) EDITOR'S OBSERVATIONS

_____

_____

_____

_____

IDENTIFICATION

PROVINCE/REGION (PUNJAB=1; SINDH=2; KPK=3; BALOCHISTAN=4; GB=5; AJK=6) . . . .

DISTRICT _____

TEHSIL _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . .

HOUSEHOLD NUMBER . . . .

IS HOUSEHOLD SELECTED FOR (SHORT=1; LONG=2. . . . .

INTERVIEWER VISITS

	1	2	3	FINAL VISIT		
DATE	_____	_____	_____	DAY		
				MONTH		
				YEAR		
INTERVIEWER'S NAME	_____	_____	_____	INT. NO.		
RESULT*	_____	_____	_____	RESULT*		
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS		
TIME	_____	_____				

*RESULT CODES:

1   COMPLETED
2   NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3   ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4   POSTPONED
5   REFUSED
6   DWELLING VACANT OR ADDRESS NOT A DWELLING
7   DWELLING DESTROYED
8   DWELLING NOT FOUND
9   OTHER _____
                    (SPECIFY)

TOTAL PERSONS IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

NO. OF FEMALE DEATHS AGE 15-49 FROM Q.38

LINE NO. OF RESPONDENT TO HOUSEHOLD SCHEDULE

LANGUAGE OF QUESTIONNAIRE** **0 1**   LANGUAGE OF INTERVIEW**   NATIVE LANGUAGE OF RESPONDENT**   TRANSLATOR USED (YES = 1, NO = 2)

LANGUAGE OF QUESTIONNAIRE** **ENGLISH**

**LANGUAGE CODES:
01 ENGLISH   03 SINDHI   05 SARAIKI
02 URDU   04 PUNJABI   06 BALUCHI
                                      07 PUSHTO
                                      08 OTHER

SUPERVISOR		FIELD EDITOR		KEYED BY
NAME	NUMBER	NAME	NUMBER	NUMBER

THIS PAGE IS INTENTIONALLY BLANK

<u>INTRODUCTION AND CONSENT</u>

Asalum-o-Alaikum. My name is _____. I am working with National Institute of Population Studies. We are conducting a survey about health and other topics all over Pakistan. The information we collect will help the government to plan health services. Your household was selected for the survey. I would like to ask you some questions about your household. The questions usually take about 25 to 30 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time. In case you need more information about the survey, you may contact the person listed on this card.

GIVE CARD WITH CONTACT INFORMATION

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER _____ DATE _____

RESPONDENT AGREES
TO BE INTERVIEWED . . 1

RESPONDENT DOES NOT AGREE
TO BE INTERVIEWED   . . 2 ⟶ END

| 100 | RECORD THE TIME. | HOURS . . . . | | |
| | | MINUTES . . . . | | |

HOUSEHOLD SCHEDULE

						IF AGE 15 OR OLDER		IF AGE 5 YEARS OR OLDER	
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY	EVER ATTENDED SCHOOL	
1	2	3	4	5	6	7	8	9	16	17
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-17 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF AGE LESS THAN 1-YEAR RECORD '00' IF 95 OR MORE, RECORD '95'.	What is (NAME)'s current marital status? 1 = CURRENTLY MARRIED 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER- MARRIED	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15 to 49 YEARS WHO ARE MARRIED DIVORCED OR SEPRATED OR WIDOWED	Has (NAME) ever attended school?	What is the highest class (NAME) has completed? SEE CODES BELOW.
			M F	Y N	Y N	IN YEARS			Y N	CLASS
01			1 2	1 2	1 2			01	1 2 → NEXT LINE	
02			1 2	1 2	1 2			02	1 2 → NEXT LINE	
03			1 2	1 2	1 2			03	1 2 → NEXT LINE	
04			1 2	1 2	1 2			04	1 2 → NEXT LINE	
05			1 2	1 2	1 2			05	1 2 → NEXT LINE	
06			1 2	1 2	1 2			06	1 2 → NEXT LINE	
07			1 2	1 2	1 2			07	1 2 → NEXT LINE	
08			1 2	1 2	1 2			08	1 2 → NEXT LINE	
09			1 2	1 2	1 2			09	1 2 → NEXT LINE	
10			1 2	1 2	1 2			10	1 2 → NEXT LINE	

2A) Just to make sure that I have a complete listing: are there any other people such as small children or infants that we have not listed?   YES ☐ → ADD TO TABLE   NO ☐

2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here?   YES ☐ → ADD TO TABLE   NO ☐

2C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed?   YES ☐ → ADD TO TABLE   NO ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HH

01 = HEAD	09 = BROTHER/SISTER-IN-LAW
02 = WIFE OR HUSBAND	10 = NEICE/NEPHEW
03 = SON OR DAUGHTER	11 = GRAND PARENTS
04 = SON-IN-LAW OR DAUGHTER-IN-LAW	12 = AUNTS/UNCLE
	13 = OTHER RELATIVE
05 = GRANDCHILD	14 = ADOPTED/STEPCHILD
06 = PARENT	15 = NOT RELATED
07 = PARENT-IN-LAW	16 = DOMESTIC SERVANT
08 = BROTHER OR SISTER	98 = DON'T KNOW

CODES FOR Q. 17: EDUCATION CLASS

- 00 = LESS THAN CLASS 1 COMPLETED
- 01 - 10 = CLASS 1 - CLASS 10 (MATRIC)
- 11 - 12 = CLASS 11 - 12
- 13 -15 = BACHELORS DEGREE
- 16 = MASTER'S DEGREE OR MBBS, PhD, MPHIL, BSc (4 YEARS)
- 98 = DON'T KNOW

							IF AGE 15 OR OLDER		IF AGE 5 YEARS OR OLDER	
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY	EVER ATTENDED SCHOOL	
1	2	3	4	5	6	7	8	9	16	17
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-17 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF AGE LESS THAN 1-YEAR RECORD '00' IF 95 OR MORE, RECORD '95'.	What is (NAME)'s current marital status? 1 = CURRENTLY MARRIED 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15 to 49 YEARS WHO ARE MARRIED DIVORCED OR SEPRATED OR WIDOWED	Has (NAME) ever attended school?	What is the highest class (NAME) has completed? SEE CODES BELOW.
#			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS		11	Y N 1 2 NEXT LINE	CLASS
#			1 2	1 2	1 2			12	1 2 NEXT LINE	
#			1 2	1 2	1 2			13	1 2 NEXT LINE	
#			1 2	1 2	1 2			14	1 2 NEXT LINE	
#			1 2	1 2	1 2			15	1 2 NEXT LINE	
#			1 2	1 2	1 2			16	1 2 NEXT LINE	
#			1 2	1 2	1 2			17	1 2 NEXT LINE	
#			1 2	1 2	1 2			18	1 2 NEXT LINE	
#			1 2	1 2	1 2			19	1 2 NEXT LINE	
#			1 2	1 2	1 2			20	1 2 NEXT LINE	

TICK HERE IF CONTINUATION SHEET ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HH

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = BROTHER/SISTER-IN-LAW
10 = NEICE/NEPHEW
11 = GRAND PARENTS
12 = AUNTS/UNCLE
13 = OTHER RELATIVE
14 = ADOPTED/STEPCHILD
15 = NOT RELATED
16 = DOMESTIC SERVANT
98 = DON'T KNOW

CODES FOR Q. 17: EDUCATION CLASS

00 = LESS THAN CLASS 1 COMPLETED
01 - 10 = CLASS 1 - CLASS 10 (MATRIC)
11 - 12 = CLASS 11 - 12
13 -15 = BACHELORS DEGREE
16 = MASTER'S DEGREE OR MBBS, PhD, MPHIL, BSc (4 YEARS)
98 = DON'T KNOW

INFORMATION ABOUT BIRTHS AND DEATHS IN THE HOUSEHOLD IN THE PREVIOUS 3 YEARS

18	Now I would like to ask you about all the births that occurred in this household in the last 3 years, whether they were born alive or dead. Since 1st January 2016, did any woman who was a usual resident of this household at the time give birth? I am interested in any birth, even stillbirth & children who didn't survive.	YES .... 1 NO .... 2 ⟶ 27

19	How many births occurred in this household in the last 3 years?	☐☐

NO	What are the names of the babies born in the last 3 years? IF STILL BORN WRITE 'BABY'.	Is (NAME) a boy or a girl?	In what month and year was (NAME) born? IF MONTH DON'T KNOW RECORD '98'	Was (NAME) born alive?	Is (NAME) still alive?	LINE NUMBER FROM HOUSEHOLD ROSTER (RECORD '00' IF CHILD NOT LISTED IN HH ROSTER)
20	21	22	23	24	25	26
01	_____	BOY GIRL	MONTH ☐☐ YR [2][0][1]☐	YES .... NO .... NEXT ⤶	YES .... NO .... NEXT ⤶	☐☐ NEXT ⤶
02	_____	BOY GIRL	MONTH ☐☐ YR [2][0][1]☐	YES .... NO .... NEXT ⤶	YES .... NO .... NEXT ⤶	☐☐ NEXT ⤶
03	_____	BOY GIRL	MONTH ☐☐ YR [2][0][1]☐	YES .... NO .... NEXT ⤶	YES .... NO .... NEXT ⤶	☐☐ NEXT ⤶
04	_____	BOY GIRL	MONTH ☐☐ YR [2][0][1]☐	YES .... NO .... NEXT ⤶	YES .... NO .... NEXT ⤶	☐☐ NEXT ⤶
05	_____	BOY GIRL	MONTH ☐☐ YR [2][0][1]☐	YES .... NO .... NEXT ⤶	YES .... NO .... NEXT ⤶	☐☐ NEXT ⤶
06	_____	BOY GIRL	MONTH ☐☐ YR [2][0][1]☐	YES .... NO .... NEXT ⤶	YES .... NO .... NEXT ⤶	☐☐ NEXT ⤶
07	_____	BOY GIRL	MONTH ☐☐ YR [2][0][1]☐	YES .... NO .... NEXT ⤶	YES .... NO .... NEXT ⤶	☐☐ NEXT ⤶
08	_____	BOY GIRL	MONTH ☐☐ YR [2][0][1]☐	YES .... NO .... NEXT ⤶	YES .... NO .... NEXT ⤶	☐☐ NEXT ⤶

INFORMATION ABOUT BIRTHS AND DEATHS IN THE HOUSEHOLD IN THE PREVIOUS 3 YEARS

27	Now I would like to ask you about any deaths that occurred in this household in the last 3 years Since 1st January 2016, God forbid, has any usual member of this household died?	YES . . . . 1 NO . . . . 2 → 38

28	How many deaths occurred to usual residents in this household in the last 3 years?	☐☐

NO	What were the names of the people who died in the last 3 years?	Was (NAME) Male or Female?	In what month and year did (NAME) die? IF MONTH DON'T KNOW RECORD '98'	How old was(NAME) when He/She died? RECORD DAYS IF LESS THAN 1 MONTHS' MONTHS IF LESS THAN 2 YEARS' OR YEARS	CHECK 31 AND 33 WAS THIS A WOMAN AGE 15-49 WHEN SHE DIED?	Female, 15 - 49 years old		
						Was (NAME) pregnant when she died	Did (NAME) die during childbirth?	Did (NAME) die within 6 weeks after delivery?
29	30	31	32	33	34	35	36	37
01	_____	MALE . . . . 1 FEMALI . . 2	MONTH ☐☐ YR 2 0 1 ☐	DAYS 1 ☐☐ MONTH 2 ☐☐ YRS 3 ☐☐	YES . . 1 NO . . 2 NEXT ⮐	YES . . 1 NEXT ⮐ NO . . 2	YES . . 1 NEXT ⮐ NO . . 2	YES . . 1 NEXT ⮐ NO . . 2
02	_____	MALE . . . . 1 FEMALI . . 2	MONTH ☐☐ YR 2 0 1 ☐	DAYS 1 ☐☐ MONTH 2 ☐☐ YRS 3 ☐☐	YES . . 1 NO . . 2 NEXT ⮐	YES . . 1 NEXT ⮐ NO . . 2	YES . . 1 NEXT ⮐ NO . . 2	YES . . 1 NEXT ⮐ NO . . 2
03	_____	MALE . . . . 1 FEMALI . . 2	MONTH ☐☐ YR 2 0 1 ☐	DAYS 1 ☐☐ MONTH 2 ☐☐ YRS 3 ☐☐	YES . . 1 NO . . 2 NEXT ⮐	YES . . 1 NEXT ⮐ NO . . 2	YES . . 1 NEXT ⮐ NO . . 2	YES . . 1 NEXT ⮐ NO . . 2
04	_____	MALE . . . . 1 FEMALI . . 2	MONTH ☐☐ YR 2 0 1 ☐	DAYS 1 ☐☐ MONTH 2 ☐☐ YRS 3 ☐☐	YES . . 1 NO . . 2 NEXT ⮐	YES . . 1 NEXT ⮐ NO . . 2	YES . . 1 NEXT ⮐ NO . . 2	YES . . 1 NEXT ⮐ NO . . 2

38	CHECK COLUMN 32 AND 34: NUMBER OF DEATHS TO WOMEN AGE 15-49 YEARS OLD IN JANUARY 2016 OR AFTER	☐☐

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

101	What is the main source of drinking water for members of your household?	**PIPED WATER**
		    PIPED INTO DWELLING 11
		    PIPED TO YARD/PLO 12
		    PIPED TO NEIGHBOUR 13
		    PUBLIC TAP/STANDPIPE 14
		
		TUBE WELL OR BOREHOLE 21
		DUG WELL
		    PROTECTED WEL 31
		    UNPROTECTED WEL 32
		WATER FROM SPRING
		    PROTECTED SPRING 41
		    UNPROTECTED SPRING 42
		
		RAINWATER 51
		TANKER TRUCK 61
		CART WITH SMALL TAN 71
		SURFACE WATER (RIVER/DAM/
		    LAKE/POND/STREAM/CANAL/
		    IRRIGATION CHANNEL) 81
		BOTTLED WATER 91
		
		OTHER _____ 96
		              (SPECIFY)
			→ 106
			
			→ 103
			
			→ 103

102	What is the main source of water used by your household for other purposes such as cooking and handwashing?	**PIPED WATER**
		    PIPED INTO DWELLING 11
		    PIPED TO YARD/PLO 12
		    PIPED TO NEIGHBOUR 13
		    PUBLIC TAP/STANDPIPE 14
		
		TUBE WELL OR BOREHOLE 21
		DUG WELL
		    PROTECTED WEL 31
		    UNPROTECTED WEL 32
		WATER FROM SPRING
		    PROTECTED SPRING 41
		    UNPROTECTED SPRING 42
		
		RAINWATER 51
		TANKER TRUCK 61
		CART WITH SMALL TAN 71
		SURFACE WATER (RIVER/DAM/
		    LAKE/POND/STREAM/CANAL/
		    IRRIGATION CHANNEL) 81
		
		OTHER _____ 96
		              (SPECIFY)
			→ 106

103	Where is that water source located?	IN OWN DWELLING . . . . 1 IN OWN YARD/PLOT . . . . 2 ELSEWHERE 3	→ 105
104	How long does it take to go there, get water, and come back? IF WATER IS DELIVERED AT HOME, RECORD	MINUTES . . . . ☐☐☐ DON'T KNOW 998	
105	CHECK 101 AND 102: CODE '14' OR '21' YES ☐ NO ☐	→ 107

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
106	In the past two weeks, was the water from this source not available for at least one full day?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
107	Do you do anything to the water to make it safer to drink?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→109

108	What do you usually do to make the water safer to drink?Anything else?
	
	RECORD ALL MENTIONED.
		BOIL . . . . A
		ADD BLEACH/CHLORINE . . . . B
		STRAIN THROUGH A CLOT C
		USE WATER FILTER (CERAMIC/
		   SAND/COMPOSITE/ETC . . . . D
		SOLAR DISINFECTIO . . . . E
		LET IT STAND AND SETTLE . . . . F
		
		OTHER _____ X
		           (SPECIFY)
		DON'T KNOW . . . . Z	

109	What kind of toilet facility do members of your household usually use?
	
	IF NOT POSSIBLE TO DETERMINE, ASK PERMISSION TO OBSERVE THE FACILITY.
		FLUSH OR POUR FLUSH TOILET
		   FLUSH TO PIPED SEWER SYSTE 11
		   FLUSH TO SEPTIC TANK 12
		   FLUSH TO PIT LATRINE 13
		   FLUSH TO SOMEWHERE ELSE 14
		   FLUSH, DON'T KNOW WHERE 15
		PIT LATRINE
		   VENTILATED IMPROVED PIT LATRIN 21
		   PIT LATRINE WITH SLAB 22
		   PIT LATRINE WITHOUT SLAB/OPEN PIT . . 23
		
		COMPOSTING TOILE 31
		BUCKET TOILET 41
		HANGING TOILET/HANGING LATRIN 51
		NO FACILITY/BUSH/FIELD 61
		
		OTHER _____ 96
		           (SPECIFY)
			→113

110	Do you share this toilet facility with other households?	YES . . . . 1 NO 2	→112
111	Including your own household, how many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 . . . . [0][ ] 10 OR MORE HOUSEHOLD . . . . 95 DON'T KNOW 98	
112	Where is this toilet facility located?	IN OWN DWELLING . . . . 1 IN OWN YARD/PLOT . . . . 2 ELSEWHERE 3	

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
113	What type of fuel does your household mainly use for cooking?	ELECTRICITY .... 01 LPG .... 02 NATURAL GAS .... 03 BIOGAS .... 04 KEROSENE .... 05 COAL, LIGNITE .... 06 CHARCOAL .... 07 WOOD .... 08 STRAW/SHRUBS/GRASS................. 09 AGRICULTURAL CROP .... 10 ANIMAL DUNG .... 11 NO FOOD COOKED IN HOUSEHOLD .... 95 OTHER _____ 96 (SPECIFY)	→ 116
114	Is the cooking usually done in the house, in a separate building, or outdoors?	IN THE HOUSE .... 1 IN A SEPARATE BUILDING .... 2 OUTDOORS........................... 3 OTHER _____ 6 (SPECIFY)	→ 116
115	Do you have a separate room which is used as a kitchen?	YES .... 1 NO 2	
116	How many rooms in this household are used for sleeping?	ROOMS .... ☐☐	
117	Does this household own any livestock, herds, other farm animals, or poultry?	YES .... 1 NO 2	→ 121
118	How many of the following animals does this household own? IF NONE, RECORD '00'. IF 95 OR MORE, RECORD '95'. IF UNKNOWN, RECORD '98'. a) Milk cows or bulls? b) Other cattle (buffalo)? c) Horses, donkeys, or mules? d) Goats? e) Sheep? f) Camels? g) Chickens or other poultry?	 a) COWS/BULLS .... ☐☐ b) OTHER CATTLE (BUFFALO .... ☐☐ c) HORSES/DONKEYS/MULES.... ☐☐ d) GOATS .... ☐☐ e) SHEEP .... ☐☐ f) CAMELS .... ☐☐ g) CHICKENS/POULTRY......... ☐☐	

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
121	Does your household have:		YES	NO	
	a) Electricity?	a) ELECTRICITY	1	2	
	b) A radio?	b) RADIO	1	2	
	c) A television?	c) TELEVISION	1	2	
	d) A non-mobile telephone?	d) NON-MOBILE TELEPHONE ..	1	2	
	e) A refrigerator?	e) REFRIGERATOR	1	2	
	f) Almirah/cabinet?	f) ALMIRAH/CABINET	1	2	
	g) Chair?	g) CHAIR	1	2	
	h) Room cooler?	h) ROOM COOLER	1	2	
	i) Air conditioner?	i) AIR CONDITIONER	1	2	
	j) Washing machine?	j) WASHING MACHINE	1	2	
	k) Water pump?	k) WATER PUMP	1	2	
	l) Bed?	l) BED	1	2	
	m) Clock?	m) CLOCK	1	2	
	n) Sofa?	n) SOFA	1	2	
	o) Camera?	o) CAMERA	1	2	
	p) Sewing machine?	p) SEWING MACHINE	1	2	
	q) Computer?	q) COMPUTER	1	2	
	r) Internet connection?	r) INTERNET CONNECTION	1	2	
122	Does any member of this household own:		YES	NO	
	a) A watch?	a) WATCH	1	2	
	b) A mobile phone?	b) MOBILE PHONE	1	2	
	c) A bicycle?	c) BICYCLE	1	2	
	d) A motorcycle or motor scooter?	d) MOTORCYCLE/SCOOTER ..	1	2	
	e) An animal-drawn cart?	e) ANIMAL-DRAWN CART	1	2	
	f) A car or truck or bus?	f) CAR/TRUCK/BUS	1	2	
	g) A tractor?	g) TRACTOR	1	2	
	h) A boat with a motor?	h) BOAT WITH MOTOR	1	2	
	i) A boat without a motor?	i) BOAT WITHOUT MOTOR	1	2	
	j) A Rickshaw/chingchi ?	j) RICKSHAW/CHINGCHI	1	2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
142	OBSERVE MAIN MATERIAL OF THE FLOOR OF THE DWELLING. RECORD OBSERVATION.	**NATURAL FLOOR** 　EARTH/SAND . . . . 11 　DUNG . . . . 12 **RUDIMENTARY FLOOR** 　WOOD PLANKS . . . . 21 　PALM/BAMBOO . . . . 22 **FINISHED FLOOR** 　PARQUET OR POLISHED WOOD . . . . 31 　VINYL OR ASPHALT STRIPS . . . . 32 　CERAMIC TILES . . . . 33 　CEMENT . . . . 34 　CARPET . . . . 35 　CHIPS/TERRAZZO . . . . 36 　BRICKS . . . . 37 　MATS . . . . 38 　MARBLE . . . . 39 OTHER _____ 96 　　　　　　(SPECIFY)	
143	OBSERVE MAIN MATERIAL OF THE ROOF OF THE DWELLING. RECORD OBSERVATION.	**NATURAL ROOFING** 　NO ROOF . . . . 11 　THATCH/PALM LEAF . . . . 12 　SOD/GRASS . . . . 13 **RUDIMENTARY ROOFING** 　RUSTIC MAT . . . . 21 　PALM/BAMBOO . . . . 22 　WOOD PLANKS . . . . 23 　CARDBOARD . . . . 24 **FINISHED ROOFING** 　ASBESTOS . . . . 31 　REINFORCED BRICK CEMENT/RC . . . . 32 　METAL . . . . 33 　WOOD . . . . 34 　CALAMINE/CEMENT FIBER . . . . 35 　CERAMIC TILES . . . . 36 　CEMENT/RCC . . . . 37 　ROOFING SHINGLES . . . . 38 OTHER _____ 96 　　　　　　(SPECIFY)	
144	OBSERVE MAIN MATERIAL OF THE EXTERIOR WALLS OF THE DWELLING. RECORD OBSERVATION.	**NATURAL WALLS** 　NO WALLS . . . . 11 　CANE/PALM/TRUNKS . . . . 12 　DIRT . . . . 13 　MUD/STONES . . . . 14 　BAMBOO/STICKS/MUD . . . . 15 **RUDIMENTARY WALLS** 　UNBAKED BRICKS/MUD . . . . 21 　BAMBOO WITH MUD . . . . 22 　STONE WITH MUD . . . . 23 　UNCOVERED ADOBE . . . . 24 　PLYWOOD . . . . 25 　REUSED WOOD . . . . 26 **FINISHED WALLS** 　CEMENT . . . . 31 　STONE WITH LIME/CEMENT . . . . 32 　BRICKS . . . . 33 　CEMENT BLOCKS . . . . 34 　COVERED ADOBE . . . . 35 　WOOD PLANKS/SHINGLES . . . . 36 OTHER _____ 96 　　　　　　(SPECIFY)	
146	RECORD THE TIME.	HOURS . . . . ▢▢ MINUTES . . . . ▢▢	

(A) INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT INTERVIEW:

_____

_____

_____

_____

_____

_____

COMMENTS ON SPECIFIC QUESTIONS:

_____

_____

_____

_____

_____

_____

ANY OTHER COMMENTS:

_____

_____

_____

_____

_____

_____

(B) SUPERVISOR'S OBSERVATIONS

_____

_____

_____

_____

_____

(C) EDITOR'S OBSERVATIONS

_____

_____

_____

_____

_____

PAKISTAN MATERNAL MORTALITY SURVEY 2019
EVER-MARRIED WOMAN'S QUESTIONNAIRE
PAKISTAN
NATIONAL INSTITUTE OF POPULATION STUDIES

IDENTIFICATION

PROVINCE/REGION (PUNJAB=1; SINDH=2; KP=3; BALOCHISTAN=4; GB=5; AJK=6) . . . .

DISTRICT _____

TEHSIL _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . .

HOUSEHOLD NUMBER . . . .

NAME AND LINE NUMBER OF WOMAN _____

INTERVIEWER VISITS				
	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY
				MONTH
				YEAR
INTERVIEWER'S NAME	_____	_____	_____	INT. NO.
RESULT*	_____	_____	_____	RESULT*
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS
TIME	_____	_____		

*RESULT CODES: 1 COMPLETED   4 REFUSED
                  2 NOT AT HOME   5 PARTLY COMPLETED   7 OTHER _____
                  3 POSTPONED   6 INCAPACITATED   SPECIFY

LANGUAGE OF QUESTIONNAIRE** **0 1**   LANGUAGE OF INTERVIEW**   NATIVE LANGUAGE OF RESPONDENT**   TRANSLATOR USED (YES = 1, NO = 2)

LANGUAGE OF QUESTIONNAIRE** **ENGLISH** _____

LANGUAGE CODES:
01 ENGLISH	03 SINDHI	05 SARAIKI
02 URDU	04 PUNJABI	06 BALUCHI
		07 PUSHTO
		08 OTHER

SUPERVISOR	FIELD EDITOR	KEYED BY
NAME NUMBER	NAME NUMBER	NUMBER

INTRODUCTION AND CONSENT

Asalum-o-Alaikum. My name is _____. I am working with National Institute of Population Studies. We are conducting a survey about women's health and health care utilization all over the Pakistan. The information we collect will help the government to plan health services. Your household was selected for the survey. The questions usually take about 60 to 90 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

In case you need more information about the survey, you may contact the person listed on the card that has already been given to your household.

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER _____   DATE _____

RESPONDENT AGREES
TO BE INTERVIEWED . .   1

RESPONDENT DOES NOT AGREE
TO BE INTERVIEWED   . .   2 ——→ END

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOURS .... [ ][ ] MINUTES .... [ ][ ]	
102	In what month and year were you born?	MONTH .... [ ][ ] DON'T KNOW MONTH .... 98 YEAR .... [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
103	How old were you at your last birthday? **COMPARE AND CORRECT 102 AND 103 IF INCONSISTENT.**	AGE IN COMPLETED YEARS .... [ ][ ]	
104	Have you ever attended school?	YES .... 1 NO 2	——→ 107
105	What is the highest class you completed? **IF COMPLETED LESS THAN CLASS ONE, RECORD '00'. IF MA, MPHIL, PHD, MBBS, OR BSC/4 YEARS, WRITE `16'.**	CLASS . ... [ ][ ]	
106	CHECK 105: CLASS 00-09 [ ] CLASS 10 [ ] OR HIGHER		——→ 108
107	Now I would like you to read this sentence to me. **SHOW CARD TO RESPONDENT.** **IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?**	CANNOT READ AT ALL .... 1 ABLE TO READ ONLY PART OF THE SENTENCE .... 2 ABLE TO READ WHOLE SENTENCE .... 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
108	What is your mother tongue?	URDU .... 01 PUNJABI .... 02 SINDHI .... 03 PUSHTO .... 04 BALOCHI .... 05 ENGLISH .... 06 BARAUHI .... 07 SIRAIKI .... 08 HINDKO .... 09 KASHMIRI .... 10 SHINA .... 11 BRUSHASKI .... 12 WAKHI .... 13 CHITRALI/ KHWAR .... 14 BALTI .... 15 PAHARI .... 16 POTOWARI .... 17 MARWARI .... 18 FARSI .... 19 OTHER 96	
109	Are you currently married?	YES .... 1 NO 2	→ 111
110	What is your current marital status?	WIDOWED .... 1 DIVORCED .... 2 SEPARATED LEGALLY FROM HUSBAND 3	→200
111	Is your husband living with you now or is he staying elsewhere?	LIVING WITH HER .... 1 STAYING ELSEWHERE 2	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
200	Now I would like to ask you about all the pregnancies that you have had during your life. By this I mean all the children born to you whether they were born alive or dead, whether they are still living or not, whether they live with you or somewhere else, and all the pregnancies that you have had that did not result in a live birth. I understand that it is not easy to talk about children who have died, or pregnancies that ended before full term, but it is important that you tell us about all of them, so that the government can develop programs to improve children's health.		
201	First I would like to ask about all the births you have had during your life. Have you ever given birth?	YES .... 1 NO 2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES .... 1 NO 2	→ 204
203	a) How many sons live with you? b) And how many daughters live with you? **IF NONE, RECORD '00'.**	a) SONS AT HOME .... ☐☐ b) DAUGHTERS AT HOME .... ☐☐	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES .... 1 NO 2	→ 206
205	a) How many sons are alive but do not live with you? b) And how many daughters are alive but do not live with you? **IF NONE, RECORD '00'.**	a) SONS ELSEWHERE .... ☐☐ b) DAUGHTERS ELSEWHERE ..... ☐☐	
206	Have you ever given birth to a boy or girl who was born alive but later died? **IF NO, PROBE: Any baby who cried, who made any movement, sound, or effort to breathe, or who showed any other signs of life even if for a very short time?**	YES .... 1 NO 2	→ 207AA
207	a) How many boys have died? b) And how many girls have died? **IF NONE, RECORD '00'.**	a) BOYS DEAD .... ☐☐ b) GIRLS DEAD .... ☐☐	
207AA	Women sometimes have pregnancies that do not result in a live born child. That is, a pregnancy can end in a miscarriage, or the child can be born dead. Have you ever had a pregnancy that did not end in a live birth?	YES .... 1 NO 2	→ 208
207BB	How many pregnancies have you had that did not end in a live birth?	PREGNANCY LOSSES .... ☐☐	
208	**SUM ANSWERS TO 203, 205, 207, AND 207BB, AND ENTER TOTAL. IF NONE, RECORD '00'.**	TOTAL PREGNANCIES .... ☐☐	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ pregnancies during your life. Is that correct? YES NO ☐ ☐ PROBE AND ↓ CORRECT 201-208 AS NECESSARY		
210	CHECK 208: ONE OR MORE ☐ NO PREGNANCIES ☐ PREGNANCIES ↓		→ 225

SECTION 2. REPRODUCTION

211	Now I would like to record all your pregnancies, whether born alive, born dead, or lost before full term, starting with the first one you had. RECORD ALL THE PREGNANCIES IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE ROWS. IF THERE ARE MORE THAN 10 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW.

212 PREG-NANCY HISTORY NUMBER	212A Think back to your first pregnancy. Was that a single or multiple pregnancy?	212B Was the baby born alive, born dead, or lost before birth?	212C Did that baby cry, move, or breathe when it was born?	212D What name was given to the child? RECORD NAME	213 Is (NAME) a boy or a girl?	215 On what day, month, and year was (NAME) born? PROBE: When is his/her birthday?	216 Is (NAME) still alive?
01	SING 1 MULT 2	BORN ALIVE 1 (SKIP TO 212D) BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 220AB)	YES .. 1 NO ... 2 ↓ (SKIP TO 220AB)	_____ NAME	BOY ... 1 GIRL ... 2	DAY ☐☐ MONTH ☐☐ ☐☐☐☐ YEAR	YES ..1 NO ... 2 ↓ (SKIP TO 220)
02	SING 1 MULT 2	BORN ALIVE 1 (SKIP TO 212D) BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 220AB)	YES .. 1 NO ... 2 ↓ (SKIP TO 220AB)	_____ NAME	BOY ... 1 GIRL ... 2	DAY ☐☐ MONTH ☐☐ ☐☐☐☐ YEAR	YES ..1 NO ... 2 ↓ (SKIP TO 220)
03	SING 1 MULT 2	BORN ALIVE 1 (SKIP TO 212D) BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 220AB)	YES .. 1 NO ... 2 ↓ (SKIP TO 220AB)	_____ NAME	BOY ... 1 GIRL ... 2	DAY ☐☐ MONTH ☐☐ ☐☐☐☐ YEAR	YES ..1 NO ... 2 ↓ (SKIP TO 220)
04	SING 1 MULT 2	BORN ALIVE 1 (SKIP TO 212D) BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 220AB)	YES .. 1 NO ... 2 ↓ (SKIP TO 220AB)	_____ NAME	BOY ... 1 GIRL ... 2	DAY ☐☐ MONTH ☐☐ ☐☐☐☐ YEAR	YES ..1 NO ... 2 ↓ (SKIP TO 220)
05	SING 1 MULT 2	BORN ALIVE 1 (SKIP TO 212D) BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 220AB)	YES .. 1 NO ... 2 ↓ (SKIP TO 220AB)	_____ NAME	BOY ... 1 GIRL ... 2	DAY ☐☐ MONTH ☐☐ ☐☐☐☐ YEAR	YES ..1 NO ... 2 ↓ (SKIP TO 220)

212 PREG-NANCY HISTORY NUMBER	212A Think back to your first pregnancy. Was that a single or multiple pregnancy?	212B Was the baby born alive, born dead, or lost before birth?	212C Did that baby cry, move, or breathe when it was born?	212D What name was given to the child? RECORD NAME	213 Is (NAME) a boy or a girl?	215 On what day, month, and year was (NAME) born? PROBE: When is his/her birthday?	216 Is (NAME) still alive?
06	SING 1 MULT 2	BORN ALIVE 1 (SKIP TO 212D) BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 220AB)	YES .. 1 NO ... 2 (SKIP TO 220AB)	_____ NAME	BOY ... 1 GIRL ... 2	DAY MONTH YEAR	YES ..1 NO ... 2 (SKIP TO 220)
07	SING 1 MULT 2	BORN ALIVE 1 (SKIP TO 212D) BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 220AB)	YES .. 1 NO ... 2 (SKIP TO 220AB)	_____ NAME	BOY ... 1 GIRL ... 2	DAY MONTH YEAR	YES ..1 NO ... 2 (SKIP TO 220)
08	SING 1 MULT 2	BORN ALIVE 1 (SKIP TO 212D) BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 220AB)	YES .. 1 NO ... 2 (SKIP TO 220AB)	_____ NAME	BOY ... 1 GIRL ... 2	DAY MONTH YEAR	YES ..1 NO ... 2 (SKIP TO 220)
09	SING 1 MULT 2	BORN ALIVE 1 (SKIP TO 212D) BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 220AB)	YES .. 1 NO ... 2 (SKIP TO 220AB)	_____ NAME	BOY ... 1 GIRL ... 2	DAY MONTH YEAR	YES ..1 NO ... 2 (SKIP TO 220)
10	SING 1 MULT 2	BORN ALIVE 1 (SKIP TO 212D) BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 220AB)	YES .. 1 NO ... 2 (SKIP TO 220AB)	_____ NAME	BOY ... 1 GIRL ... 2	DAY MONTH YEAR	YES ..1 NO ... 2 (SKIP TO 220)

217 IF ALIVE: How old was (NAME) at (NAME)'s last birthday? **RECORD AGE IN COMPLETED YEARS.**	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD. RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD.	220 IF DEAD: How old was (NAME) when (he/she) died? **IF '12 MONTHS' OR '1 YR', ASK: Did (NAME) have (his/her) first birthday? THEN ASK: Exactly how many months old was (NAME) when (he/she) died** **RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.**	220AB On what day, month, and year did this pregnancy end?	220AC IF BORN DEAD OR LOST BEFORE BIRTH — How many months did this pregnancy last? **RECORD IN COMPLETED MONTHS.**	220AD Did you or someone else do something to end this pregnancy?	221 Were there any other pregnancies between the previous pregnancy and this pregnancy?
AGE IN YEARS	YES ..1 NO ... 2	HOUSEHOLD LINE NUMBER (NEXT PREGNANCY)	DAYS 1 MONTHS 2 YEARS 3 (NEXT PREGNANCY)	DAY MONTH YEAR	MONTHS	YES ... 1 NO 2	
AGE IN YEARS	YES ..1 NO ... 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3 (SKIP TO 221)	DAY MONTH YEAR	MONTHS	YES ... 1 NO 2	YES ...... 1 (ADD PREGNANCY) NO .... 2 (NEXT PREGNANCY)
AGE IN YEARS	YES ..1 NO ... 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3 (SKIP TO 221)	DAY MONTH YEAR	MONTHS	YES ... 1 NO 2	YES ...... 1 (ADD PREGNANCY) NO .... 2 (NEXT PREGNANCY)
AGE IN YEARS	YES ..1 NO ... 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3 (SKIP TO 221)	DAY MONTH YEAR	MONTHS	YES ... 1 NO 2	YES ...... 1 (ADD PREGNANCY) NO .... 2 (NEXT PREGNANCY)
AGE IN YEARS	YES ..1 NO ... 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3 (SKIP TO 221)	DAY MONTH YEAR	MONTHS	YES ... 1 NO 2	YES ...... 1 (ADD PREGNANCY) NO .... 2 (NEXT PREGNANCY)

217 IF ALIVE: How old was (NAME) at (NAME)'s last birthday? **RECORD AGE IN COMP-LETED YEARS.**	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD. RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD.	220 IF DEAD: How old was (NAME) when (he/she) died? **IF '12 MONTHS' OR '1 YR', ASK: Did (NAME) have (his/her) first birthday? THEN ASK: Exactly how many months old was (NAME) when (he/she) died** **RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.**	220AB IF BORN DEAD OR LOST BEFORE BIRTH On what day, month, and year did this pregnancy end?	220AC How many months did this pregnancy last? **RECORD IN COMP-LETED MONTHS.**	220AD Did you or someone else do something to end this pregnancy?	221 Were there any other pregnancies between the previous pregnancy and this pregnancy?
AGE IN YEARS	YES ..1 NO ... 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3 (SKIP TO 221)	DAY MONTH YEAR	MONTHS	YES ... 1 NO 2	YES ...... 1 (ADD PREGNANCY) NO .... 2 (NEXT PREGNANCY)
AGE IN YEARS	YES ..1 NO ... 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3 (SKIP TO 221)	DAY MONTH YEAR	MONTHS	YES ... 1 NO 2	YES ...... 1 (ADD PREGNANCY) NO .... 2 (NEXT PREGNANCY)
AGE IN YEARS	YES ..1 NO ... 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3 (SKIP TO 221)	DAY MONTH YEAR	MONTHS	YES ... 1 NO 2	YES ...... 1 (ADD PREGNANCY) NO .... 2 (NEXT PREGNANCY)
AGE IN YEARS	YES ..1 NO ... 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3 (SKIP TO 221)	DAY MONTH YEAR	MONTHS	YES ... 1 NO 2	YES ...... 1 (ADD PREGNANCY) NO .... 2 (NEXT PREGNANCY)
AGE IN YEARS	YES ..1 NO ... 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3 (SKIP TO 221)	DAY MONTH YEAR	MONTHS	YES ... 1 NO 2	YES ...... 1 (ADD PREGNANCY) NO .... 2 (NEXT PREGNANCY)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
222	Have you had any pregnancies since the last pregnancy mentioned?	YES . . . . 1 (RECORD PREGNANCY(S) IN TABLE) ← NO 2	
223	COMPARE 208 WITH NUMBER OF PREGNANCIES IN PREGNANCY HISTORY NUMBERS NUMBERS ARE □ ARE SAME DIFFERENT □ ↓ **(PROBE AND RECONCILE)** ←		
224	CHECK 215: ENTER THE NUMBER OF BIRTHS IN 2016-2019 IF NONE, RECORD `0'.	NUMBER OF BIRTHS . . . . □	
225	Are you pregnant now?	YES . . . . 1 NO . . . . 2 UNSURE 8	→ 301
226	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS.	MONTHS . . . . □□	
227	When you got pregnant, did you want to get pregnant at that time?	YES . . . . 1 NO 2	→ 301
228	CHECK 208: TOTAL NUMBER OF BIRTHS ONE OR MORE □ NONE □ a) Did you want to have a baby later on or did you not want any more children? b) Did you want to have a baby later on or did you not want any children?	LATER . . . . 1 NO MORE/NONE 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Have you ever heard of any (METHOD)?	YES .... 1 NO 2	→ 308
302	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES .... 1 NO 2	→ 307
303	Which method(s) have you ever used? **RECORD ALL MENTIONED**	FEMALE STERILIZATION .... A MALE STERILIZATION .... B IUD .... C INJECTABLES .... D IMPLANTS .... E PILL .... F CONDOM .... G EMERGENCY CONTRACEPTION .... I STANDARD DAYS METHOD .... J LACTATIONAL AMENORRHEA METHOD ..... K RHYTHM METHOD .... L WITHDRAWAL .... M OTHER TRADITIONAL METHOD .... X ANY OTHER METHOD .... Y	→ 306
304	Have you ever experienced a side effect or problems related with the use of family planning method(s)?	YES .... 1 NO .... 2 DON'T KNOW 8	
305	Were you ever told about side effects or problems you might have with family planning methods?	YES .... 1 NO 2	
306	Were you advised by a health or family planning worker about the following: a) Help you in selecting a method? b) Explained how to use the selected method?	YES NO a) HELP SELECT METHOD ..... 1 2 b) EXPLAIN METHOD USING 1 2	
307	Do you know a place where you can obtain a method of family planning?	YES .... 1 NO 2	
308	In the last 12 months, were you visited by a LHW?	YES .... 1 NO 2	→ 311
309	Did your LHW talk to you about these topics? a) Family planning? b) Antenatal care? c) Delivery care? d) Postnatal care? e) Complications during pregnancy/child birth/postpartum period?	YES NO a) FAMILY PLANNING 1 2 b) ANTENATAL CARE 1 2 c) DELIVERY CARE 1 2 d) POSTNATAL CARE 1 2 e) COMPLICATIONS 1 2	
310	Did your LHW provide you these services/ referral/ advice: a) Treatment for malaria b) Treatment for diarrhoea c) Treatment for fever d) Referral for family planning e) Referral for antenatal care f) Referral for delivery care x) Other (Specify)	YES NO a) TREATMENT FOR MALARIA 1 2 b) TREATMENT FOR DIARRHOEA 1 2 c) TREATMENT FOR FEVER 1 2 d) REFERRAL FOR FAMILY PLANNING 1 2 e) REFERRAL FOR ANTENATAL CARE 1 2 f) REFERRAL FOR DELIVERY CARE 1 2 x) _____	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
311	CHECK 202: CHILDREN LIVING WITH RESPONDENT YES ☐ NO ☐ a) In the last 12 months, have you visited a health facility for care for yourself or your children? b) In the last 12 months, have you visited a health facility for care for yourself?	YES . . . . 1 NO 2	→ 401
312	Did any staff member at the health facility speak to you about family planning methods?	YES . . . . 1 NO 2	

SECTION 4. PREGNANCY AND POSTNATAL CARE

401	CHECK 220AB, 220AC AND 224: ONE OR MORE LIVE BIRTHS, STILLBIRTHS, ☐ NO LIVE BIRTHS, STILLBIRTH ☐ ⟶ 636 MISCARRIAGE, ABORTION IN 2016-2019 MISCARRIAGE, ABORTION IN 2016-2019
402	CHECK 212 and record pregnancy history number in 403; In 404 record result of last pregnancy in 2016-2019 and survival status in 405. Now I would like to ask some questions about your last pregnancy that ended during last 3-years (even if it ended in still birth/ abortion/ miscarriage)
403	PREGNANCY NUMBER FROM 212 IN PREGNANCY HISTORY. LAST PREGNANCY PREGNANCY NUMBER . . . . ☐☐
404	CHECK 212B, 215, 220AB, 220AC AND 220AD PREGNANCY OUTCOME: ⟶ 406 LIVE BIRTH STILLBIRTH MISCARRIAGE ABORTION ☐ ☐ ☐ ☐
405	FROM 212D AND 216: NAME _____ LIVING ☐ DEAD ☐
406	Did you see anyone for antenatal care for this pregnancy?	YES . . . . 1 NO . . . . 2 (SKIP TO 414)
407	Whom did you see? Anyone else? **PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.**	**HEALTH PERSONNEL** OBSTETRICIAN/SPECIALIST . . . . A DOCTOR . . . . B NURSE/MIDWIFE/LHV. . . . . C COMMUNITY MIDWIFE D **OTHER PERSON** DAI-TBA . . . . E LADY H. WORKER . . . . F HOMEOPATH . . . . G HAKIM . . . . H DISPENSER / COMPOUNDER . . . . I OTHER _____ X (SPECIFY)
408	Were you satisfied with the service provided?	YES . . . . 1 NO 2

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____

409	Where did you receive antenatal care for this pregnancy?
	
	Anywhere else?
	
	PROBE TO IDENTIFY THE TYPE OF SOURCE.
	
	IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE.
	
	_____
	(NAME OF PLACE)
		HOME
		  HER HOME . . . . A
		  OTHER HOME . . . . B
		
		PUBLIC SECTOR
		  GOVT. HOSPITAL C
		  RHC/MCH . . . . D
		  BHU/FWC . . . . E
		
		  OTHER PUBLIC SECTOR _____ F
		                                            (SPECIFY)
		
		PRIVATE MEDICAL SECTOR
		  PRIVATE HOSPITAL/ CLINIC G
		  PVT. DOCTOR . . . . H
		  HOMEOPATH I
		  DISPENSER / COMPOUNDER . . . . J
		
		  OTHER PRIVATE MEDICAL SECTOR _____ K
		                                            (SPECIFY)
		
		  HAKIM L
		
		  OTHER _____ X
		                          (SPECIFY)

410	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS . . . . ☐☐ DON'T KNOW 98
411	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES . . . . ☐☐ DON'T KNOW 98
412	As part of your antenatal care during this pregnancy, were any of the following done at least once: a) Was your blood pressure measured? b) Did you give a urine sample? c) Did you give a blood sample?	YES NO a) BP . . . . 1 2 b) URINE . . . . 1 2 c) BLOOD 1 2
413	During (any of) your antenatal care visit(s), were you advised on the following: a) Early initiation of breastfeeding? b) Exclusive breastfeeding? c) Balanced diet during pregnancy?	YES NO a) EARLY BF . . . . 1 2 b) EXCLUSIVE BF . . . . 1 2 c) BALANCED DIET 1 2
414	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES . . . . 1 NO . . . . 2 ⌐ (SKIP TO 417) ◄―┘ DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____
415	During this pregnancy, how many times did you get a tetanus injection?	TIMES . . . . [ ] DON'T KNOW 8
416	CHECK 415: 2 OR MORE TIMES [ ] OTHER [ ] (SKIP TO 419) ←	
417	At any time before this pregnancy, did you receive any tetanus injections?	YES . . . . 1 NO . . . . 2 (SKIP TO 419) ← DON'T KNOW 8
417A	Before this pregnancy, how many times did you receive a tetanus injection? **IF 7 OR MORE TIMES, RECORD '7'.**	TIMES . . . . [ ] DON'T KNOW 8

418	CHECK 417A:
	
	ONLY [ ] MORE [ ]
	ONE ↓ THAN ONE ↓
	a) How many years b) How many years
	    ago did you ago did you
	    receive that receive the last
	    tetanus tetanus injection
	    injection? prior to this
	                pregnancy?
		YEARS AGO . . . . [ ][ ]

419	During this pregnancy, were you given or did you buy any iron tablets or iron syrup? SHOW TABLETS/SYRUP.	YES . . . . 1 NO . . . . 2 (SKIP TO 421) ← DON'T KNOW 8
420	During the whole pregnancy, for how many days did you take the Iron tablets or syrup? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	DAYS . . . . [ ][ ][ ] DON'T KNOW 998
421	During this pregnancy, did you take any drug for intestinal worms?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8
422	CHECK 404 (PREGNANCY OUTCOME): IF LIVE BIRTH/ STILLBIRTH [ ] IF ABORTION/ MISCARRIAGE [ ] → 429	

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____
423	Who assisted with the delivery? Who else? **PROBE FOR THE TYPE (S) OF PERSON (S) AND RECORD ALL MENTIONED**	**HEALTH PERSONNEL** 　OBSTETRICIAN/SPECIALIST .... A 　DOCTOR .... B 　NURSE/MIDWIFE/LHV .... C 　COMMUNITY MIDWIFE D **OTHER PERSON** 　DAI/TRADITIONAL BIRTH ATTENDANT .... E 　FAMILY WELFARE WK .... F 　LADY H. WORKER .... G 　HOMEOPATH .... H 　HAKIM .... I 　RELATIVE/FRIEND .... J 　OTHER _____ X 　　　　　　　　　　(SPECIFY) 　NO ONE ASSISTED .... Y
424	Where did you give birth to (NAME)? **PROBE TO IDENTIFY THE TYPE OF SOURCE.**	**HOME** 　HER HOME .... 11 ┐ 　　　　　　　　　(SKIP TO 437A) ◄ 　OTHER HOME .... 12 ┘ **PUBLIC SECTOR** 　GOVERNMENT HOSPITAL .... 21 　RHC/MCH .... 22 　BHU/FWC .. . . 23 　OTHER PUBLIC SECTOR _____ 26 　　　　　　　　　　(SPECIFY) **PRIVATE MEDICAL SECTOR** 　PRIVATE HOSPITAL/ CLINIC .... 31 　OTHER PRIVATE 　　MEDICAL SECTOR _____ 36 　　　　　　　　　(SPECIFY) 　OTHER _____ 96 ┐ 　　　　　　　(SPECIFY) 　　　　　　　(SKIP TO 437A) ◄ ┘
425	How did delivery occur?	NORMAL VAGINAL DELIVERY .... 1 ┐ ASSISTED VAGINAL DELIVERY (USE OF FORCEPS OR 　VACUUM EXTRACTION) .... 2 ┤ 　　　　　　　(SKIP TO 427) ◄ ┘ CESAREAN SECTION DELIVERY 3
426	When was the decision made to have the caesarean section? Was it before or after your labour pains started?	BEFORE .... 1 ┐ AFTER .... 2 ┤ 　　　　　　　(SKIP TO 428) ◄ ┘
427	Did the baby come head first?	YES .... 1 NO (BABY CAME FEET FIRST OR SIDEWAYS) .... 2 DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____
428	Once your labour pains started, how long did it take to deliver the child?	LESS THAN 2 HOURS .... 1 2-6 HOURS .... 2 7-12 HOURS .... 3 MORE THAN 12 HOURS .... 4 NO LABOUR PAINS BECAUSE OF C SECTION .... 5 DON'T KNOW/DON'T REMEMBER .... 8 (SKIP TO 431)

429	Who assisted in induced abortion and/or after the abortion on miscarriage?
	
	Who else?
	
	PROBE FOR THE TYPE(S) OF PERSONS(S) AND (RECORD ALL MENTIONED)
		HEALTH PERSONNEL
		    OBSTETRICIAN/ SPECIALIST .... A
		    DOCTOR .... B
		    NURSE/MIDWIFE/LHV C
		
		OTHER PERSON
		    DAI/TRADITIONAL BIRTH ATTENDANT .... D
		    FAMILY WELFARE WK .... E
		    LADY H. WORKER .... F
		    HOMEOPATH .... G
		    HAKIM .... H
		    RELATIVE/FRIEND I
		    OTHER_____
		                        (SPECIFY) X
		
		NO ONE ASSISTED .... Y

430	Where did you received healthcare for induced abortion and/ or after the abortion/miscarriage?
	
	Anywhere else?
	
	PROBE TO IDENTIFY THE TYPE OF SOURCE.
	
	IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE.
	
	_____
	(NAME OF PLACE)
		HOME
		    HER HOME .... A
		    OTHER HOME .... B
		
		PUBLIC SECTOR
		    GOVT. HOSPITAL C
		    RHC/MCH .... D
		    BHU/FWC .... E
		
		    OTHER PUBLIC SECTOR_____ F
		                        (SPECIFY)
		
		PRIVATE MEDICAL SECTOR
		    PRIVATE HOSPITAL/ CLINIC .... G
		    PVT. DOCTOR .... H
		    HOMEOPATH I
		    DISPENSER / COMPOUNDER .... J
		    OTHER PRIVATE
		       MEDICAL SECTOR_____ K
		                        (SPECIFY)
		    HAKIM L
		OTHER_____ X
		                        (SPECIFY)
		NO WHERE .... Y

430A	CHECK 430:
	
	        CODE **"C"** TO **"X"** [ ]
	        CIRCLED ↓
		CODE **"A"** , **"B"** OR **"Y"** [ ]
		        CIRCLED ⟶ (SKIP TO 437A)

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____
431	I would like to talk to you about checks on your health after delivery, for example, someone asking you questions about your health or examining you. Did anyone check on your health after you gave birth or after your abortion/miscarriage?	YES .... 1 NO .... 2 (SKIP TO 434)
432	When did you see this provider? **IF LESS THAN ONE DAY, RECORD HOURS;** **IF LESS THAN ONE WEEK, RECORD DAYS.**	HOURS .... 1 ☐☐ DAYS .... 2 ☐☐ WEEKS .... 3 ☐☐ DON'T KNOW 998

433	Who checked on your health at that time?
	
	PROBE FOR MOST QUALIFIED PERSON.
		HEALTH PERSONNEL
		   OBSTETRICIAN/SPECIALIST 11
		   DOCTOR 12
		   NURSE/MIDWIFE/LHV 13
		   COMMUNITY MIDWIFE 14
		OTHER PERSON
		   DAI-TBA 15
		   FWW 16
		   LADY H. WORKER 17
		   HOMEOPATH 18
		   HAKIM 19
		   DISPENSER / COMPOUNDER 20
		
		OTHER _____ 96
		          (SPECIFY)

434	Now I want to talk to you about what happened after you left the facility. Did anyone check on your health after you left the facility?	YES .... 1 NO .... 2 (SKIP TO 439)
435	How long after delivery or abortion/miscarriage did that check take place? **IF LESS THAN ONE DAY, RECORD HOURS;** **IF LESS THAN ONE WEEK, RECORD DAYS.**	HOURS .... 1 ☐☐ DAYS .... 2 ☐☐ WEEKS .... 3 ☐☐ DON'T KNOW 998

436	Who checked on your health at that time?
	
	PROBE FOR MOST QUALIFIED PERSON.
		HEALTH PERSONNEL
		   OBSTETRICIAN/SPECIALIST 11
		   DOCTOR 12
		   NURSE/MIDWIFE/LHV 13
		   COMMUNITY MIDWIFE 14
		OTHER PERSON
		   DAI- TBA 15
		   FWW 16
		   LADY H.WORKER 17
		   HOMEOPATH 18
		   HAKIM 19
		   DISPENSER / COMPOUNDER 20
		
		OTHER _____ 96
		          (SPECIFY)

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____

437	Where did the check take place?
	
	PROBE TO IDENTIFY THE TYPE OF SOURCE.
	
	IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE.
	
	_____
	(NAME OF PLACE)
		HOME
		   HER HOME . . . . 11 ⌐
		   OTHER HOME . . . . 12 │
		PUBLIC SECTOR
		   GOVT. HOSPITAL 21
		   RHC/MCH 22
		   BHU/FWC 23
		
		   OTHER PUBLIC SECTOR 26 → 439
		                     (SPECIFY)
		
		PRIVATE MEDICAL SECTOR
		   PRIVATE HOSPITAL/ CLINIC 31
		   OTHER PRIVATE
		     MEDICAL SECTOR 36
		                   (SPECIFY)
		OTHER _____ 96 ┘
		                (SPECIFY)

437A	I would like to talk to you about checks on your health after delivery/abortion or miscarriage, for example, someone asking you questions about your health or examining you. Did anyone check on your health after you gave birth/abortion or miscarriage?	YES . . . . 1 NO . . . . 2 ⌐ (SKIP TO 439) ←
438	How long after delivery did the first check take place? **IF LESS THAN ONE DAY, RECORD HOURS; IF LESS THAN ONE WEEK, RECORD DAYS.**	HOURS . . . . 1 ☐☐ DAYS . . . . 2 ☐☐ WEEKS . . . . 3 ☐☐ DON'T KNOW 998

438A	Who checked on your health at that time?
	
	PROBE FOR MOST QUALIFIED PERSON.
		HEALTH PERSONNEL
		   OBSTETRICIAN/SPECIALIST 11
		   DOCTOR 12
		   NURSE/MIDWIFE/LHV 13
		   COMMUNITY MIDWIFE 14
		
		OTHER PERSON
		   DAI- TBA 21
		   FWW 22
		   LADY H.WORKER 23
		   HOMEOPATH 24
		   HAKIM 25
		   DISPENSER / COMPOUNDER 26
		
		OTHER _____ 96
		              (SPECIFY)

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____

438B	Where did the check take place?
	
	PROBE TO IDENTIFY THE TYPE OF SOURCE.
	
	IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE.
	
	_____
	(NAME OF PLACE)
		HOME
		   HER HOME 11
		   OTHER HOME 12
		
		PUBLIC SECTOR
		   GOVT. HOSPITAL 21
		   RHC/MCH 22
		   BHU 23
		   COMMUNITY MIDWIF 24
		   OTHER PUBLIC SECTOR _____ 26
		                    (SPECIFY)
		
		PRIVATE MEDICAL SECTOR
		   PRIVATE HOSPITAL/ CLINIC 31
		   OTHER PRIVATE
		      MEDICAL SECTOR _____ 36
		                 (SPECIFY)
		OTHER _____ 96
		             (SPECIFY)

439	Has your menstrual period returned since the termination of your last pregnancy?	YES . . . . 1 NO . . . . 2 ⌐ (SKIP TO 441) ←
440	For how many months after termination of your last pregnancy did you not have a period?	MONTHS . . . . ☐☐ DON'T KNOW 98

441	CHECK 225: IS RESPONDENT PREGNANT?	NOT PREGNANT PREGNANT OR UNSURE
		   ☐ ☐
		   ↓ (SKIP TO 443) ←

442	Have you had sexual intercourse since the termination of your last pregnancy?	YES . . . . 1 NO . . . . 2 ⌐ (SKIP TO 501) ←
443	For how many months after the termination of your last pregnancy did you not have sexual intercourse?	MONTHS . . . . ☐☐ DON'T KNOW 98

SECTION 5. MATERNAL MORBIDITY

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH)				SKIP

NO.	QUESTIONS AND FILTERS		YES (Before Prompting)	YES (After Prompting)	NO	DK	SKIP
501	Now I would like to ask you about any problems/ illnesses that you might have suffered during your last pregnancy? What problems did you experience during your last pregnancy?	a) FEVER	1	2	3	8	
		b) FITS/ SEIZURES	1	2	3	8	
		c) VAGINAL BLEEDING	1	2	3	8	
		d) JAUNDICE	1	2	3	8	
		e) LOWER ABDOMINAL PAIN	1	2	3	8	
		f) EXCESSIVE VOMITING	1	2	3	8	
		g) GENERAL ABDOMINAL PAIN	1	2	3	8	
		h) BLURRING OF VISION	1	2	3	8	
		i) SEVERE HEADACHE	1	2	3	8	
	WAIT FOR THE SPONTANEOUS RESPONSE. IF NOT MENTIONED, THEN PROMPT THOSE THAT ARE NOT MENTIONED.	j) FEELING OF EXTREME WEAKNESS	1	2	3	8	
		k) SHORTNESS OF BREATH AFTER EXERCISE/ WORKING	1	2	3	8	
		l) SHORTNESS OF BREATH EVEN AT REST	1	2	3	8	
		m) UNCONSCIOUSNESS/COMA	1	2	3	8	
		n) CHEST PAIN	1	2	3	8	
		o) DIFFICULTY IN BREATHINGS	1	2	3	8	
		p) COUGH	1	2	3	8	
		q) HIGH BLOOD PRESSURE	1	2	3	8	
		r) HIGH SUGAR LEVELS DIAGNOSED AS DIABETES	1	2	3	8	
		s) LOSS OF WEIGHT	1	2	3	8	
		t) UNUSUALLY HIGH WEIGHT GAIN	1	2	3	8	
		u) BURNING OF MICTURITIONS	1	2	3	8	
		v) BLOOD OR PUS IN URINE	1	2	3	8	
		w) BODY-ACHES	1	2	3	8	
		x) SEVERE ANAEMIA	1	2	3	8	
		y) SWELLING OF ANKLES/ FEET	1	2	3	8	
		z) SWELLING OVER FACE	1	2	3	8	
502	During this pregnancy, did you have any other complications? If yes, list below:	a) _____ b) _____ c) _____ d) _____ NONE ... Y					
502A	CHECK: 404 LIVE BIRTH/STILLBIRTH ☐ ABORTION/MISCARRIAGE ☐						→ 505

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY					SKIP
		NAME (IF LIVE BIRTH) _____					
502B	How long did the labour pains last?	<12 HOURS . . . . 1 12-24 HOURS . . . . 2 >24 HOURS . . . . 3 NOT LIVE BIRTH OR STILL BIRTH/NO LABOUR PAINS . . . . 7 DON'T KNOW 8					

			YES (Before Prompting)	YES (After Prompting)	NO	DK	
503	Now I would like to ask you about any problems/ illnesses that you might have suffered during childbirth (labour and delivery). What Problems did you experience during labour and delivery? **WAIT FOR THE SPONTANEOUS RESPONSE. IF NOT MENTIONED, THEN PROMPT THOSE THAT ARE NOT MENTIONED.**	a) PROLONGED LABOUR PAINS (LABOUR PAINS CONTINUED >12 HOURS)	1	2	3	8	
		b) EXCESSIVE BLEEDING BEFORE THE BABY CAME OUT	1	2	3	8	
		c) EXCESSIVE BLEEDING AFTER THE BABY CAME OUT BUT BEFORE DELIVERY OF PLACENTA	1	2	3	8	
		d) EXCESSIVE BLEEDING AFTER THE DELIVERY OF THE PLACENTA	1	2	3	8	
		e) RETAINED PLACENTA (PART OF PLACENTA DID NOT COME OUT; PLACENTA WAS TORN)	1	2	3	8	
		f) THE UMBILICAL CORD WAS WRAPPED AROUND THE BABY'S NECK	1	2	3	8	
		g) *THE BABY DID NOT BREATHE AFTER DELIVERY AND REQUIRED RESUSCITATION	1	2	3	8	
		h) *THE BABY WAS PREMATURE AT BIRTH	1	2	3	8	
		i) THERE WAS A LACERATION (TEAR) IN THE VAGINA AT THE TIME OF DELIVERY . .	1	2	3	8	
		j) THE BABY'S PRESENTATION WAS BREECH	1	2	3	8	
		k) THE BABY'S PRESENTATION WAS HAND FIRST	1	2	3	8	
504	During this delivery, did you have any other complications? If yes, list below:	a) _____ b) _____ c) _____ d) _____ NONE . . . . Y					

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____				SKIP

NO.	QUESTIONS AND FILTERS		YES (Before Prompting)	YES (After Prompting)	NO	DK	SKIP
505	Now I would like to ask you about any problems/ illnesses that you might have suffered after the delivery/abortion/miscarriage and during the forty days after delivery/abortion/miscarriage. What problem did you experience during this postpartum period?						
		a) FEVER	1	2	3	8	
		b) SEIZURES/FITS	1	2	3	8	
		c) HEAVY BLEEDING/ EXCESSIVE BLEEDING ..	1	2	3	8	
		d) JAUNDICE	1	2	3	8	
		e) VAGINAL DISCHARGE OF FOUL SMELLING MATERIAL	1	2	3	8	
		f) BURNING IN MICTURITION ..	1	2	3	8	
		g) INCREASED FREQUENCY OF URINE	1	2	3	8	
	WAIT FOR THE SPONTANEOUS RESPONSE. IF NOT MENTIONED, THEN PROMPT THOSE THAT ARE NOT MENTIONED.	h) FEELING OF EXTREME WEAKNESS	1	2	3	8	
		i) PALLOR	1	2	3	8	
		j) SHORTNESS OF BREATH	1	2	3	8	
		k) COUGH WITH DIFFICULTY IN BREATHING	1	2	3	8	
		l) BREASTS TENDERNESS	1	2	3	8	
		m) BREAST SWELLING	1	2	3	8	
		n) BREAST INFECTION	1	2	3	8	
		o) TEAR/ ULCER IN BREAST	1	2	3	8	
		p) SWELLING AND PAIN ONE OR BOTH LEGS	1	2	3	8	
		q) FEVER RELATED WITH WOUND (C/SECTION)	1	2	3	8	
506	During the postpartum period, did you have any other complications? If yes, list below:	a) _____ b) _____ c) _____ d) _____ NONE .... Y					

507	CHECK: 407,423,429, 433 AND 436		
	HEALTH PERSONNEL/ OTHER PERSON CIRCLED ☐	NO ONE/ NOT ASKED ☐ ────────►	509

NO.	QUESTIONS AND FILTERS		YES	NO	DK	SKIP
508	During the course of your last pregnancy, childbirth and/or postpartum period, did any of your healthcare providers ever inform you that you had any of the following?	a) PNEUMONIA	1	2	8	
		b) JAUNDICE AND/OR HEPATITIS	1	2	8	
		c) EMBOLISM	1	2	8	
		d) POSTPARTUM INFECTION/SEPSIS	1	2	8	
		e) HIGH BLOOD PRESSURE	1	2	8	
	a) PNEUMONIA	f) DIABETES	1	2	8	
	b) JAUNDICE AND/OR HEPATITIS	g) ANY OTHER INFECTIOUS DISEASE DURING PREGNANCY	1	2	8	
	c) EMBOLISM	h) SLOW GROWTH OF BABY INSIDE THE WOMB	1	2	8	
	d) POSTPARTUM INFECTION/SEPSIS	i) PROBLEMS ASSOCIATED WITH PLACENTA ..	1	2	8	
	e) HIGH BLOOD PRESSURE	j) PROBLEMS ASSOCIATED WITH THE POSITION OF THE BABY	1	2	8	
	f) DIABETES	k) UTERINE PROLAPSE	1	2	8	
	g) ANY OTHER INFECTIOUS DISEASE DURING PREGNANCY	l) PREECLAMPSIA (DEFINITION)	1	2	8	
	h) SLOW GROWTH OF BABY INSIDE THE WOMB	x) OTHERS _____	1	2	8	
	i) PROBLEMS ASSOCIATED WITH PLACENTA	(SPECIFY)				
	j) PROBLEMS ASSOCIATED WITH THE POSITION OF THE BABY					
	k) UTERINE PROLAPSE					
	l) PREECLAMPSIA (DEFINITION)					
	x) OTHERS (Specify)					

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____	SKIP

509	**During last pregnancy,** childbirth or postpartum period, were you treated for any of the following conditions?
	
	a) HIGH BLOOD PRESSURE
	b) DIABETES
	c) SEVERE NAUSEA AND VOMITING OF PREGNANCY
	d) CHEST INFECTION
	e) ANAEMIA
	f) ANY OTHER INFECTION
	g) PREECLAMPSIA (DEFINITION)
	h) PREMATURE FETUS
	i) PRETERM LABOR
	j) URINARY TRACT INFECTION
	k) JAUNDICE
	l) PROTEIN/ALBUMIN IN URINE
	x) OTHER (Specify)
		YES NO DK
		a) HIGH BLOOD PRESSURE 1 2 8
		b) DIABETES 1 2 8
		c) SEVERE NAUSEA AND VOMITING OF
		    PREGNANCY 1 2 8
		d) CHEST INFECTION 1 2 8
		e) ANAEMIA 1 2 8
		f) ANY OTHER INFECTION 1 2 8
		g) PREECLAMPSIA (DEFINITION) 1 2 8
		h) PREMATURE FETUS 1 2 8
		i) PRETERM LABOR 1 2 8
		j) URINARY TRACT INFECTION 1 2 8
		k) JAUNDICE 1 2 8
		l) PROTEIN/ALBUMIN IN URINE 1 2 8
		
		x) OTHER _____ 1 2 8
		                  (SPECIFY)	

510	Were you hospitalized for more than 24 hours stay during the last pregnancy/ childbirth/ abortion/ miscarriage or postpartum period?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 511

510A	How many times were you hospitalised for more that 24 hours during the last pregnancy/ childbirth/ abortion/ miscarriage or postpartum period?
	
	IF MORE THAN 7 RECORD '7'
		NO. OF TIMES
		a) DURING PREGNANCY .... ☐
		
		b) DURING CHILDBIRTHS/ABORTION/MISCARRIAGE .... ☐
		
		c) DURING POSTPARTUM PERIOD (WITHIN 40 DAYS
		    AFTER DELIVERY, ABORTION OR MISCARRIAGE) .. ☐
		
		d) AFTER POSTPARTUM PERIOD (>40 DAYS
		    AFTER THE TERMINATION OF PREGNANCY) .... ☐	

511	**Before your last pregnancy,** were your suffering from any of the following conditions?
	
	a) HIGH BLOOD PRESSURE
	b) DIABETES
	c) OBESITY
	d) CHEST INFECTION OTHER THAN TUBERCULOSIS
	e) TUBERCULOSIS
	f) HEPATITIS
	g) VARICOSE VEINS
	h) SEVERE ANEMIA
	i) KIDNEY PROBLEM
	j) EPILEPSY
	k) SEXUALLY TRANSMITTED DISEASES
	l) HIV/AIDS
	x) OTHERS (Specify)
		YES NO DK
		a) HIGH BLOOD PRESSURE 1 2 8
		b) DIABETES 1 2 8
		c) OBESITY 1 2 8
		d) CHEST INFECTION OTHER THAN
		    TUBERCULOSIS 1 2 8
		e) TUBERCULOSIS 1 2 8
		f) HEPATITIS 1 2 8
		g) VARICOSE VEINS 1 2 8
		h) SEVERE ANEMIA 1 2 8
		i) KIDNEY PROBLEM 1 2 8
		j) EPILEPSY 1 2 8
		k) SEXUALLY TRANSMITTED DISEASES 1 2 8
		l) HIV/AIDS 1 2 8
		
		x) OTHERS _____ 1 2 8
		                  (SPECIFY)	

512	**Before** your last pregnancy, did you ever get a surgical operation done (other than Caesarean section operation)?	YES .... 1 NO .... 2 DON'T KNOW 8	
513	**Before** the last pregnancy did you smoke cigarettes/ biri every day, some days, or not at all?	EVERY DAY .... 1 SOME DAYS .... 2 NOT AT ALL 3	→ 515 → 516
514	On average, how many cigarettes or biris did you smoke each day?	NUMBER OF CIGARETTES/BIDIS .... ☐☐	

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____	SKIP
515	Did you stop or reduce smoking after you became pregnant?	YES STOPPED .... 1 YES REDUCE .... 2 NEITHER STOPED NOR REDUCED 3	
516	**Before** last pregnancy did you smoke or use any other type of tobacco every day, some days, or not at all? (Gutka/Naswar/Hooka)	EVERY DAY .... 1 SOME DAYS .... 2 NOT AT ALL 3	→ 519
517	What other type of tobacco did you smoke or use? **RECORD ALL MENTIONED**	PIPES FULL OF TOBACCO .... A WATER PIPE/HUKAA/SHEESHA .... B SNUFF BY MOUTH .... C SNUFF BY NOSE .... D CHEWING TOBACCO .... E BETEL QUID/PAAN WITH TOBACCO .... F GUTKA/ MAVA/ NASWAR .... G OTHERS _____ X (SPECIFY)	
518	Did you stop or reduce smoking or use any other type of tobacco after you became pregnant?	YES STOPPED .... 1 YES REDUCED .... 2 NEITHER STOPED NOR REDUCED 3	
519	Were you using any medications before you become pregnant?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 521
520	A. Which medicines you were using before you become pregnant? **Prob:** Please try to remember names or description of the medications. **ASK WOMAN TO SHOW THE MEDICATION** **BOTTLES IF AVAILABLE WRAPPERS.** B. Did you stop using this medication when become pregnant?	(see table below)	
521	Were you prescribed any medication during this pregnancy or postpartum period?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 523
522	Which medications were you prescribed during pregnancy or postpartum period? **RECORD ALL MENTIONED**	IRON/ FOLIC ACID TABLETS/ CAPSULES .... A VITAMIN TABLETS/ CAPSULES .... B INJECTION/ DRIP CONTAINING VITAMINS .... C DRUGS FOR HIGH BP .... D DRUGS FOR DIABETES .... E DRUGS FOR REDUCING FEVER .... F ANTIBIOTICS .... G DRUGS TO REDUCE NAUSEA/ VOMITING .... H OTHER _____ X (SPECIFY)	
523	Now I would like to ask some questions on specific complications during pregnancy, childbirth or after childbirth during 40 days.		

Question 520 table:

	A. Medicine using before pregnancy	B. Stopped when became Pregnant		
		YES	NO	DK
a		1	2	8
b		1	2	8
c		1	2	8
d		1	2	8
e		1	2	8
f		1	2	8
g		1	2	8

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH)	SKIP
524	CHECK 501(a): HAD FEVER DURING ☐ LAST PREGNANCY ↓ (CODES 1 OR 2 CIRCLED)	NO FEVER ☐ (CODES 3 OR 8 CIRCLED)	→ 526
525	**MODULE: FEVER** How many times during last pregnancy did you experience fever? **IF '7' OR MORE WR**	NUMBER OF TIMES . . . . ☐ DON'T KNOW 8	
525A	During which month(s) did you experience the fever?	MONTH(S) OF PREGNANCY 1ST . . . . A 2ND . . . . B 3RD . . . . C 4TH . . . . D 5TH . . . . E 6TH . . . . F 7TH . . . . G 8TH . . . . H 9TH . . . . I DON'T KNOW . . . . Z	
525B	Now I would like to talk about the most recent attack of fever during last pregnancy. How high was the fever?	LESS THAN 101^0F . . . . 1 101^0F OR MORE . . . . 2 DON'T KNOW EXACT TEMPERATURE 8	→ 525D
525C	At that time was the fever very high, moderately high or mild?	VERY HIGH . . . . 1 MODERATELY HIGH . . . . 2 MILD . . . . 3 DON'T KNOW/ CANNOT SAY 8	
525D	Was the fever accompanied with shivering?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
525E	Did you have any difficulty/pain/burning sensation during micturition?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
525F	Did the colour of urine change to become dark yellow, reddish or brown?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
525G	Was there blood in the urine?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
525H	Did you have vomiting during fever?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
525I	Did you have cough with fever?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
525J	Did you take any medications for the fever?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 525M

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____	SKIP
525K	Was your fever diagnosed as malaria?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
525L	Did the fever subside after you took the medications?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	

525M	With fever did you also have:
	
	a) Vaginal discharge?
	b) Itching everywhere on body
	c) Flu like symptoms?
	        (sneezing / running nose)
	    d) Loose stools/diarrhoea?
		YES NO DK
		a) VAGINAL DISCHARGE 1 2 8
		b) ITCHING ON BODY 1 2 8
		c) FLU LIKE SYMPTOMS
		        (SNEEZING/ RUNNING NOSE) 1 2 8
		d) LOOSE STOOLS/ DIARRHOEA 1 2 8	

526	CHECK 505(a): HAD FEVER IN POSTPARTUM PERIOD/ 40 DAYS AFTER TERMINATION OF PREGNANCY (CODES 1 OR 2 CIRCLED)	NO FEVER (CODES 3 OR 8 CIRCLED)	→ 528
527	When did the fever start? (how many days after delivery/termination of pregnancy?	NUMBER OF DAYS . . . . □□ ON THE DAY OF LABOUR/ DELIVERY 00	
527A	How high was the fever?	LESS THAN 101^{0}F . . . . 1 101^{0}F OR MORE . . . . 2 DON'T KNOW EXACT TEMPERATURE 8	→ 527C
527B	If you don't know exact temperature, was the fever very high, moderately high or mild?	VERY HIGH . . . . 1 MODERATELY HIGH . . . . 2 MILD . . . . 3 DON'T KNOW/ CANNOT SAY 8	
527C	Was the fever accompanied with shivering?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
527D	Did you have any abnormal vaginal discharge?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 527H
527E	What was the texture of discharge?	THICK . . . . 1 THIN . . . . 2 WITH CLOTS . . . . 3 DON'T KNOW 8	
527F	What was the colour of discharge?	BROWN . . . . 1 RED . . . . 2 YELLOW . . . . 3 OTHER _____ 6 SPECIFY DON'T KNOW 8	
527G	What was the smell of discharge?	NO SMELL . . . . 1 FOUL SMELL . . . . 2 OTHER _____ 6 SPECIFY DON'T KNOW 8	
527H	Did you have any difficulty/pain/burning sensation during micturition?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH)	SKIP
527I	Did the colour of urine change to become dark yellow, reddish or brown?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
527J	Was there blood in the urine?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
527K	Did you have vomiting during fever?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
527L	Did you take any medications for the fever?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 528
527M	Were you given any injections for the fever?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
527N	Did the fever subside after you took the treatment?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 528
527O	How long did it take for the fever to subside?	NUMBER OF DAYS . . . . ☐☐	
528	CHECK 501(b): HAD FITS DURING PREGNANCY ☐ (CODES 1 OR 2 CIRCLED) ↓ NO FITS ☐ (CODES 3 OR 8 CIRCLED)		→ 530
	MODULE: FITS/SEIZURES		
529	In which month of pregnancy did you experience the fits?	MONTH OF PREGNANCY . . . . ☐☐	
529A	How severe were the fits?	VERY SEVERE . . . . 1 MODERATELY SEVERE 2 NOT SEVERE . . . . 3 DON'T KNOW 8	
529B	How long did fits last each time they occurred?	<1 MIN . . . . 1 1-2 MIN . . . . 2 3-5 MIN . . . . 3 >5 MIN 4	
529C	How frequently did fits occur?	1-2 TIMES/ DAY . . . . 1 3-4 TIMES/ DAY . . . . 2 >5 TIMES/ DAY 3	
529D	Were you unconscious during fits?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
529E	Were you disoriented during fits?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
529F	Did you lose control over urine/ micturition during fits?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____	SKIP
529G	Did fits affect your ability to walk, move your hand, work?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
529H	Did you ever have fits when you were not pregnant?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
529I	Was your blood pressure high during this pregnancy?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
529J	Did you have swelling over your ankles and feet?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
529K	Did you have puffiness over your face?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
529L	Did you have any vision problems, such as blurred vision?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
529M	Did you have urinary problems such as burning or pain during micturition?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
529N	Was your urine tested and found abnormal?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
530	CHECK 501 (c): HAD BLEEDING DURING ☐ LAST PREGNANCY (CODES 1 OR 2 CIRCLED) ↓ NO BLEEDING ☐ (CODES 3 OR 8 CIRCLED)		→ 532

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____	SKIP
	MODULE: EXCESSIVE BLEEDING DURING PREGNANCY (BEFORE DELIVERY OR ABORTION)		
531	What type of bleeding did you experience? **RECORD ALL MENTIONED**	SPOTTING .... A FRANK BLEEDING .... B CLOTS WITH BLOOD .... C DISCHARGE WITH BLOOD .... D STREAKS OF FRESH BLOOD .... E OTHERS _____ X 　　　　　　　　　SPECIFY DON'T KNOW .... Z	
531A	During which month of pregnancy did you have the bleeding for the first time?	MONTH OF PREGNANCY .... ☐☐	
531B	Was the bleeding accompanied with pain in lower abdomen?	YES .... 1 NO .... 2 DON'T KNOW 8	
531C	Did you see a healthcare provider for the treatment of bleeding?	YES .... 1 NO .... 2 DON'T KNOW 8	→531E
531D	What treatment was provided? **RECORD ALL MENTIONED**	BED REST .... A INJECTION/DRIP .... B PILLS .... C BLOOD TRANSFUSION .... D OTHERS _____ X 　　　　　　　　　SPECIFY	
531E	How long did the bleeding last?	NUMBER OF DAYS .... ☐☐ DON'T KNOW 98	
532	CHECK 505 (c): 　　HAD BLEEDING AFTER DELIVERY/ ☐　　NO BLEEDING ☐ 　　ABORTION/ MISCARRIAGE　　　　　(CODES 3 OR 8 CIRCLED) 　　(CODES 1 OR 2 CIRCLED) ↓		534
	MODULE: BLEEDING AFTER DELIVERY OR ABORTION/MISCARRIAGE		
533	When did the bleeding start?	IMMEDIATELY AFTER DELIVERY/ABORTION/ MISCARRIAGE . 1 NEXT DAY OF DELIVERY/ABORTION/ MISCARRIAGE .... 2 2-3 DAYS AFTER DELIVERY/ABORTION/MISCARRIAGE ...... 3 DON'T KNOW 8	
533A	How long did the bleeding last? **IF LESS THAN ONE DAY WRITE "00"**	NUMBER OF DAYS .... ☐☐ BLEEDING CONTINUE .... 97 DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____	SKIP
533B	What type of bleeding did you experience? **Record all mentioned**	FRANK BLEEDING .... A CLOTS WITH BLOOD .... B DISCHARGE WITH BLOOD .... C STREAKS OF FRESH BLOOD .... D OTHERS _____ X SPECIFY DON'T KNOW .... Z	

533C	How heavy was the bleeding?	CHANGED PADS OR CLOTH 1-2 TIMES/ DAY 1
		CHANGED PADS OR CLOTH 3-4 TIMES/ DAY 2
		CHANGED PADS OR CLOTH 5+ TIMES/ DAY 3
		BLEESING WAS CONTINUOUS WITH NO TIME
		        TO CHANGE PADS/ CLOTH 4
		
		OTHER _____ 6
		                               SPECIFY
		DON'T KNOW/ DON'T REMEMBER 8	

533D	Was the bleeding from a tear in your vaginal wall?	YES .... 1 NO .... 2 DON'T KNOW 8	
533E	Was the bleeding from an episiotomy cut in your vaginal wall done by a healthcare provider during delivery?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 533H
533F	Was the bleeding due to a miscarriage?	YES .... 1 NO .... 2 DON'T KNOW 8	
533G	Was the bleeding due to an induced abortion?	YES .... 1 NO .... 2 DON'T KNOW 8	
533H	Was the bleeding accompanied with pain in lower abdomen?	YES .... 1 NO .... 2 DON'T KNOW 8	
533I	Did you see a healthcare provider for the treatment of bleeding?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 533L
533J	What treatment was provided? Record all mentioned	BLOOD TRANSFUSION .... A BED REST .... B INJECTION/DRIP .... C PILLS .... D PACKING OF VAGINA .... E OTHERS _____ X (SPECIFY)	
533K	Was any operation done to try to stop the bleeding?	YES .... 1 NO .... 2 DON'T KNOW 8	
533L	How long did the bleeding last? **IF 95 OR MORE WRITE '95'**	NUMBER OF DAYS .... ☐☐ BLEEDING CONTINUE .... 97 DON'T KNOW 98	
533M	After how many days did the bleeding completely stop? **IF 95 OR MORE WRITE '95'**	NUMBER OF DAYS .... ☐☐ BLEEDING CONTINUE. .... 97 DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____	SKIP
534	CHECK 501 (d): HAD JAUNDICE DURING LAST PREGNANCY (CODES 1 OR 2 CIRCLED) ☐ NO JAUNDICE (CODES 3 OR 8 CIRCLED) ☐		→ 536
535	**MODULE: JAUNDICE** Did the colour of your eyes and/or face visibly change to yellowish?	YES .... 1 NO .... 2 DON'T KNOW 8	
535A	Did your urine become dark yellow?	YES .... 1 NO .... 2 DON'T KNOW 8	
535B	Did the colour of your stools change to dark brown or black?	YES .... 1 NO .... 2 DON'T KNOW 8	
535C	Did you experience nausea and/or vomiting?	YES .... 1 NO .... 2 DON'T KNOW 8	
535D	Did you experience loss of appetite?	YES .... 1 NO .... 2 DON'T KNOW 8	
535E	Did you have fever accompanied with jaundice?	YES .... 1 NO .... 2 DON'T KNOW 8	
535F	Did you have abdominal pain accompanied with jaundice?	YES .... 1 NO .... 2 DON'T KNOW 8	
535G	Did you have itching over body?	YES .... 1 NO .... 2 DON'T KNOW 8	
535H	Did you have fever?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 535J
535I	Was the fever very high, moderate or mild?	VERY HIGH .... 1 MODERATE .... 2 MILD .... 3 DON'T KNOW 8	
535J	Did your healthcare provider tell you that your liver was enlarged?	YES .... 1 NO .... 2 DON'T KNOW 8	
535K	Did your healthcare provider tell you that you had hepatitis?	YES .... 1 NO .... 2 DON'T KNOW 8	
535L	Were there any blood tests done for checking your liver function?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 535N

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____	SKIP
535M	What was the result? (specify)	_____ _____ _____	
535N	Did you see a healthcare provider for the treatment of jaundice?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 535P
535O	What treatment was provided? Record all mentioned	BED REST .... A INJECTION/DRIP .... B PILLS .... C OTHERS _____ X (SPECIFY)	
535P	Did you fully recover from the jaundice?	YES .... 1 NO .... 2 DON'T KNOW 8	
536	CHECK 505 (d): HAD JAUNDICE AFTER DELIVER/ NO JAUNDICE 40 DAYS AFTER DELIVERY (CODES 3 OR 8 CIRCLED) (CODES 1 OR 2 CIRCLED)		→ 600
537	How many days after delivery/abortion/ miscarriage did you have jaundice?	NUMBER OF DAYS .... DON'T KNOW 98	
537A	Did the color of your eyes and/or face visibly change to yellowish?	YES .... 1 NO .... 2 DON'T KNOW 8	
537B	Did your urine become dark yellow?	YES .... 1 NO .... 2 DON'T KNOW 8	
537C	Did the colour of your stools change to dark brown or black?	YES .... 1 NO .... 2 DON'T KNOW 8	
537D	Did you experience nausea and/or vomiting?	YES .... 1 NO .... 2 DON'T KNOW 8	
537E	Did you have fever accompanied with jaundice?	YES .... 1 NO .... 2 DON'T KNOW 8	
537F	Did you have abdominal pain accompanied with jaundice?	YES .... 1 NO .... 2 DON'T KNOW 8	
537G	Did your healthcare provider tell you that your liver was enlarged?	YES .... 1 NO .... 2 DON'T KNOW 8	
537H	Did your healthcare provider tell you that you had hepatitis?	YES .... 1 NO .... 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	LAST PREGNANCY NAME (IF LIVE BIRTH) _____		SKIP
537I	Were there any blood tests done for checking your liver function?	YES . . . . NO . . . . DON'T KNOW	1 2 8	⎤ ⎦→537K
537J	What was the result? (specify)	_____ _____ _____		
537K	Did you see a healthcare provider for the treatment of jaundice?	YES . . . . NO . . . . DON'T KNOW	1 2 8	⎤ ⎦→537M
537L	What treatment was provided? Record all mentioned	BED REST . . . . INJECTION/DRIP . . . . PILLS . . . . OTHERS _____ (SPECIFY)	A B C X	
537M	Did you fully recover from the jaundice?	YES . . . . NO . . . . DON'T KNOW	1 2 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
600	Did you see anyone for antenatal care for this pregnancy?	YES . . . . 1 NO 2	
601	CHECK 406 AND 600: IF RESPONSE IS SAME ☐	IF RESPONSE IS DIFFERENT PROBE AND CORRECT 406-410 ☐	
602	CHECK 600: YES ☐	NO ☐	→ 608A
603	Before your first visit, were you suffering from any health problem or any complication associated with your pregnancy?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
604	How many times did you receive antenatal care during this pregnancy?	NUMBER OF VISITS . . . . ☐☐ DON'T KNOW 98	
605	During any of these visits, were you suffering from any health problem or any complication associated with your pregnancy?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 607

606	Whom did you see?
	
	 Anyone else?
	
	 PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.
		HEALTH PERSONNEL
		     OBSTETRICIAN/SPECIALIST . . . . A
		     DOCTOR . . . . B
		     NURSE/MIDWIFE/LHV C
		     COMMUNITY MIDWIFE . . . . D
		 OTHER PERSON
		     DAI-TBA . . . . E
		     LADY H. WORKER . . . . F
		     HOMEOPATH . . . . G
		     HAKIM . . . . H
		     DISPENSER / COMPOUNDER I
		
		 OTHER _____ X
		                  (SPECIFY)	

607	What was done during ANC visits (regardless of which visit)	**YES** **NO** **DK**
		
		 a) ULTRASOUND 1 2 8
		 b) BP CHECK 1 2 8
		 c) ABDOMINAL EXAM 1 2 8
		 d) VAGINAL EXAM 1 2 8
		 e) FETOSCOPE EXAM FOR FETAL
		     HEARTBEAT 1 2 8
		 f) BLOOD TEST FOR SUGAF 1 2 8
		 g) BLOOD TEST FOR MALARIA . . 1 2 8
		 h) BLOOD TEST FOR ANY OTHER
		     REASON 1 2 8
		 i) URINE TEST FOR URINARY TRACT
		     INFECTION 1 2 8
		 j) URINE TEST FOR ALBUMIN/
		     PROTEIN 1 2 8
		 k) URINE TEST FOR ANY OTHER
		     REASON 1 2 8
		
		 l) OTHER _____ 1 2 8
		            (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
608	In any of the ANC visits, did your healthcare provider inform you about possible complications of pregnancy, childbirth and postpartum?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
608A	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
609	CHECK 414 AND 608A: IF RESPONSE IS SAME ☐ IF RESPONSE IS DIFFERENT PROBE AND CORRECT 414-416 ☐		
609A	CHECK 608A: YES ☐ NO ☐		611
610	How many times were you immunized against tetanus during this pregnancy?	NUMBER OF TIMES . . . . ☐ DON'T KNOW 8	
611	CHECK 423: NO ONE ASSISTED ☐ **CODE "Y" CIRCLED** ↓ OTHER RESPONSE **NO CODE CIRCLED** ☐		620

612	Who assisted with the delivery (of NAME)?
	
	Anyone else?
	
	PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED.
	
	IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.
		HEALTH PERSONNEL
		   OBSTETRICIAN/SPECIALIST . . . . A
		   DOCTOR . . . . B
		   NURSE/MIDWIFE/LHV C
		   COMMUNITY MIDWIFE . . . . D
		OTHER PERSON
		   DAI/TRADITIONAL BIRTH ATTENDANT . . . . . E
		   FAMILY WELFARE WORKER . . . . F
		   LADY H. WORKER . . . . G
		   HOMEOPATH . . . . H
		   HAKIM I
		   RELATIVE/FRIEND . . . . J
		
		OTHERS_____ X
		                    (SPECIFY)
		NO ONE ASSISTED . . . . Y	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
613	Where did you give birth (to NAME)? **PROBE TO IDENTIFY THE TYPE OF SOURCE.** **IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE.** _____ (NAME OF PLACE)	**HOME** 　OWN HOME . . . . 11 　OTHER HOME . . . . 12 **PUBLIC SECTOR** 　GOVERNMENT HOSPITAL . . . . 21 　RHC/MCH . . . . 22 　BHU/FWC . . . . 23 　OTHER PUBLIC SECTOR _____ 26 　　　　　　　　　　　　　(SPECIFY) **PRIVATE MEDICAL SECTOR** 　PRIVATE HOSPITAL/ CLINIC . . . . 31 　OTHER PRIVATE 　　MEDICAL SECTOR _____ 36 　　　　　　　　　　　(SPECIFY) 　OTHER _____ 96 　　　　　　　(SPECIFY)	→ 620
615	How long after delivery did you stay there? IF LESS THAN ONE DAY, RECORD HOURS; IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS . . . . 1 ☐☐ DAYS . . . . 2 WEEKS . . . . 3 DON'T KNOW 998	
616	Was a Caesarean section done?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 618
617	Was the delivery assisted with forceps?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
618	Did you take misoprostol tablets immediately after delivery of baby (to control the excessive bleeding)?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
619	When was the placenta delivered?	NUMBER OF MINUTES AFTER 　DELIVERY . . . . ☐☐ NOT APPLICABLE . . . . 97 DON'T KNOW 98	
620	CHECK 212B, 220AC AND 220AD: 　MISCARRIAGE ☐　　ABORTION/ STILLBIRTH ☐　LIVE BIRTH ☐		→ 627 → 636
621	Where were you when the miscarriage happened?	HOME . . . . 1 HEALTH FACILITY . . . . 2 ON THE WAY . . . . 3 OTHERS _____ 6 　　　　　　(SPECIFY)	
622	Did you see a healthcare provider immediately after miscarriage?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 624

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

623	Whom did you see?
	
	Anyone else?
	
	PROBE FOR THE MOST QUALIFIED PERSON
		HEALTH PERSONNEL
		  OBSTETRICIAN/SPECIALIST 11
		  DOCTOR 12
		  NURSE/MIDWIFE/LHV 13
		  COMMUNITY MIDWIFE 14
		OTHER PERSON
		  DAI-TBA 15
		  FWW 16
		  LADY H. WORKER 17
		  HOMEOPATH 18
		  HAKIM 19
		  DISPENSER / COMPOUNDER 20
		
		OTHER _____ 96
		                          (SPECIFY)	

624	How much time after the miscarriage did you see the healthcare provider? **IF LESS THAN ONE DAY, RECORD HOURS;** **IF LESS THAN ONE WEEK, RECORD DAYS.**	HOURS . . . . **1** ☐☐ DAYS . . . . **2** ☐☐ WEEKS . . . . **3** ☐☐ DID NOT GO . . . . 997 DON'T KNOW 998	→ 626
625	Did healthcare provider did surgery to remove the retained products of the pregnancy?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	626
625A	Was it done under general anaesthesia?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
626	Did you have fever after the miscarriage?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
627	Did you visit a health facility for check-up after stillbirth/miscarriage/abortion?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	636
628	How long after still birth/ miscarriage/ abortion did the first check take place?	HOURS . . . . **1** ☐☐ DAYS . . . . **2** ☐☐ WEEKS . . . . **3** ☐☐ DON'T KNOW 998	
629	How many visits did you make?	NUMBER OF VISITS . . . . ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

630	Whom did you visit?
	
	Who else?
	
	PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED
		HEALTH PERSONNEL
		    OBSTETRICIAN/SPECIALIST . . . . A
		    DOCTOR . . . . B
		    NURSE/MIDWIFE/LHV C
		    COMMUNITY MIDWIFE . . . . D
		OTHER PERSON
		    DAI-TBA . . . . E
		    LADY H. WORKER . . . . F
		    HOMEOPATH . . . . G
		    HAKIM . . . . H
		    DISPENSER / COMPOUNDER I
		
		OTHER _____ X
		            (SPECIFY)	

631	Where did you visit?
	
	PROBE TO IDENTIFY THE TYPE OF SOURCE.
	
	IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE.
	
	_____
	      (NAME OF PLACE)
		HOME
		    HER HOME . . . . A
		    OTHER HOME . . . . B
		PUBLIC SECTOR
		    GOVT. HOSPITAL C
		    RHC/MCH . . . . D
		    BHU/FWC . . . . E
		
		    OTHER PUBLIC SECTOR _____ F
		               (SPECIFY)
		PRIVATE MEDICAL SECTOR
		    PRIVATE HOSPITAL/ CLINIC . . . . G
		    PVT. DOCTOR . . . . H
		    HOMEOPATH I
		    DISPENSER / COMPOUNDER . . . . J
		
		    OTHER PRIVATE
		      MEDICAL SECTOR _____ K
		               (SPECIFY)
		    HAKIM L
		
		OTHER _____ X
		          (SPECIFY)	

632	Were you given any injections or drips?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
633	CHECK 212B, 220AC AND 220AD: STILLBIRTH OR MISCARRIAGE ABORTION		⟶ 634
633A	Did the doctor tell you why you had the stillbirth/ miscarriage?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
634	Were you advised to start using a family planning method?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	⟶ 636
635	Did your healthcare provider give you a family planning method?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
636	RECORD THE TIME.	HOURS . . . . ☐☐ MINUTES . . . . ☐☐	

<u>INTERVIEWER'S OBSERVATIONS</u>

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT INTERVIEW:

_____

_____

_____

_____

_____

_____

COMMENTS ON SPECIFIC QUESTIONS:

_____

_____

_____

_____

_____

_____

ANY OTHER COMMENTS:

_____

_____

_____

_____

_____

_____

<u>SUPERVISOR'S OBSERVATIONS</u>

_____

_____

_____

_____

<u>EDITOR'S OBSERVATIONS</u>

_____

_____

_____

_____

PAKISTAN MATERNAL MORTALITY SURVEY 2019
DECEASED WOMAN'S IDENTIFICATION
PAKISTAN
NATIONAL INSTITUTE OF POPULATION STUDIES

IDENTIFICATION

PROVINCE (PUNJAB=1; SINDH=2; KPK=3; BALOCHISTAN=4; GB=5; AJK=6) . . . .

DISTRICT . . . .

TEHSIL

CLUSTER NUMBER . . . .

HOUSEHOLD NUMBER . . . .

NAME OF HOUSEHOLD HEAD

NAME OF DECEASED WOMAN . . . .

NAME OF DECEASED WOMAN'S HUSBAND/FATHER (CIRCLE ONE)

DATE OF DECEASED WOMAN'S DEATH AFTER 1 JANUARY, 2016

INTERVIEWER VISITS				
	1	2	3	FINAL VISIT
DATE				DAY
				MONTH
				YEAR — 2 0 1
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE / TIME				TOTAL NUMBER OF VISITS

*RESULT CODES:
1 COMPLETED   4 REFUSED
2 NOT AT HOME   5 PARTLY COMPLETED   7 OTHER _____
3 POSTPONED   6 INCAPACITATED   (SPECIFY)

LANGUAGE OF QUESTIONNAIRE** **0 1**   LANGUAGE OF INTERVIEW**   NATIVE LANGUAGE OF RESPONDENT**   TRANSLATOR USED (YES = 1, NO = 2)

LANGUAGE OF QUESTIONNAIRE**   **ENGLISH**

**LANGUAGE CODES:
01 ENGLISH   03 SINDHI   05 SARAIKI
02 URDU   04 PUNJABI   06 BALUCHI
                             07 PUSHTO
                             08 OTHER

SUPERVISOR	FIELD EDITOR	KEYED BY
NAME	NAME	
DATE	DATE	

INTRODUCTION AND CONSENT

AssalamoAlaikum. My name is _____ and I am working with (NIPS, Islamabad). Our institute works on population related issues. Nowadays our institute is conducting a national survey about maternal mortality issues. As you are aware that every year thousands of mothers die during pregnancy and child birth. Most of the time the real cause of death can not be known. By conducting this survey we would like to know the causes of deaths of such women. After the survey government would like to formulate plans and policies for safe motherhood and women lives can be protected. We would very much appreciate your participation in this survey. I will ask you about the death of _____ (NAME of deceased woman) . The questionnaire is long and there is repetition in questions, It will usually take about one hour to complete All of the answers you give will be kept strictly confidential and will not be shown to any other person. If I ask any question you do not want to answer, tell me and I will go to the next question; or you can stop the interview at any time. However, we hope you will participate in the survey since your views are very important, and your participation will help in saving women's lives in future.

At this time, do you want to ask me anything about the survey? May I begin the interview now?

SIGNATURE OF INTERVIEWER _____   DATE _____

RESPONDENT AGREES
TO BE INTERVIEWED . .   1

RESPONDENT DOES NOT AGREE
TO BE INTERVIEWED   . . 2 ⟶ END

SECTION 1. INFORMATION ABOUT RESPONDENTS

INTERVIEWER: ASK TO TALK TO THOSE WHO KNOW THE MOST ABOUT THE WOMAN'S LAST ILLNESS AND HER DEATH.IF A NEIGHBOR, FRIEND, OR DAI WAS PRESENT DURING HER ILLNESS OR DEATH, ASK THEM TO COME AND JOIN IN FOR INTERVIEW GET ALL THE RESPONDENTS TOGETHER FOR THE INTERVIEW AND FILL THE TABLE BELOW.

First, I have a few questions about each of you. Please tell me:

101 NO.	102 What is your name	103 Sex of respondent	104 How old are you? COMPLETED YEARS	105 What was your relationship to (NAME) i.e deceased woman? RELATION	106 What is your educa-tion? SEE CODES BELOW (CLASSES PASSED)	107 Were you present when (NAME) first fell ill?	108 Were you present when (NAME) was taken to hospital?	109 Were you present when (NAME) died?	110 CIRCLE LINE NO. OF MAIN RES-POND-ENT
1		MALE. . . . 1 FEMALE . 2				YES . . . 1 NO 2	YES . . . . 1 NO . . . . . 2 NOT TAKEN 3	YES . . 1 NO . . . 2	1
2		MALE . . . 1 FEMALE . 2				YES . . . 1 NO 2	YES . . . . 1 NO . . . . . 2 NOT TAKEN 3	YES . . 1 NO . . . 2	2
3		MALE . . 1 FEMALE . 2				YES . . . 1 NO 2	YES . . . . 1 NO . . . . . 2 NOT TAKEN 3	YES . . 1 NO . . . 2	3
4		MALE . . 1 FEMALE . 2				YES . . . 1 NO 2	YES . . . . 1 NO . . . . . 2 NOT TAKEN 3	YES . . 1 NO . . . 2	4
5		MALE . . 1 FEMALE . 2				YES . . . 1 NO 2	YES . . . . 1 NO . . . . . 2 NOT TAKEN 3	YES . . 1 NO . . . 2	5
6		MALE . . 1 FEMALE . 2				YES . . . 1 NO 2	YES . . . . 1 NO . . . . . 2 NOT TAKEN 3	YES . . 1 NO . . . 2	6

CODES FOR Q. 105: RELATIONSHIP TO DECEASED WOMAN

02 = HUSBAND	09 = BROTHER/SISTER IN-LAW
03 = SON OR DAUGHTER	10 = NIECE/NEPHEW
04 = SON-IN-LAW OR DAUGHTER-IN-LAW	11 = GRAND PARENT
05 = GRANDCHILD	12 = AUNTS/UNCLE
06 = PARENT	13 = OTHER RELATIVE
07 = PARENT-IN-LAW	14 = ADOPTED/FOSTER/STEPCHILD
08 = BROTHER OR SISTER	15 = NOT RELATED
	16 = DOMESTIC SERVANT

CODES FOR Q. 106: EDUCATION CLASS

00 = LESS THAN CLASS 1 COMPLETED
01 - 10 = CLASS 1 - CLASS 10 (MATRIC)
11 - 12 = CLASS 11 - 12
13 -15 = BACHELORS DEGREE
16 = MASTER'S DEGREE OR MBBS, PhD, MPHIL, BSc (4 YEARS)
98 = DON'T KNOW

SECTION 2. DECEASED WOMAN'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	RECORD THE TIME AT BEGINNING OF INTERVIEW	HOUR . . . . MINUTES	
202	I want to talk about the death of (NAME). **WRITE WOMAN'S NAME HERE AND ON COVER PAGE**	_____	
203	Can you tell me the name of (NAME)'s father?	_____	
204	In what day/month and year did (NAME) die? **PROBE BY ASKING HOW MANY YEARS AGO, WHETHER IT WAS IN SUMMER OR WINTER, WHETHER IT WAS BEFORE OR AFTER EID, ETC.**	DAY . . . . DON'T KNOW . . . . 98 MONTH . . . . YEAR	
204A	CHECK 204: DIED IN 2016, 2017, 2018, OR 2019 DIED BEFORE 2016		END
204B	In what day/month and year did (NAME) born? **PROBE BY ASKING HOW MANY YEARS AGO, WHETHER IT WAS IN SUMMER OR WINTER,** **WHETHER IT WAS BEFORE OR AFTER EID, ETC.**	DAY . . . . DON'T KNOW . . . . 98 MONTH . . . . DON'T KNOW 98 YEAR . . . . DON'T KNOW 9998	
205	How old was she (NAME) when she died?	AGE IN YEARS	
205A	CHECK 205: AGE AT DEATH BETWEEN 15 AND 49 YEARS	AGE AT DEATH 14 YEARS OR YOUNGER AGE AT DEATH 50 YEARS OR OLDER	END
206	At the time she died, was (NAME) a usual member of this household or was she here temporarily?	USUAL MEMBER . . . . 1 HERE TEMPORARILY 2	
207	Did she ever attend school?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	209
208	What is the highest class she completed? **IF CLASS-1 NOT COMPLETED WRITE '00'** **IF MA, MPHIL, PHD, MBBS, BSC/4 YEARS WRITE '16'**	CLASS	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
209	Was she working for wages or salary when she died?	YES .... 1 NO .... 2 DON'T KNOW 8	⌐→ 211
210	What was her occupation? That is, what kind of work did she mainly do?	☐☐	
211	What was her mother tongue?	URDU .... 01 PUNJABI .... 02 SINDHI .... 03 PUSHTO .... 04 BALOCHI .... 05 ENGLISH .... 06 BARAUHI .... 07 SIRAIKI .... 08 HINDKO .... 09 KASHMIRI .... 10 SHINA .... 11 BRUSHASKI .... 12 WAKHI .... 13 CHITRALI/ KHWAR .... 14 BALTI .... 15 PAHARI .... 16 POTOWARI .... 17 MARWARI .... 18 FARSI .... 19 OTHER 96	
212	At the time she died, was she married, divorced, widowed, separated or never married?	MARRIED .... 1 DIVORCED .... 2 WIDOWED .... 3 SEPARATED .... 4 NEVER MARRIED* 5	⌐→ 215 → 217A
213	What was the name of her husband?		
214	How old was her husband at the time of her death?	AGE IN YEARS .... ☐☐ DON'T KNOW 98	
215	Did her (last) husband ever attend school?	YES .... 1 NO .... 2 DON'T KNOW 8	⌐→ 217
216	What was the highest class completed by her husband? **IF CLASS-1 NOT COMPLETED WRITE '00'** **IF MA, MPHIL,PHD, MBBS, BSC/ 4YEARS WRITE '16'**	CLASS .... ☐☐ DON'T KNOW 98	
217	What was her husband's occupation? That is, what kind of work does he mainly do?	☐☐ DON'T KNOW 98	→301
217A	CAUTIOUSLY AND CAREFULLY TRY TO ESTABLISH IF THE WOMAN'S DEATH WAS IN ANY WAY RELATED WITH COMPLICATIONS OF PREGNANCY OR CHILDBIRTH. IF SUCH A CASE IS FOUND, PLEASE FILL SECTION 3. (1) YES DEATH RELATED TO COMPLICATIONS (2) NOT RELATED TO PREGNANCY OF PREGNANCY OR CHILD BIRTH ☐ COMPLICATIONS OR CHILDBIRTH ☐	→401

SECTION 3. BIRTH AND PREGNANCY INFORMATION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301	Now I would like to ask about all the births (NAME) had during her life. Did she ever have a live birth?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 304
302	How many total live births did she have? (Include children who later died)	LIVE BIRTHS .... ☐☐	
303	How many of her sons and daughters are still alive?	TOTAL LIVING CHILDREN .. ☐☐ BOYS .... ☐☐ GIRLS .... ☐☐	
304	Women sometimes have pregnancies that do not end in a live birth. Did (NAME) ever have a pregnancy that ended in miscarriage, abortion or stillbirth?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 306
305	How many TOTAL miscarriages, abortions and stillbirths did she have? a) Number of abortions? b) Number of stillbirths? c) Number of miscarriages? d) Total Pregnancy Losses	a) Number of abortions? ☐☐ b) Number of stillbirths? ☐☐ c) Number of miscarriages? ☐☐ d) Total Pregnancy Losses ☐☐	
306	CHECK 301 AND 304: 　　AT LEAST ONE LIVE BIRTH OR ☐ 　　PREGNANCY LOSS 　　(301 IS 'YES' OR 304 IS 'YES') ↓	NO LIVE BIRTHS OR ☐ PREGNANCY LOSSES BOTH 'NO' OR 'DK'	→ 315
307	Did she ever have a Caesarean section operation?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 308
307A	How many caesarean sections?	NUMBER OF C-SECTION ☐	
308	Did she have a pregnancy during last 3 years of her life? (regardless of the result of the pregnancy)	YES .... 1 NO .... 2 DON'T KNOW 8	→ 315

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
309	How long before her death did her last pregnancy end? **IF < 24 HOURS, WRITE '00' DAYS.** **IF < 1 MONTH, WRITE DAYS.** **IF < 1 YEARS, WRITE MONTHS.** **IF ONE OR MORE YEARS, WRITE YEARS.**	DAYS .... 1 MONTHS .... 2 YEARS .... 3 DON'T KNOW 998	
310	What was the outcome of her last pregnancy?	LIVE BIRTH .... 1 STILLBIRTH .... 2 MISCARRIAGE .... 3 ABORTION .... 4 DON'T KNOW 8	→ 314 → 315
311	Is her last born child still alive?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 313
312	How old is that child now?	AGE IN YEARS	→ 314
313	How old was that child when died? **IF < 24 HOURS, WRITE '00' DAYS.** **IF < 1 MONTH, WRITE DAYS.** **IF < 2 YEARS, WRITE MONTHS.** **IF TWO OR MORE YEARS, WRITE YEARS.**	DAYS .... 1 MONTHS .... 2 YEARS .... 3 DON'T KNOW 998	
314	How long after her last birth / delivery / miscarriage / abortion did (NAME) die? **IF < 24 HOURS, WRITE '00' DAYS.** **IF < 1 MONTH, WRITE DAYS.** **IF < 2 YEARS, WRITE MONTHS.** **IF TWO OR MORE YEARS, WRITE YEARS.**	DAYS .... 1 MONTHS .... 2 YEARS .... 3 DON'T KNOW 998	
315	Was (NAME) pregnant at the time she died?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 321
316	How many months was she pregnant at the time she died?	MONTHS .... DON'T KNOW 98	
318	Did she die before labour pains began, before birth or during delivery/ abortion or miscarriage?	BEFORE LABOUR PAINS BEGAN 1 AFTER LABOUR PAINS BEGAN BUT BEFORE BIRTH .... 2 DURING DELIVERY/ABORTION/ MISCARRIAGE .... 3 BEFORE DELIVERY OF PLACENTA 4 DURING PREGNANCY .... 5 DON'T KNOW 8	→ 401
321	Did she die within 40 days of delivery, abortion or miscarriage?	YES .... 1 NO .... 2 DON'T KNOW 8	

SECTION 4. VERBATIM DESCRIPTION OF ILLNESS AND DEATH

401   Please tell me everything that happened during the last illness before (NAME)'s death, starting from the beginning of the illness and also what happened during the final hours before she died.

a.   Focus on the time <u>before</u> any symptoms of illness were identified:

i) How was the general health of the deceased woman; ii) Did she have any apparent physical or emotional distress; iii) Did she have past history of any serious illness

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

b. Focus on the time when the first symptoms of her last illness were identified:

i) What were the symptoms? ii) Why does respondent think those were symptoms of her last illness? iii) What was done about those symptoms (treatment, rites)? iv) Was she seen by a healthcare provider (where and by whom)? v) What was the result of the management/treatment? vi) Was there a respite in the symptoms? vii) Was she taken to a hospital (where and seen by whom there)? viii) Was she hospitalized (for how long, with what results)? ix) What was the healthcare provider's opinion, remarks and advice?

c.   Focus on the time around her death:

i) What were her last symptoms and signs? ii) Where did she die? iii) Who was her last healthcare provider (by profession or designation)? iv) What was the probable cause of death:

1. as perceived by respondent

2. as explained by healthcare provider

v.   What other factors might have been responsible for her death (e.g., lack of proper and timely care; lack of resources; delay in making the decision to take the woman to hospital; lack of transport; delay in getting to a hospital; lack of facilities and/or healthcare provider at hospital; etc.)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

d.   Relation of dead to pregnancy, childbirth or postpartum complications:

i) Was she pregnant at the time of death, or had recently delivered or aborted? ii) Was the death related with pregnancy, childbirth or postpartum complications (in what way)? iii) Please provide information about the result and outcome of pregnancy (induced abortion, natural abortion, stillbirth, live birth, etc.)?

SECTION 5. SYMPTOMS IDENTIFICATION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	Where did (NAME) die?	HOSPITAL/CLINIC .... 1 HUSBAND'S HOME .... 2 HER PARENTS' HOME .... 3 IN -TRANSIT .... 4 OTHER _____ 5 (SPECIFY) DON'T KNOW 8	→ 505
502	What was the name of the hospital / clinic where she died?	_____ (NAME)	
503	Did anyone at the hospital / clinic tell you why she died?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 505
504	What were the reasons given by the hospital / clinic as to why she died? Any other reason?	_____ _____	
505	What do you think is the main cause of her death?	_____ _____	
506	Did (NAME) have any chronic disease? (Probe for each disease condition) a) High blood pressure or hypertension? b) Diabetes or high blood sugar? c) Epilepsy? d) Tuberculosis or TB? e) Heart disease? f) Blood disease? g) Asthma? h) Severe anaemia? i) Jaundice? j) Hepatitis? k) HIV/AIDS? l) Cancer? SPECIFY TYPE: _____ x) Any other chronic disease? SPECIFY: _____	Y N DK a) HIGH BLOOD PRESSURE 1 2 8 b) SUGAR/DIABETES ..... 1 2 8 c) EPILEPSY .... 1 2 8 d) TB .... 1 2 8 e) HEART DISEASE ..... 1 2 8 f) BLOOD DISEASE ..... 1 2 8 g) ASTHMA .... 1 2 8 h) SEVERE ANAEMIA .....1 2 8 i) JAUNDICE .... 1 2 8 j) HEPATITIS .... 1 2 8 k) HIV/AIDS .... 1 2 8 l) CANCER .... 1 2 8 x) OTHER DISEASE 1 2 8	
507	Was she ever hospitalized? I mean did she ever stay in the hospital overnight?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 511
508	How long before she died was she last hospitalized? **IF < 24 HOURS, WRITE '00' DAYS.** **IF < 1 MONTH, WRITE DAYS.** **IF < 2 YEARS, WRITE MONTHS.** **IF TWO OR MORE YEARS, WRITE YEARS.**	DAYS .... 1 MONTHS .... 2 YEARS .... 3 DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
509	Why was she last hospitalized? Any other reason?	_____ _____	
510	Did she have any operation before she died?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	510B
510A	What type of operation?	_____ _____	
510B	Now I would like to ask about the major symptoms that she might have had during her last illness. **INTERVIEWER: PROBE TO GET AN ESTIMATE OF HOW LONG EACH SYMPTOM LASTED FROM** **WHEN IT FIRST APPEARED UNTIL IT STOPPED, EVEN IF IT STOPPED BEFORE SHE DIED.**		
511	Did she have **fever**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	512
511A	How many days or months did the fever last? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS . . . . 1 ☐☐ MONTHS . . . . 2 ☐☐ DON'T KNOW 998	
511B	Was the fever continuous or on and off?	CONTINUOUS . . . . 1 ON AND OFF . . . . 2 DON'T KNOW 8	
512	Was she **breathless doing light work**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
512A	Was she **breathless when she was lying down** or when she was asleep?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
513	Did she have rapid heart beat (**palpitations)**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
514	Did she have **wheezing**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
515	Did she have a **cough**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	516

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
515A	For how long did she have a cough? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 998	
515B	Did the cough produce sputum?	YES .... 1 NO .... 2 DON'T KNOW 8	
515C	Did she cough blood?	YES .... 1 NO .... 2 DON'T KNOW 8	
516	Did she have **chest pain**?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 517
516A	How many days or months did she have chest pain? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 998	
516B	Was the chest pain mild, moderate or severe?	MILD .... 1 MODERATE .... 2 SEVERE .... 3 DON'T KNOW 8	
516C	Did the chest pain start suddenly or gradually?	SUDDENLY .... 1 GRADUALLY .... 2 DON'T KNOW 8	
516D	Was the pain at or near the centre of the chest?	NEAR STERNUM .... 1 SOMEWHERE ELSE/ALL OVER ... 2 DON'T KNOW 8	
517	Did she have **diarrhoea** (loose motions)?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 517B
517A	How many times a day did she have loose motions?	TIMES .... DON'T KNOW 98	
517B	Was there blood in the stools?	YES .... 1 NO .... 2 DON'T KNOW 8	
518	Did she have **poor appetite or loss of appetite**?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 520
518A	For how long did she have poor appetite? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 998	
520	Did she have **difficulty in swallowing**?	YES .... 1 NO .... 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
520A	Did she have **pain in swallowing**?	YES .... 1 NO .... 2 DON'T KNOW 8	
521	Did she have **headache**?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 522
521A	How many days or months did she have headache? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 998	
522	Did she pass **blood in her urine**?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 523
522A	For how many days or months did she pass blood in her urine? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 998	
523	Did she have **pain while urinating**?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 524
523A	For how many days or months did she have pain when urinating? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 8	
524	Was she **unable to pass urine**?	YES .... 1 NO .... 2 DON'T KNOW 8	
525	Did she **urinate many times** in a day?	YES .... 1 NO .... 2 DON'T KNOW 8	
526	Did she have any type of pain anywhere in the body ?	YES .... 1 NO .... 2 DON'T KNOW 8	
527	Did she have **abdominal pain**?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 528
527A	How long did the abdominal pain last? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
527B	Was the abdominal pain mild, moderate or severe?	MILD ... . 1 MODERATE .... 2 SEVERE .... 3 DON'T KNOW 8	
527C	Was the abdominal pain in her upper belly, lower belly, or all over her belly?	UPPER ABDOMEN .... 1 LOWER ABDOMEN .... 2 ALL OVER THE ABDOMEN ..... 3 DON'T KNOW 8	
528	Did she have **abdominal distension**?	YES .... 1 NO .... 2 DON'T KNOW 8	529
528A	How many days or months was her abdomen distended? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 998	
528B	Did the distension come rapidly within days or slowly over several weeks?	RAPIDLY, WITHIN FEW DAYS ... 1 SLOWLY, OVER WEEKS .... 2 DON'T KNOW 8	
529	Did she have a **mass in her abdomen**?	YES .... 1 NO .... 2 DON'T KNOW 8	
530	Did she have **vomiting**?	YES .... 1 NO .... 2 DON'T KNOW 8	531
530A	For how many days or months did she have vomiting? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 998	
530B	Did she vomit blood?	YES .... 1 NO .... 2 DON'T KNOW 8	
531	Did she become **mentally confuse**?	YES .... 1 NO .... 2 DON'T KNOW 8	
532	Did she **loose consciousness**?	YES .... 1 NO .... 2 DON'T KNOW 8	533
532A	For how long she remained unconscious? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 998	
532B	Did she become unconscious suddenly or gradually?	SUDDENLY .... 1 GRADUALLY .... 2 DON'T KNOW 8	
533	Did she become **paralyze** before her death?	YES .... 1 NO .... 2 DON'T KNOW 8	534

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
533A	How long did the paralysis last? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF > 1 MONTH WRITE MONTHS** **IF ONE OR MORE YEAR WRITE YEARS**	DAYS .... 1 ☐☐ MONTHS .... 2 ☐☐ LASTED TILL DEATH .... 997 DON'T KNOW 998	
533B	Was the paralysis on only one side of her body or both sides?	ONE SIDE ONLY .... 1 BOTH SIDES .... 2 DON'T KNOW 8	
534	Did she have **stiffness in her whole body**?	YES .... 1 NO .... 2 DON'T KNOW 8	
535	Did she have **neck pain**?	YES .... 1 NO .... 2 DON'T KNOW 8	
536	Did she had **convulsion**?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 537
536A	How long did the convulsion last? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 ☐☐ MONTHS .... 2 ☐☐ DON'T KNOW 998	
536B	When the fits were most frequent, how many times a day did she have fits?	TIMES .... ☐☐ DON'T KNOW 98	
537	Did she have an **ulcer or swelling/ lump in the breast**?	YES .... 1 NO .... 2 DON'T KNOW 8	
538	Did she have **vaginal bleeding** when she was not having her menstrual period?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 539
538A	For how many days or months did she have bleeding? **IF < 24 HRS WRITE '00' DAYS** **IF < 1- MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 ☐☐ MONTHS .... 2 ☐☐ DON'T KNOW 998	
538B	Did the bleeding persist until she died?	YES .... 1 NO .... 2 DON'T KNOW 8	
539	Did she have **abnormal vaginal discharge**?	YES .... 1 NO .... 2 DON'T KNOW 8	
540	Did she have **swelling on her ankles**?	YES .... 1 NO .... 2 DON'T KNOW 8	
541	Did she have **swelling or puffiness on her hands and/or face** ?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 542

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
541A	For how many days or months did she have swelling on her hands and/or face ? **IF < 24 HRS WRITE '00' DAYS** **IF < 1- MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS . . . . 1 ☐☐ MONTHS . . . . 2 DON'T KNOW 998	
542	Did she **lose weight**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
543	Did she have **sores in her mouth**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
544	Did she have any **skin disease**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
545	Did she look **pale**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
545A	Did she have **jaundice**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→547
546	Were her **eyes yellowish** in colour?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→547
546A	For how many days or months did she have yellow eyes? **IF < 24 HRS WRITE '00' DAYS** **IF < 1- MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS . . . . 1 ☐☐ MONTHS . . . . 2 DON'T KNOW 998	
547	Did she ever complain of having **blurred vision**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
548	Did she have **difficulty in opening her mout**h?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
549	Did she have difficulty in **passing stools or constipation**?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
550	Did she feel **dizz**y?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
551	Did she have **general weakness** or fatigue?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→552

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
551A	For how many days or months did she have Weakness? **IF < 24 HRS WRITE '00' DAYS** **IF < 1- MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS .... 1 MONTHS .... 2 DON'T KNOW 998	
551B	Did she have light flashes before her eyes close at night?	YES .... 1 NO .... 2 DON'T KNOW 8	
551C	Did she complain of double vision?	YES .... 1 NO .... 2 DON'T KNOW 8	
552	Did she have any **ulcers** on her body?	YES .... 1 NO .... 2 DON'T KNOW 8	
553	Were there any other symptom that we did not mention?	**PLEASE WRITE IN URDU OR ENGLISH** A _____ B _____ C _____ D _____ E _____ F _____ NO ONE .... Y	
554	Did people think she had an evil eye or shadow?	YES .... 1 NO .... 2 DON'T KNOW 8	
555	Was a Faith Healer called to or she was taken give amulets or spiritual healing?	YES .... 1 NO .... 2 DON'T KNOW 8	601
556	Give details of spiritual healing:	_____ _____ _____	

SECTION 6. DECEASED ILLNESS HISTORY

601	CHECK 511:		
	YES ☐ HAD FEVER ↓	NO / ☐ DON'T KNOW →	614

FEVER SECTION

602	How long before she died did the fever start? **IF < 1 DAY WRITE HOURS** **IF < 1 WEEK WRITE DAYS** **IF < 1 MONTH WRITE WEEKS** **IF ONE OR MORE MONTH WRITE MONTHS**	HOURS .... 1 ☐☐ DAYS .... 2 ☐☐ WEEKS .... 3 ☐☐ MONTHS .... 4 ☐☐ DON'T KNOW 998	
602A	When did the fever start?	BEFORE CHILD BIRTH / ABORTION / MISCARRIAGE .... 1 AFTER CHILD BIRTH / ABORTION / MISCARRIAGE .... 2 NOT APPLICABLE .... 7 DON'T KNOW / REMEMBER 8	→ 603
602B	How long before/after childbirth, miscarriage or abortion did the fever start? **IF < 1 DAY WRITE HOURS** **IF < 1 WEEK WRITE DAYS** **IF < 1 MONTH WRITE WEEKS** **IF ONE OR MORE MONTH WRITE MONTHS**	HOURS .... 1 ☐☐ DAYS .... 2 ☐☐ WEEKS .... 3 ☐☐ MONTHS .... 4 ☐☐ DON'T KNOW 998	
603	How long did it last? **IF < 1 DAY WRITE HOURS** **IF < 1 WEEK WRITE DAYS** **IF < 1 MONTH WRITE WEEKS** **IF ONE OR MORE MONTH WRITE MONTHS**	HOURS .... 1 ☐☐ DAYS .... 2 ☐☐ WEEKS .... 3 ☐☐ MONTHS .... 4 ☐☐ DON'T KNOW 998	
604	Was the fever very high?	YES .... 1 NO .... 2 DON'T KNOW 8	
605	Did she have fever with chills?	YES .... 1 NO .... 2 DON'T KNOW 8	
606	Was she prescribed anti-malarial tablets for the episodes of fever and chills?	YES .... 1 NO .... 2 DON'T KNOW 8	
607	Did her colour change during her last illness?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 608
607A	What was the colour?	PALLOR .... 1 JAUNDICED .... 2 BLUE 3	
608	Had she been vomiting during her last illness?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 610

608A	How long before she died did the vomiting start? **IF < 1 DAY WRITE HOURS** **IF < 1 WEEK WRITE DAYS** **IF < 1 MONTH WRITE WEEKS** **IF ONE OR MORE MONTH WRITE MONTHS**	HOURS .... 1 DAYS .... 2 WEEKS .... 3 MONTHS .... 4 DON'T KNOW 998	
608B	Did she have severe body aches during fever?	YES .... 1 NO .... 2 DON'T KNOW 8	
609	Did she ever vomit pure blood?	YES .... 1 NO .... 2 DON'T KNOW 8	
610	Did she have any difficulty with urination?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 613
610A	Record all that apply. **ASK EACH CONDITION (ONE BY ONE):**	Y N DK a) UNABLE TO PASS URINE .. 1 2 8 b) TOO FREQUENT URINATION 1 2 8 c) PAINFUL URINATION .... .. 1 2 8 d) BACK PAIN WITH FEVER .. 1 2 8 e) BLOOD IN URINE . ... 1 2 8 x) OTHER _____ . .. 1 2 8 (SPECIFY)	
613	Did she have convulsions with fever?	YES .... 1 NO .... 2 DON'T KNOW 8	
614	**CHECK 515:** **YES** ☐ **NO/** ☐ ⟶ **621** **HAD COUGH** ↓ **DON'T KNOW**		

COUGH SECTION

615	How long before she died did the cough start? **IF < 1 DAY WRITE HOURS** **IF < 1 WEEK WRITE DAYS** **IF < 1 MONTH WRITE WEEKS** **IF ONE OR MORE MONTH WRITE MONTHS**	HOURS .... 1 DAYS .... 2 WEEKS .... 3 MONTHS .... 4 DON'T KNOW 998	
616	Was there any sputum when she coughed?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 618
617	Was there blood in it?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 618
617A	How much blood did the sputum contain?	FEW DARK SPECKS .. .. 1 STREAKS OF BLOOD .. .. 2 FRANK BLOOD 3	
618	Did she lose weight during this illness?	YES .... 1 NO .... 2 DON'T KNOW 8	

620	Was she short of breath?	YES 1	
		NO 2	
		DON'T KNOW 8	→ 621

| 620A | For how long?

IF < 1 DAY WRITE HOURS
IF < 1 WEEK WRITE DAYS
IF ONE OR MORE WEEK WRITE WEEKS
IF ONE OR MORE MONTH WRITE MONHTS | HOURS 1

DAYS 2

WEEKS 3

MONTHS 4
DON'T KNOW . . . . 998 | |

621	**CHECK 526:**		
	YES ☐ **NO /** ☐		
	HAD PAIN IN THE BODY ↓ **DON'T KNOW** ————————————→		**632**

PAIN SECTION

622	What kind of pain?	CONTINOUS 1	
		INTERMITTENT 2	
		VERY INTENSE 3	
		INCREASING IN SEVERITY 4	
		OTHER _____ 6	
		(SPECIFY)	

623	What was / were the site (s) of the pain?	HEAD . . . . A	
		ABDOMEN . . . . B	
		CHEST C	
		BREAST . . . . D	
		LEGS . . . . E	
		ALL OVER . . . . F	
		OTHERS _____ X	
		(SPECIFY)	

| 624 | How long before she died did the pain start?

IF < 1 DAY WRITE HOURS
IF < 1 WEEK WRITE DAYS
IF < 1 MONTH WRITE WEEKS
IF ONE OR MORE MONTH WRITE MONTHS | HOURS 1

DAYS 2

WEEKS 3

MONTHS 4

DON'T KNOW . . . . 998 | |

| 625 | How long did it last?

IF < 1 DAY WRITE HOURS
IF < 1 WEEK WRITE DAYS
IF < 1 MONTH WRITE WEEKS
IF ONE OR MORE MONTH WRITE MONTHS | HOURS 1

DAYS 2

WEEKS 3

MONTHS 4
DON'T KNOW . . . . 998 | |

625A	Did she have pain in upper abdomen?	YES 1	
		NO 2	
		DON'T KNOW 8	→ 627

625B	When did the pain start?	BEFORE LABOUR .... 1 AT TIME OF LABOUR .... 2 AT THE DAY OF DELIVERY ..... 3 1 DAY AFTER DELIVERY .... 4 2 DAYS AFTER DELIVERY .... 5 3 DAYS OR MORE THAN 3 DAYS AFTER DELIVERY .... 6 NOT APPLICABLE .... 7 DON'T KNOW / DON'T REMEMBER 8	
626	If it was in abdomen, which specific side?	_____ _____ _____	
627	Was there any pain in the lower abdomen?	YES .... 1 NO .... 2 DON'T KNOW 8	
628	Was the pain accompanied by fever?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 630
629	Was the fever mild, moderate or high?	MILD .... 1 MODERATE .... 2 HIGH .... 3 DON'T KNOW 8	
630	Was the pain accompanied by vomiting?	YES .... 1 NO .... 2 DON'T KNOW 8	

632	CHECK 536: YES ☐ NO/ HAD CONVULSIONS ↓ DON'T KNOW ☐ → 639		

CONVULSION SECTION

633	Did she have a history of convulsions?	YES .... 1 NO .... 2 DON'T KNOW 8	
634	Did she have convulsions in her last illness?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 635
634A	For how long before death? **IF < 1 DAY WRITE HOURS** **IF < 1 WEEK WRITE DAYS** **IF < 1 MONTH WRITE WEEKS** **IF ONE OR MORE MONTH WRITE MONTHS**	HOURS .... 1 ☐☐ DAYS .... 2 ☐☐ WEEKS .... 3 ☐☐ MONTHS .... 4 ☐☐ DON'T KNOW 998	
635	Did she have high blood pressure before she died?	YES .... 1 NO .... 2 DON'T KNOW 8	
636	Did she have severe headache before she died?	YES .... 1 NO .... 2 DON'T KNOW 8	
637	Did she have change in her vision before she died?	YES .... 1 NO .... 2 DON'T KNOW 8	

638	What was her state of consciousness before she died? I mean, was she conscious, semi-conscious or unconscious? (Explain)	_____ _____ _____ _____	
638A	Did she have history of convulsions or epilepsy?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 639
638B	How frequently did she have convulsions?	TIMES . . . . [ ][ ] DON'T KNOW 98	
638C	CHECK 315: PREGNANT [ ]　　　　NOT PREGNANT [ ] (CODE 1 CIRCLED)　　　(CODE 2 OR 8 CIRCLED)		→ 638E
638D	When did convulsions start?	1ST TRIMESTER . . . . 1 2ND TRIMESTER . . . . 2 3RD TRIMESTER . . . . 3 DON'T KNOW 8	
638E	How long did convulsions last?	ABOUT 1 MINUTE . . . . 1 LESS THAN 5 MINUTES . . . . . . 2 5 MINUTES OR MORE . . . . . . 3 DON'T KNOW 8	
638F	Where the convulsions restricted to one part of the body or did they involve the whole body?	FOCAL . . . . 1 GENERALISED . . . . 2 DON'T KNOW 8	
639	CHECK 540 & 541: YES [ ]　　　　NO / [ ] HAD SWELLING　　　DON'T KNOW		→ 701
SWELLING SECTION		
640	Where was the site of swelling? (Ask for each)	YES　NO　DK a) ABDOMEN . . . . 1　2　8 b) FACE . . . . 1　2　8 c) LEGS AND FEET . . . . 1　2　8 d) WHOLE BODY . . . . . . 1　2　8	
641	How long before she died did she have this swelling? **IF < 1 DAY WRITE HOURS** **IF < 1 WEEK WRITE DAYS** **IF < 1 MONTH WRITE WEEKS** **IF ONE OR MORE MONTH WRITE MONTHS**	HOURS . . . . 1　[ ][ ] DAYS . . . . 2　[ ][ ] WEEKS . . . . 3　[ ][ ] MONTHS . . . . 4　[ ][ ] DON'T KNOW 998	

642	When did the swelling start in relation to delivery of the baby or abortion or miscarriage? **IF < 1 DAY WRITE HOURS** **IF < 1 WEEK WRITE DAYS** **IF < 1 MONTH WRITE WEEKS** **IF ONE OR MORE MONTH WRITE MONTHS**	HOURS .... 1 ☐☐ DAYS .... 2 ☐☐ WEEKS .... 3 ☐☐ MONTHS .... 4 ☐☐ NOT APPLICABLE .... 997 DON'T KNOW 998	
643	At the time of death was she short of breath?	YES .... 1 NO .... 2 DON'T KNOW 8	
644	Did her colour change during her last illness?	YES .... 1 NO .... 2 DON'T KNOW .... 8 → 645	
644A	Did she have yellowness of skin or face?	YES .... 1 NO .... 2 DON'T KNOW 8	
645	Did she also have any urinary problems?	YES .... 1 NO .... 2 DON'T KNOW .... 8 → 701	
645A	What were those problems? **RECORD ALL THAT APPLY**	Y N DK a) UNABLE TO PASS URINE .. 1 2 8 b) TOO FREQUENT URINATION 1 2 8 c) PAINFUL URINATION . .. 1 2 8 d) BLOOD IN URINE . .. .. 1 2 8 x) OTHER _____ . .. 1 2 8 (SPECIFY)	

SECTION 7. ANTENATAL CARE AND CHARACTERISTICS OF LAST PREGNANCY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	**CHECK 308 OR 315 FOR LAST PREGNANCY:** NOT ASKED ☐ YES ☐ NO/ ☐ HAD A PREGNANCY ↓ DON'T KNOW		→ **901** → **801**
702	During her last pregnancy, did (NAME) see anyone for antenatal care?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 709

703	Who did she see for antenatal care?
	
	 CIRCLE ALL THAT MENTIONED
		HEALTH PERSONNEL
		    OBSTETRICIAN/SPECIALIS ..... A
		    DOCTOR .... B
		    NURSE/MIDWIFE/LHV C
		
		 OTHER PERSON
		    DAI-TBA .... D
		    LADY H. WORKER .... E
		    HOMEOPATH .... F
		    HAKIM .... G
		    DISPENSER / COMPOUNDER H
		
		 OTHER_____ X
		           (SPECIFY)	

704	The first time she went for antenatal care, did she go because she had a problem or did she go for a check-up?	FOR PROBLEM .... 1 FOR CHECK-UP ONLY .... 2 DON'T KNOW 8	→ 706
705	What was the problem she went for?	_____ _____	
706	How many months pregnant was she when she first saw a health provider during the last pregnancy?	MONTHS .... ☐☐ DON'T KNOW 98	
707	How many times did she see a health provider during her last pregnancy?	TIMES .... ☐☐ DON'T KNOW 98	
708	Was she referred by a health care provider to go to a specialist ?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 710
709	Why didn't she see anyone for antenatal care during her last pregnancy? **CIRCLE ALL THAT MENTIONED**	NOT NECESSARY .... A COSTS TOO MUCH .... B TOO FAR .... C NO TRANSPORT .... D NO ONE TO GO WITH .... E SERVICE NOT GOOD .... F NO TIME TO GO .... G DID NOT KNOW WHERE TO GO . H DID NOT WANT TO SEE A MALE DOCTOR .... I LONG WAITING TIME .... J NOT ALLOWED TO GO .... K OTHER_____ X (SPECIFY) DON'T KNOW .... Z	
710	During her last pregnancy, did (NAME) have an injection in her arm/buttocks to prevent the baby from getting tetanus, that is, convulsions after birth?	YES .... 1 NO .... 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
711	Did she have her blood pressure measured during this pregnancy?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 714
712	Do you know whether her blood pressure was normal or high or low?	NORMAL .... 1 HIGH .... 2 LOW .... 3 DON'T KNOW 8	→ 714
713	Was she prescribed medicines for blood pressure ?	YES .... 1 NO .... 2 DON'T KNOW 8	
714	Was (NAME) using any family planning method before she became pregnant?	YES .... 1 NO .... 2 DON'T KNOW 8	
715	Did she want this pregnancy?	YES .... 1 NO .... 2 DON'T KNOW 8	
716	Did she do anything to try to end this pregnancy?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 719
717	What did she do to end the pregnancy?	WENT FOR ABORTION .... 1 TOOK DRUGS .... 2 INSERTED OBJECT INTO VAGINA .... 3 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
718	Who did she go to for help to end this pregnancy?	**HEALTH PERSONNEL** OBSTETRICIAN/SPECIALIS ..... 01 DOCTOR .... 02 NURSE/MIDWIFE/LHV .... 03 **OTHER PERSON** DAI-TBA .... 04 LADY H. WORKER .... 05 HOMEOPATH .... 06 HAKIM .... 07 DISPENSER / COMPOUNDER 08 OTHER _____ 96 (SPECIFY)	
719	**CHECK 310:** **MISCARRIAGE OR ABORTION** **(CODES 3 OR 4 CIRCLED)** ↓ **OTHER RESPONSES** **(CODES 1,2 OR 8 CIRCLED)**		→ **726**
719A	**CHECK 315:** **CODE 2 OR 8 CIRCLED** ↓ **CODE 1 CIRCLED**		→ **726**
720	Did she have a foul-smelling discharge from her vagina after the miscarriage/abortion?	YES .... 1 NO .... 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
721	Did she have fever after the miscarriage/abortion?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
722	Did she have abdominal distension after the miscarriage / abortion?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
726	During the last illness, did she have bleeding from vagina?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 732
727	Did the bleeding wet her clothes?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
728	Did the bleeding wet the bed?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
729	Was there so much blood as to wet the floor?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
730	Was she in pain while bleeding?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
731	Did the bleeding contain clots?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
732	Did someone examine her internally during last pregnancy?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 734
733	Did the vaginal examination cause any bleeding or make the bleeding worse?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
734	Did the bleeding persist until she died?	YES . . . . 1 NO . . . . 2 NOT APPLICABLE . . . . 7 DON'T KNOW 8	

SECTION 8. FOR DEATHS DURING LABOUR, DELIVERY, OR WITHIN 40 DAYS AFTER DELIVERY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	**CHECK 321:** **Death within 40 days of delivery, abortion or miscarriage?** NO / DON'T KNOW / ☐ NOT ASKED ↓ "YES" (CODE **1** CIRCLED) ☐		→ 802
801A	**CHECK 318:** CODE 1,2,3 OR 4 CIRCLED ☐ ↓ CODE 5 OR 8 CIRCLED/ NOT ASKED ☐		→ 901
802	Did (NAME) have bleeding from her vagina ?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 805
803	Did the bleeding start before or after the birth / delivery ?	BEFORE .... 1 AFTER .... 2 DON'T KNOW 8	
804	Was she in pain while bleeding?	YES .... 1 NO .... 2 DON'T KNOW 8	
805	Did the pain start before the labor pains started?	YES .... 1 NO .... 2 DON'T KNOW 8	

806	Where did she deliver?	**HOME**
		  HER HOME 11
		  OTHER HOME 12
		PUBLIC SECTOR
		  GOVT. HOSPITAL 21
		  RHC/MCH 22
		  OTHER PUBLIC
		
		  _____ 26
		          (SPECIFY)
		PRIVATE MED. SECTOR
		  PVT. HOSPITAL/CLINIC 31
		  OTHER PRIVATE
		      MED._____ 36
		          (SPECIFY)
		OTHER _____ 96
		          (SPECIFY)
		DID NOT DELIVER 97
			→ 814

807	Who assisted with the delivery?	**HEALTH PERSONNEL**
		  OBSTETRICIAN/SPECIALIST . 01
		  DOCTOR 02
		  NURSE/MIDWIFE/LHV 03
		
		OTHER PERSON
		  DAI-TBA 04
		  LADY H. WORKER 05
		  HOMEOPATH 06
		  HAKIM 07
		  DISPENSER / COMPOUNDER 08
		
		OTHER _____ 96
		          (SPECIFY)	

808	Were any instruments used to assist in her last delivery?	YES .... 1 NO .... 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
808A	You said that (NAME) died during (Check 318 and 321) is that correct.	DURING LABOUR .... 1 AFTER CHILD BIRTH 2	
808B	Was the delivery normal vaginal delivery or assisted vaginal delivery (use of forceps vacuum extraction) or a caesarean section?	NORMAL .... 1 ASSISTED VAGINAL .... 2 CAESAREAN SECTION 3	→ 811
809	During her last delivery, did someone cut her vagina to make room for the baby to come [episiotomy]?	YES .... 1 NO .... 2 DON'T KNOW 8	
810	Was there a tear in her vagina after her last delivery?	YES .... 1 NO .... 2 DON'T KNOW 8	
811	During the delivery, did her birth attendant examine her vagina using either hands or instruments?	YES .... 1 NO .... 2 DON'T KNOW 8	
812	Did her water bag break before the labour pains started?	YES .... 1 NO .... 2 DON'T KNOW 8	
813	How long was she in labour?	HOURS .... ☐☐ DON'T KNOW 98	
814	Was (NAME) given any drugs just before or during labour?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 816
815	What were the drugs used for?	EXPEDITE DELIVERY OF BABY ... 1 EXPEDITE PLACENTA COMING 2 TO EASE PAIN .... 3 TO REDUCE BLEEDING .... 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
816	Did she have a lot of bleeding <u>before</u> delivering the baby?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 820
817	Did the bleeding wet her clothes?	YES .... 1 NO .... 2 DON'T KNOW 8	
818	Did the bleeding wet the bed?	YES .... 1 NO .... 2 DON'T KNOW 8	
819	Was there so much blood as to wet the floor?	YES .... 1 NO .... 2 DON'T KNOW 8	
820	Did she die before or after the baby was born?	BEFORE .... 1 AFTER .... 2 DON'T KNOW 8	→ 901

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
821	Did she have difficulty delivering the baby?	YES .... 1 NO .... 2 DON'T KNOW 8	
822	What part of the baby came out first?	HEAD .... 1 LEGS........................ 2 SHOULDER .... 3 ARMS .... 4 CAESARIAN SECTION .... 5 DON'T KNOW 8	→ 826
823	Did the placenta come out?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 826
824	How long after the baby came did the placenta come out? **IF < 1 HOUR WRITE MINUTES** **IF ONE ORE MORE HOUR WRITE HOURS**	MINUTES .... 1 HOURS .... 2 DON'T KNOW 998	
825	Did all of the placenta come out or only part?	ALL .... 1 PART .... 2 DON'T KNOW 8	
826	Did she have a lot of bleeding <u>after</u> delivering the baby?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 830
827	Did the bleeding wet her clothes?	YES .... 1 NO .... 2 DON'T KNOW 8	
828	Did the bleeding wet the bed?	YES .... 1 NO .... 2 DON'T KNOW 8	
829	Was there so much blood as to wet the floor?	YES .... 1 NO .... 2 DON'T KNOW 8	
830	Did she have a foul-smelling discharge from her vagina after the baby was born?	YES .... 1 NO .... 2 DON'T KNOW 8	
831	Did she have a pain in her legs after the baby was born?	YES .... 1 NO .... 2 DON'T KNOW 8	
832	Did she have a fever after the baby was born?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 838
833	How long after the delivery did the fever start? **IF < 1 DAY WRITE HOURS** **IF ONE OR MORE DAY WRITE DAYS**	HOURS .... 1 DAYS .... 2 DON'T KNOW 998	
834	Did she have any fits or rigors with the fever?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 836

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
835	Did the fits stop after the baby was born?	YES .... 1 NO .... 2 DON'T KNOW 8	
836	How long did the fever last? **IF < 1 DAY WRITE HOURS** **IF ONE OR MORE DAY WRITE DAYS**	HOURS .... 1 DAYS .... 2 DON'T KNOW 998	
837	Was she having the fever when she died?	YES .... 1 NO .... 2 DON'T KNOW 8	
838	Was the colour of her eyes yellow after the baby was born?	YES .... 1 NO .... 2 DON'T KNOW 8	
839	After the delivery, did a birth attendant examine her vagina using either hands or instruments?	YES .... 1 NO .... 2 DON'T KNOW 8	
840	Did (NAME) receive (or need) a blood transfusion?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 901
841	When did she get blood transfusion?	BEFORE LABOUR .... 1 DURING CHILDBIRTH .... 2 AFTER CHILDBIRTH .... 3 DID NOT GET BLOOD TRANSFUSION 4	

SECTION 9. DEATHS DUE TO INJURY / ACCIDENT / VIOLENCE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Did she have any serious accident or injury before she **died?**	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 1001
902	Please tell me what happened. **WRITE IN DETAIL WHAT IS SAID.** **THEN CIRCLE THE CODE THAT FITS BEST** _____ _____ _____ _____ _____ _____ _____ _____	ROAD / TRAIN ACCIDENT . . . . 01 FALL . . . . 02 DROWNING . . . . 03 SEVERE BURNS / ACID BURNS . 04 POISONING . . . . 05 SUFFOCATION . . . . 06 CUT / STABBED . . . . 07 BEATEN / PUNCHED / KICKED 08 RAPE . . . . 09 SHOT WITH GUN . . . . 10 DOG BITE . . . . 11 SNAKE BITE . . . . 12 INSECT BITE . . . . 13 OTHER _____ 96 (SPECIFY)	
903	How long before she died did this happen? **IF < 1-DAY WRITE '00'** **IF < 1-MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	DAYS . . . . 1 ☐☐ MONTHS . . . . 2 DON'T KNOW 998	
904	Did she hurt herself intentionally, did someone else hurt her intentionally, or was this an accident?	HURT HERSELF INTENTIONALLY . 1 SOMEONE HURT HER . . . . 2 ACCIDENT . . . . 3 DON'T KNOW 8	→ 906
905	Do you think she was trying to commit suicide?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	
906	Do you think this injury was the main cause of her death, did it contribute to her death, or was it not important?	MAIN CAUSE . . . . 1 CONTRIBUTED . . . . 2 NOT IMPORTANT . . . . 3 DON'T KNOW 8	

SECTION 10. CARE-SEEKING BEHAVIOR

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	During her last illness, how long after she first started having symptoms, did you recognize that she was having a serious problem or illness? **IF < 1 DAY WRITE HOURS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	IMMEDIATELY 000 HOURS .... 1 DAYS .... 2 MONTHS .... 3 DIED IMMEDIATELY .... 995 DON'T KNOW 998	
1002	How serious did she/her family perceive this complication or problem to be?	NOT SERIOUS .... 1 SOMEWHAT SERIOUS .... 2 VERY SERIOUS .... 3 LIFE THREATENING 4	→ 1004
1003	Did she/her family think that she could have died because of her problem or illness or did you think it was not so serious at first?	THOUGHT SHE COULD DIE ..... 1 DID NOT THINK SHE COULD DIE 2	
1004	During (NAME)'s last illness/problem, did she or anyone seek any kind of treatment for her illness?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 1007
1005	Why did you **not** seek any treatment for her illness? **CIRCLE ALL MENTIONED.** **WRITE DETAILS OF THE REASON GIVEN IN THE SPACE BELOW:**	NO TREATMENT NECESSARY ... A NOT CUSTOMARY .... B COST TOO MUCH .... C TOO FAR .... D NO TRANSPORT .... E NO ONE TO ACCOMPANY .... F FAMILY DID NOT ALLOW .... G GOOD CARE AT HOME .... H DID NOT KNOW WHERE TO GO ... I NO TIME TO GO .... J HAVE TO GO TO A MALE DOCTOR K DID NOT REALIZE SERIOUSNESS . L OTHER _____ X (SPECIFY) DON'T KNOW .... Z	
1006	Who was involved in making the decision that (NAME) should NOT go for treatment? **CIRCLE ALL MENTIONED.**	DECEASED HERSELF .... A HUSBAND .... B MOTHER IN LAW/FATHER IN LAW . C MOTHER / FATHER .... D SISTER / SISTER IN LAW .... E OTHER HUSBAND'S FAMILY ..... F DECEASED'S FAMILY MEMBERS . G RELATIVES .... H FRIENDS /NEIGHBOURS .... I DAI / LHV / FIELDWORKER .... J OTHER _____ X (SPECIFY) NO ONE .... Y DON'T KNOW .... Z	→ H100

1007	From whom did she receive treatment?
	
	Anyone else?
	
	CIRCLE ALL MENTIONED.
		HEALTH PERSONNEL
		   OBSTETRICIAN/SPECIALIST ..... A
		   DOCTOR .... B
		   NURSE/MIDWIFE/LHV C
		   COMMUNIRTY MIDWIFE D
		
		OTHER PERSON
		   DAI-TBA .... E
		   LADY H. WORKER .... F
		   HOMEOPATH .... G
		   HAKIM .... H
		   DISPENSER / COMPOUNDER I
		
		OTHER _____ X
		(SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

1008	Where was the treatment provided?
	
	CIRCLE ALL MENTIONED.
		HOME
		  HER HOME . . . . A
		  OTHER HOME . . . . B
		PUBLIC SECTOR
		  GOVT. HOSPITAL C
		  RHC/MCH . . . . D
		  OTHER PUBLIC
		  _____ E
		        (SPECIFY)
		PRIVATE MED. SECTOR
		  PVT. HOSPITAL/CLINIC . . . . . F
		  OTHER PRIVATE
		    MED. _____ G
		       (SPECIFY)
		OTHER _____ X
		       (SPECIFY)
		NO ONE . . . . Y
		DON'T KNOW . . . . Z	

1009	Who was involved in making the decision that (NAME) should go for treatment? **CIRCLE ALL MENTIONED.**	DECEASED HERSELF . . . . A HUSBAND . . . . B MOTHER IN LAW/FATHER IN LAW . C MOTHER / FATHER . . . . D SISTER / SISTER IN LAW . . . . E OTHER HUSBAND'S FAMILY . . . . . F DECEASED'S FAMILY MEMBERS . G RELATIVES . . . . H FRIENDS /NEIGHBOURS . . . . I DAI / LHV / FIELDWORKER . . . . J OTHER _____ X (SPECIFY) NO ONE . . . . Y DON'T KNOW . . . . Z	
1010	How long after the problem was recognized, was it decided that she should go for treatment? **IF < 24 HRS WRITE '00' DAYS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	HOURS . . . . 1 ▢▢ DAYS . . . . 2 ▢▢ MONTHS . . . . 3 ▢▢ DON'T KNOW 998	
1011	Once you decided to go for treatment, did you try to go immediately, or did you wait?	YES, TRIED TO GO IMMEDIATELY / ALREADY AT HEALTH FACILITY 1 → 1013 NO, WAITED . . . . 2 DON'T KNOW . . . . 8 → 1013	
1012	Why did you not try to go immediately?	HOSPITAL TOO FAR . . . . A DID NOT REALIZE SERIOUSNESS B LACK OF FUNDS . . . . C HAVE TO GO TO A MALE DOCTOR D NIGHT TIME . . . . E NO TRANSPORT . . . . F HUSBAND AWAY . . . . G NEED PERMISSION FROM ELDERS H OTHER _____ X DON'T KNOW . . . . Z	
1013	What was the time lag between first recognition of the seriousness of symptoms and taking (NAME) to hospital? **IF < 1 DAY WRITE HOURS** **IF ONE OR MORE DAY WRITE DAYS**	HOURS . . . . 1 ▢▢ DAYS . . . . 2 ▢▢ ALREADY AT HEALTH FACILITY 997 DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1014	**CHECK 1008:** CARE OUTSIDE HOME (ANY CODE 'C' THROUGH X' CIRCLED)	(CODE A,B,Y,Z)	→ 1043
1015	Where did she **first** get treatment for her last illness?	**PUBLIC SECTOR** GOVT. HOSPITAL .... 21 RHC/MCH .... 22 OTHER PUBLIC _____ 26 (SPECIFY) **PRIVATE MED. SECTOR** PVT. HOSPITAL/CLINIC .... 31 OTHER PRIVATE MED. _____ 36 (SPECIFY) OTHER _____ 96 DON'T KNOW 98	
1016	Who went with her when she went to the first place for treatment? **CHECK ALL THAT APPLY**	HUSBAND .... B MOTHER IN LAW/FATHER IN LAW . C MOTHER / FATHER .... D SISTER / SISTER IN LAW .... E OTHER HUSBAND'S FAMILY ..... F DECEASED'S FAMILY MEMBERS . G RELATIVES .... H FRIENDS /NEIGHBOURS .... I DAI / LHV / FIELDWORKER ..... J OTHER _____ X (SPECIFY) NO ONE .... Y DON'T KNOW .... Z	
1017	How far is the (HEALTH FACILITY / PROVIDER) from her home / where she was staying?	KILOMETERS ..... ☐☐☐ DON'T KNOW 998	
1018	How did she go to the first place she went for treatment?	ON FOOT .... A PRIVATE CAR/JEEP .... B BUS .... C TRAIN .... D AMBULANCE .... E ANIMAL CART .... F TAXI/RENTED VEHICLE .... G RICKSHAW .... H MOTORCYCLE .... I OTHER _____ X (SPECIFY) DON'T KNOW .... Z	→ 1020 → 1021
1019	Was it difficult to get transport?	YES .... 1 NO .... 2 DON'T KNOW 8	
1020	How long did it take to get there? **IF < 1 HOUR WRITE MINUTES** **IF ONE OR MORE HOUR WRITE HOURS**	MINUTES .... 1 ☐☐ HOURS .... 2 ☐☐ DON'T KNOW 998	
1021	After she arrived at the first hospital / clinic, how long did she wait before until she was examined by a doctor or nurse or other health care provider? **IF < 1 HOUR WRITE MINUTES** **IF ONE OR MORE HOUR WRITE HOURS**	IMMEDIATELY .... 000 MINUTES .... 1 ☐☐ HOURS .... 2 ☐☐ DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1022	What treatment was given to (NAME)? Did she receive: a) An injection in her arm? b) An injection in her buttock? c) A needle in her vein attached to a bag (drip)? d) A blood transfusion? e) An operation? f) Pills or capsules? g) Oxygen?	YES NO DK a) INJECTION IN ARM . 1 2 8 b) INJECTION IN BUTT 1 2 8 c) DRIP . . . . 1 2 8 d) TRANSFUSION . . . . . 1 2 8 e) OPERATION . . . . 1 2 8 f) PILLS/CAPSULES . . . 1 2 8 g) OXYGEN . . . . 1 2 8 x) OTHER -1 _____ 1 2 (SPECIFY) y) OTHER -2 _____ 1 2 (SPECIFY)	
1023	Did (NAME)'s condition improve after treatment in this place or did it stay the same or get worse?	IMPROVED . . . . 1 STAYED SAME . . . . 2 GOT WORSE . . . . 3 DIED . . . . 4 DON'T KNOW 8	→ 1025 → 1025
1024	How long after she arrived in the first hospital / clinic did she die? **IF < 1 HOUR WRITE MINUTES** **IF < 1 DAY WRITE HOURS** **IF ONE OR MORE DAYS WRITE DAYS**	IMMEDIATELY . . . . 000 MINUTES . . . . 1 HOURS . . . . 2 DAYS . . . . 3 DON'T KNOW 998	→ 1043
1025	Did the first hospital / clinic / provider refer (NAME) to another hospital / clinic?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	→ 1031
1026	Where was she referred to?	**PUBLIC SECTOR** GOVT. HOSPITAL . . . . 21 RHC/MCH . . . . 22 OTHER PUBLIC _____ 26 (SPECIFY) **PRIVATE MED. SECTOR** PVT. HOSPITAL/CLINIC . . . . 31 OTHER PRIVATE MED. _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	
1027	How long after she arrived in the first hospital / clinic did they refer her to the second hospital / clinic? **IF < 1 HOUR WRITE MINUTES** **IF < 1 DAY WRITE HOURS** **IF < 1 MONTH WRITE DAYS** **IF ONE OR MORE MONTH WRITE MONTHS**	IMMEDIATELY . . . . 000 MINUTES . . . . 1 HOURS . . . . 2 DAYS . . . . 3 MONTHS . . . . 4 DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

1028	Why did they refer (NAME) to the second place?	NO EQUIPMENT FOR OPERATION A
		HIGH BLOOD PRESSURE .... B
		TO GET BETTER CARE C
		NO DOCTOR WAS AVAILABLE ... D
		NO ARRANGEMENTS FOR GIVING
		    BLOOD .... E
		NO PROPER ARRANGEMENTS
		    FOR RESOLVING PROBLEM ..... F
		BABY WENT HIGHER .... G
		PART OF BABY CAME OUT ..... H
		BABY PASSED STOOL INSIDE
		    UTERUS I
		CERVIX DID NOT OPEN .... J
		OTHER _____ X
		            (SPECIFY)
		DON'T KNOW .... Z	

1029	Did she go to the place they referred her to?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 1032 → 1031
1030	Why did she not go there for treatment? **CIRCLE ALL MENTIONED.** **BE SURE TO GET A GOOD REASON. WRITE NOTES IF NECESSARY.**	NO TREATMENT NECESSARY ... A NOT CUSTOMARY .... B COST TOO MUCH .... C TOO FAR .... D NO TRANSPORT .... E NO ONE TO ACCOMPANY .... F FAMILY DID NOT ALLOW .... G GOOD CARE AT HOME .... H DID NOT KNOW WHERE TO GO I NO TIME TO GO .... J HAVE TO GO TO A MALE DOCTOR K DID NOT REALIZE SERIOUSNESS L OTHER _____ X (SPECIFY) DON'T KNOW .... Z	
1031	Did she go anywhere else for treatment?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 1043

1032	Where did she go the **last** time she got treatment for her last illness?	**PUBLIC SECTOR**
		    GOVT. HOSPITAL 21
		    RHC/MCH 22
		    OTHER PUBLIC
		    _____ 26
		            (SPECIFY)
		
		PRIVATE MED. SECTOR
		    PVT. HOSPITAL/CLINIC 31
		    OTHER PRIVATE
		        MED. _____ 36
		            (SPECIFY)
		OTHER _____ 96
		            (SPECIFY)
		DON'T KNOW 98	

1033	Who went with her when she went to the last place for treatment?	HUSBAND .... B MOTHER IN LAW/FATHER IN LAW C MOTHER / FATHER .... D SISTER / SISTER IN LAW .... E OTHER HUSBAND'S FAMILY ..... F DECEASED'S FAMILY MEMBERS G RELATIVES .... H FRIENDS /NEIGHBOURS .... I DAI / LHV / FIELDWORKER .... J OTHER _____ X (SPECIFY) NO ONE .... Y DON'T KNOW .... Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1034	How did she get to this last place she went for treatment?	ON FOOT .... A PRIVATE CAR/JEEP .... B BUS .... C TRAIN .... D AMBULANCE .... E ANIMAL CART .... F TAXI/RENTED VEHICLE .... G OTHER _____ X (SPECIFY) DON'T KNOW .... Z	→ 1036 → 1036
1035	Was it difficult to get transport?	YES .... 1 NO .... 2 DON'T KNOW 8	
1036	After she arrived at this last hospital / clinic, how long did she wait until she was examined by a doctor or nurse or other health care providers? **IF < 1 HOUR WRITE MINUTES** **IF ONE OR MORE HOUR WRITE HOURS**	IMMEDIATELY .... 000 MINUTES .... 1 HOURS .... 2 DON'T KNOW 998	
1037	What treatment was given to (NAME)? Did she receive: a. An injection in her arm? b. An injection in her buttock? c. A needle in her vein attached to a bag (drip)? d. A blood transfusion? e. An operation? f. Pills or capsules? g. Oxygen?	YES NO DK a) INJECTION IN ARM ... 1 2 8 b) INJECTION IN BUTT . ... 1 2 8 c) DRIP .... 1 2 8 d) TRANSFUSION . ... 1 2 8 e) OPERATION .... 1 2 8 f) PILLS/CAPSULES ... 1 2 8 g) OXYGEN .... 1 2 8 x) OTHER -1 ____ 1 2 (SPECIFY) y) OTHER -2 ____ 1 2 (SPECIFY)	
1038	Did (NAME)'s condition improve after treatment in this **last** place or did it stay the same or get worse?	IMPROVED .... 1 STAYED SAME .... 2 GOT WORSE .... 3 DIED .... 4 DON'T KNOW 8	→ 1040 → 1040
1039	How long after she arrived in the last hospital / clinic did she die? **IF < 1 HOUR WRITE MINUTES** **IF < 1 DAY WRITE HOURS** **IF ONE OR MORE DAY WRITE DAYS**	IMMEDIATELY .... 000 MINUTES .... 1 HOURS .... 2 DAYS .... 3 DIE BEFORE REACHING HOSPITAL .... 997 DON'T KNOW 998	→ 1043
1040	Before she died, did this last hospital / clinic / provider refer (NAME) to another hospital / clinic?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 1043

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1041	Where was she referred to?	**PUBLIC SECTOR** 　GOVT. HOSPITAL .... 21 　RHC/MCH .... 22 　OTHER PUBLIC 　_____ 26 　　　　(SPECIFY) **PRIVATE MED. SECTOR** 　PVT. HOSPITAL/CLINIC .... 31 　OTHER PRIVATE 　　MED. _____ 36 　　　　(SPECIFY) OTHER _____ 96 DON'T KNOW 98	
1042	Why did they refer (NAME) to this place?	NO EQUIPMENT FOR OPERATION　A HIGH BLOOD PRESSURE .... B TO GET BETTER CARE .... C NO DOCTOR WAS AVAILABLE ... D NO ARRANGEMENTS FOR GIVING 　BLOOD .... E NO PROPER ARRANGEMENTS 　FOR RESOLVING PROBLEM ..... F BABY WENT HIGHER .... G PART OF BABY CAME OUT ..... H BABY PASSED STOOL INSIDE 　UTERUS .... I CERVIX DID NOT OPEN .... J OTHER _____ X 　　　　(SPECIFY) DON'T KNOW .... Z	
1043	How much did it cost in total for the treatment for her last illness? **IF > 990000 WRITE 990000**	RUPEES □□□□□ NO AMOUNT SPENT ..... 999997 DON'T KNOW 999998	→ 1045
1044	Where did you get the funds to pay for her care? **CIRCLE ALL MENTIONED**	FAMILY FUNDS .... A BORROWED .... B SOLD ASSETS .... C GIVEN BY RELATIVES/FRIENDS ... D MORTGAGED PROPERTY .... E OTHER _____ X 　　　　(SPECIFY) DON'T KNOW .... Z	
1045	Did she die in the hospital?	YES .... 1 NO .... 2 DON'T KNOW 8	→ 1047
1046	Where did she die?	ON HER WAY TO NEXT HOSPITAL　1 ON HER WAY BACK TO HOME . 2 AT HOME .... 3 OTHERS .... 6 DON'T KNOW 8	→ H100
1047	How long after she died did they remove the body from the hospital / clinic? **IF < 1 HOUR WRITE "00"** **IF < 1 DAY WRITE HOURS** **IF ONE OR MORE DAY WRITE DAYS**	HOURS .... 1 □□ DAYS .... 2 □□ DON'T KNOW 998	

SECTION 11: HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
H100	**CHECK HOUSEHOLD IDENTIFICATION:** **HOUSEHOLD SELECTED FOR SHORT** ☐ **HOUSEHOLD SELECTED FOR LONG** ☐		→ H146

H101	What is the main source of drinking water for members of your household?	**PIPED WATER**
		    PIPED INTO DWELLING 11
		    PIPED TO YARD/PLOT 12
		    PIPED TO NEIGHBOR 13
		    PUBLIC TAP/STANDPIPE 14
		
		TUBE WELL OR BOREHOLE 21
		DUG WELL
		    PROTECTED WELL 31
		    UNPROTECTED WELL 32
		WATER FROM SPRING
		    PROTECTED SPRING 41
		    UNPROTECTED SPRING 42
		
		RAINWATER 51
		TANKER TRUCK 61
		CART WITH SMALL TANK 71
		SURFACE WATER (RIVER/DAM/
		    LAKE/POND/STREAM/CANAL/
		    IRRIGATION CHANNEL) 81
		BOTTLED WATER 91
		
		OTHER _____ 96
		                (SPECIFY)
			→ H106
			
			→ H103
			
			→ H103

H102	What is the main source of water used by your household for other purposes such as cooking and handwashing?	**PIPED WATER**
		    PIPED INTO DWELLING 11
		    PIPED TO YARD/PLOT 12
		    PIPED TO NEIGHBOR 13
		    PUBLIC TAP/STANDPIPE 14
		
		TUBE WELL OR BOREHOLE 21
		DUG WELL
		    PROTECTED WELL 31
		    UNPROTECTED WELL 32
		WATER FROM SPRING
		    PROTECTED SPRING 41
		    UNPROTECTED SPRING 42
		
		RAINWATER 51
		TANKER TRUCK 61
		CART WITH SMALL TANK 71
		SURFACE WATER (RIVER/DAM/
		    LAKE/POND/STREAM/CANAL/
		    IRRIGATION CHANNEL) 81
		
		OTHER _____ 96
		                (SPECIFY)
			→ H106

H103	Where is that water source located?	IN OWN DWELLING .... 1 IN OWN YARD/PLOT .... 2 ELSEWHERE 3	→ H105
H104	How long does it take to go there, get water, and come back? IF WATER IS DELIVERED AT HOME, RECORD `000'.	MINUTES .... ☐☐☐ DON'T KNOW 998	
H105	CHECK H101 AND H102: CODE '14' OR '21' CIRCLED? YES ☐ NO ☐	→ H107

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
H106	In the past two weeks, was the water from this source not available for at least one full day?	YES .... 1 NO .... 2 DON'T KNOW 8	
H107	Do you do anything to the water to make it safer to drink?	YES .... 1 NO .... 2 DON'T KNOW 8	→ H109

H108	What do you usually do to make the water safer to drink?Anything else?
	
	RECORD ALL MENTIONED.
		BOIL .... A
		ADD BLEACH/CHLORINE .... B
		STRAIN THROUGH A CLOTH C
		USE WATER FILTER (CERAMIC/
		    SAND/COMPOSITE/ETC) .... D
		SOLAR DISINFECTION .... E
		LET IT STAND AND SETTLE .... F
		
		OTHER _____ X
		             (SPECIFY)
		DON'T KNOW .... Z	

H109	What kind of toilet facility do members of your household usually use?
	
	IF NOT POSSIBLE TO DETERMINE, ASK PERMISSION TO OBSERVE THE FACILITY.
		FLUSH OR POUR FLUSH TOILET
		    FLUSH TO PIPED SEWER SYSTEM 11
		    FLUSH TO SEPTIC TANK 12
		    FLUSH TO PIT LATRINE 13
		    FLUSH TO SOMEWHERE ELSE 14
		    FLUSH, DON'T KNOW WHERE 15
		PIT LATRINE
		    VENTILATED IMPROVED PIT LATRINE 21
		    PIT LATRINE WITH SLAB 22
		    PIT LATRINE WITHOUT SLAB/OPEN PIT 23
		
		COMPOSTING TOILET 31
		BUCKET TOILET 41
		HANGING TOILET/HANGING LATRINE 51
		NO FACILITY/BUSH/FIELD 61
		
		OTHER _____ 96
		             (SPECIFY)
			→ H113

H110	Do you share this toilet facility with other households?	YES .... 1 NO 2	→ H112
H111	Including your own household, how many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 .... [0] 10 OR MORE HOUSEHOLDS .... 95 DON'T KNOW 98	
H112	Where is this toilet facility located?	IN OWN DWELLING .... 1 IN OWN YARD/PLOT .... 2 ELSEWHERE 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
H113	What type of fuel does your household mainly use for cooking?	ELECTRICITY .... 01 LPG .... 02 NATURAL GAS .... 03 BIOGAS .... 04 KEROSENE .... 05 COAL, LIGNITE .... 06 CHARCOAL .... 07 WOOD .... 08 STRAW/SHRUBS/GRASS .... 09 AGRICULTURAL CROP .... 10 ANIMAL DUNG .... 11 NO FOOD COOKED IN HOUSEHOLD .... 95 OTHER _____ 96 (SPECIFY)	 → H116
H114	Is the cooking usually done in the house, in a separate building, or outdoors?	IN THE HOUSE .... 1 IN A SEPARATE BUILDING .... 2 OUTDOORS .... 3 OTHER _____ 6 (SPECIFY)	→ H116
H115	Do you have a separate room which is used as a kitchen?	YES .... 1 NO 2	
H116	How many rooms in this household are used for sleeping?	ROOMS .... ⬜⬜	
H117	Does this household own any livestock, herds, other farm animals, or poultry?	YES .... 1 NO 2	→ H121
H118	How many of the following animals does this household own? IF NONE, RECORD '00'. IF 95 OR MORE, RECORD '95'. IF UNKNOWN, RECORD '98'. a) Milk cows or bulls? b) Other cattle (buffalo)? c) Horses, donkeys, or mules? d) Goats? e) Sheep? f) Camels? g) Chickens or other poultry?	 a) COWS/BULLS .... ⬜⬜ b) OTHER CATTLE (BUFFALO) ..... ⬜⬜ c) HORSES/DONKEYS/MULES ..... ⬜⬜ d) GOATS .... ⬜⬜ e) SHEEP .... ⬜⬜ f) CAMELS .... ⬜⬜ g) CHICKENS/POULTRY .... ⬜⬜	

SECTION 11: HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
H121	Does your household have:		YES	NO	
	a) Electricity?	a) ELECTRICITY	1	2	
	b) A radio?	b) RADIO	1	2	
	c) A television?	c) TELEVISION	1	2	
	d) A non-mobile telephone?	d) NON-MOBILE TELEPHONE ..	1	2	
	e) A refrigerator?	e) REFRIGERATOR	1	2	
	f) Almirah/cabinet?	f) ALMIRAH/CABINET	1	2	
	g) Chair?	g) CHAIR	1	2	
	h) Room cooler?	h) ROOM COOLER	1	2	
	i) Air conditioner?	i) AIR CONDITIONER	1	2	
	j) Washing machine?	j) WASHING MACHINE	1	2	
	k) Water pump?	k) WATER PUMP	1	2	
	l) Bed?	l) BED	1	2	
	m) Clock?	m) CLOCK	1	2	
	n) Sofa?	n) SOFA	1	2	
	o) Camera?	o) CAMERA	1	2	
	p) Sewing machine?	p) SEWING MACHINE	1	2	
	q) Computer?	q) COMPUTER	1	2	
	r) Internet connection?	r) INTERNET CONNECTION	1	2	
H122	Does any member of this household own:		YES	NO	
	a) A watch?	a) WATCH	1	2	
	b) A mobile phone?	b) MOBILE PHONE	1	2	
	c) A bicycle?	c) BICYCLE	1	2	
	d) A motorcycle or motor scooter?	d) MOTORCYCLE/SCOOTER	1	2	
	e) An animal-drawn cart?	e) ANIMAL-DRAWN CART	1	2	
	f) A car or truck or bus?	f) CAR/TRUCK/BUS	1	2	
	g) A tractor?	g) TRACTOR	1	2	
	h) A boat with a motor?	h) BOAT WITH MOTOR	1	2	
	i) A boat without a motor?	i) BOAT WITHOUT MOTOR	1	2	
	j) A Rickshaw/chingchi ?	j) RICKSHAW/CHINGCHI	1	2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

H142	OBSERVE MAIN MATERIAL OF THE FLOOR OF THE DWELLING.
	
	RECORD OBSERVATION.
		NATURAL FLOOR
		   EARTH/SAND 11
		   DUNG 12
		RUDIMENTARY FLOOR
		   WOOD PLANKS 21
		   PALM/BAMBOO 22
		FINISHED FLOOR
		   PARQUET OR POLISHED WOOD 31
		   VINYL OR ASPHALT STRIPS 32
		   CERAMIC TILES 33
		   CEMENT 34
		   CARPET 35
		   CHIPS/TERRAZZO 36
		   BRICKS 37
		   MATS 38
		   MARBLE 39
		
		OTHER _____ 96
		             (SPECIFY)	

H143	OBSERVE MAIN MATERIAL OF THE ROOF OF THE DWELLING.
	
	RECORD OBSERVATION.
		NATURAL ROOFING
		   NO ROOF 11
		   THATCH/PALM LEAF 12
		   SOD/GRASS 13
		RUDIMENTARY ROOFING
		   RUSTIC MAT 21
		   PALM/BAMBOO 22
		   WOOD PLANKS 23
		   CARDBOARD 24
		FINISHED ROOFING
		   ASBESTOS 31
		   REINFORCED BRICK CEMENT/RCC 32
		   METAL 33
		   WOOD 34
		   CALAMINE/CEMENT FIBER 35
		   CERAMIC TILES 36
		   CEMENT/RCC 37
		   ROOFING SHINGLES 38
		
		OTHER _____ 96
		             (SPECIFY)	

H144	OBSERVE MAIN MATERIAL OF THE EXTERIOR WALLS OF THE DWELLING.
	
	RECORD OBSERVATION.
		NATURAL WALLS
		   NO WALLS 11
		   CANE/PALM/TRUNKS 12
		   DIRT 13
		   MUD/STONES 14
		   BAMBOO/STICKS/MUD 15
		
		RUDIMENTARY WALLS
		   UNBAKED BRICKS/MUD 21
		   BAMBOO WITH MUD 22
		   STONE WITH MUD 23
		   UNCOVERED ADOBE 24
		   PLYWOOD 25
		   REUSED WOOD 26
		FINISHED WALLS
		   CEMENT 31
		   STONE WITH LIME/CEMENT 32
		   BRICKS 33
		   CEMENT BLOCKS 34
		   COVERED ADOBE 35
		   WOOD PLANKS/SHINGLES 36
		
		OTHER _____ 96
		             (SPECIFY)	

H146	RECORD THE TIME.	HOURS . . . . ☐☐ MINUTES . . . . ☐☐	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

_____

_____

_____

_____

_____

COMMENTS ON SPECIFIC QUESTIONS:

_____

_____

_____

_____

_____

ANY OTHER COMMENTS:

_____

_____

_____

_____

_____

SUPERVISOR'S OBSERVATIONS

_____

_____

_____

_____

_____

_____

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

_____

_____

_____

_____

NAME OF EDITOR: _____ DATE: _____

PAKISTAN MATERNAL MORTALITY SURVEY 2019
COMMUNITY QUESTIONNAIRE
(FOR RURAL SAMPLE CLUSTERS ONLY)
PAKISTAN
NATIONAL INSTITUTE OF POPULATION STUDIES

IDENTIFICATION

PROVINCE/REGION (PUNJAB=1; SINDH=2; KP=3; BALOCHISTAN=4; GB=5; AJK=6) . . . .

DISTRICT _____

TEHSIL _____

CLUSTER NUMBER . . . .

INTERVIEW RESULT

*RESULT CODES:
1 COMPLETED
2 UNABLE TO FIND SUITABLE RESPONDENTS
9 OTHER _____
         (SPECIFY)

DAY
MONTH
YEAR
INT. NO

NAME OF PERSONS INTERVIEWED	SEX (M=1; F=2)	POSITION (WRITE POSITION, E.G., VILLAGE LEADER, NAZIM/ MAYOR/ UC LEADER, COUNCILLOR, RELIGIOUS LEADER, CHOWKIDAR, LOCAL FEMALE OR MALE TEACHER, LHV OR LHW)
1 _____		_____
2 _____		_____
3 _____		_____
4 _____		_____
5 _____		_____
6 _____		_____
7 _____		_____
8 _____		_____

LANGUAGE OF QUESTIONNAIRE** **0 1**   LANGUAGE OF INTERVIEW**   NATIVE LANGUAGE OF RESPONDENT**   TRANSLATOR USED (YES=1, NO=2)

LANGUAGE OF QUESTIONNAIRE**   **ENGLISH**

**LANGUAGE CODES:
01 ENGLISH   03 SINDHI   05 SARAIKI
02 URDU   04 PUNJABI   06 BALUCHI
                                    07 PUSHTO
                                    08 OTHER

SUPERVISOR	FIELD EDITOR	KEYED BY
_____			
NAME NUMBER	NAME NUMBER	NUMBER

THIS PAGE IS INTENTIONALLY BLANK

<u>INTRODUCTION AND CONSENT</u>

AFTER ASSEMBLING THE INFORMANTS, READ THE FOLLOWING GREETING:

Asalum-o-Alaikum. My name is _____. I am working with National Institute of Population Studies. We are conducting a survey about health of women and other topics all over Pakistan. The information we collect will help the government to plan health services.

We are collecting information with communities to get a picture of infrastructure available in the community, services available to the communities and to understand the access to the people. I would like to ask you some questions about your community and about sources of health care in it and around it as a way of better understanding how to serve the population. Please be assured that this discussion is strictly confidential. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time. In case you need more information about the survey, you may contact the person listed on this card.

GIVE CARD WITH CONTACT INFORMATION

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER _____   DATE _____

| RESPONDENTS AGREE TO BE INTERVIEWED . . 1 | RESPONDENTS DO NOT AGREE TO BE INTERVIEWED . . 2 ⟶ END |

101

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	How far is the district headquarter from this village? **ASK FROM THE CENTER OF THE LARGEST SETLLEMENT OF THE VILLAGE**	KILOMETERS . . . . ⬜⬜ 95 KMS. OR MORE 95	
102	Is the road that goes to the district headquarter mainly a katcha road or a pakka road?	MAINLY KATCHA . . . . 1 MAINLY PAKKA 2	
103	How far is it from this village to the road that goes to the district headquarter? **ASK FROM THE CENTER OF THE LARGEST SETLLEMENT OF THE VILLAGE**	LESS THAN 1 KM. 00 KILOMETERS . . . . ⬜⬜ 95 KMS. OR MORE 95	

104	How do most people get from here to the road that goes to to the district headquarter?	WALK 01
		RICKSHAW 02
		BICYCLE 03
		MOTORBIKE 04
		PRIVATE CAR / TAXI / SUZUKI VAN
		    TRACTOR TROLLY 05
		TONGA/CATTLE CART 06
		BUS / TRUCK 07
		
		OTHER _____ 96
		              (SPECIFY)	

105	How far is the nearest city/town from this village?	LESS THAN 1 KM. 00 KILOMETERS . . . . ⬜⬜ 95 KMS. OR MORE 95	
106	Are most of the streets/galies of this village paved, cemented, bricks solling or kutcha?	PAVED . . . . 1 CEMENTED . . . . 2 BRICKS SOLLING . . . . 3 KUTCHA . . . . 4 OTHERS _____ 6 (SPECIFY)	
107	What means of transport are available in this village?	BUS . . . . A WAGON . . . . B PRIVATE CAR . . . . C PICK-UP SUZUKI . . . . D RIKSHAW . . . . E MOTORBIKE . . . . F TONGA . . . . G OTHERS _____ X (SPECIFY)	
108	Is transport available during the night time?	YES . . . . 1 NO . . . . 2 DOES NOT KNOW/NOT SURE 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
109	If a woman in this village has a serious problem with her pregnancy, where would she go for treatment? _____ (NAME OF PLACE)	DHQ HOSPITAL .... 01 THQ HOSPITAL .... 02 MCH CENTRE .... 03 RHC .... 04 BHU .... 05 PRIVATE CLINIC / HOSPITAL .... 06 DAI / BIRTH ATTENDANT .... 07 LADY HEALTH WORKER 08	
110	How would she reach (NAME OF PLACE IN 109)?	WALK .... 01 RICKSHAW .... 02 BICYCLE .... 03 MOTORBIKE . ... 04 PRIVATE CAR / TAXI / SUZUKI VAN TRACTOR TROLLY .... 05 TONGA/CATTLE CART .... 06 BUS / TRUCK .... 07 OTHER _____ 96 (SPECIFY)	
111	How long would it take to reach the facility using this means?	MINUTES .... ☐☐☐ DOES NOT KNOW 998	
112	Is there a Lady Health Worker in this village?	YES .... 1 NO .... 2 DOES NOT KNOW/NOT SURE 8	→115
113	What services does she provide? **CIRCLE ALL MENTIONED.**	ANTENATAL CARE .... A DELIVERY .... B CHILD IMMUNIZATIONS .... C CHILD CARE SERVICES .... D POSTNATAL CARE .... E FAMILY PLANNING .... F GENERAL AILMENTS .... G OTHER _____ X (SPECIFY)	
114	Does the LHW make house visits on a regular basis?	YES .... 1 NO .... 2 DO NOT KNOW/NOT SURE 8	
115	Where births are registered?	UNION COUNCIL .... A TOWN COMMITTEE .... B MUNICIPAL CORPORATION .... C OTHER _____ X (SPECIFY)	
116	How many women from this village get financial support through BISP? **IF NO WOMAN IS GETTING BISP FINANCIAL SUPPPORT 'RECORDE 00'**	NO. OF WOMEN .... ☐☐	
117	What type of economic activities are available for women in this village?	AGRICULTURE .... A LIVESTOCK .... B STITCHING/EMBROIDERY .... C HANDICRAFT MAKING .... D OTHER _____ X (SPECIFY)	

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
118	In this village, do the following social organizations a) Punchayat? b) Cooperative society? c) Social welfare society? d) School committee? e) None of them?	PUNCHAYAT .... A COOPERATIVE SOCIETY .... B SOCIAL WELFARE SOCIETY .... C SCHOOL COMMITTEE .... D NONE OF THEM .... Y	→ 120
119	Do the women of this village usually participate in these organizations?	YES .... 1 NO 2	
120	Is there any campaign for the use of mosquito nets and their distribution in this village?	YES .... 1 NO 2	
121	Are medicines easily available in this village?	EASILY AVAILABLE .... 1 SOMETIME AVAILABLE .... 2 NEVER AVAILABLE 3	
122	Is there any natural disaster occurred in this village during last 5 years?	NOT OCCURRED .... A FLOOD .... B HEAVY RAINS .... C DROUGHT .... D EARTH QUAKE .... E OTHER _____ X (SPECIFY)	

201	Now I would like to ask you about facilities and other services that may be available in this village or at some distance.			
NO.	**TYPE OF FACILITY/SERVICE**	**LOCATION**		**DISTANCE**
	202	**203**		**204**
	Please specify the types of facilities:	Is the (FACILITY/SERVICE) in this village?		How far away is (FACILITY/SERVICE) from this village? **IF >95 KMS, WRITE 95.**
a.	Medical store?	YES 1	NO . . . . . 2 →	KMS . . . .
b.	General store or shop?	YES 1	NO . . . . . 2 →	KMS . . . .
c.	Motorized public transport?	YES 1	NO . . . . . 2 →	KMS . . . .
d.	Non-motorized public transport?	YES 1	NO . . . . . 2 →	KMS . . . .
e.	Post office?	YES 1	NO . . . . . 2 →	KMS . . . .
f.	Courier services ?	YES 1	NO . . . . . 2 →	KMS . . . .
g.	Bank?	YES 1	NO . . . . . 2 →	KMS . . . .
h.	Primary school for **boys**?	YES 1	NO . . . . . 2 →	KMS . . . .
i.	Primary school for **girls**?	YES 1	NO . . . . . 2 →	KMS . . . .
j.	Secondary school for **boys**?	YES 1	NO . . . . . 2 →	KMS . . . .
k.	Secondary school for **girls**?	YES 1	NO . . . . . 2 →	KMS . . . .
l.	Degree college for boys or girls?	YES 1	NO . . . . . 2 →	KMS . . . .
m.	Any ambulance service?	YES 1	NO . . . . . 2 →	KMS . . . .
n.	Ultrasound services for pregnant women?	YES 1	NO . . . . . 2 →	KMS . . . .
o.	NADRA Office ?	YES 1	NO . . . . . 2 →	KMS . . . .
p.	A waste water drainage scheme?	YES 1	NO 2	
q.	A sewerage system?	YES 1	NO 2	
r.	A drinking water scheme?	YES 1	NO 2	
s.	Television signal/service?	YES 1	NO 2	
t.	Cable television connections ?	YES 1	NO 2	
u.	Any land-line telephone service?	YES 1	NO 2	
v.	Mobile telephone coverage?	YES 1	NO 2	
w.	Electricity?	YES 1	NO 2	
x.	Gas connection?	YES 1	NO 2	
y.	Any public call office (PCO)?	YES 1	NO 2	

301	Please tell me how far away each of the following facilities are from here?		
	ASK FROM THE CENTER OF THE (LARGEST) SETTLEMENT	**IF LESS THAN 1 KM PUT 00** **IF 95 KMS. OR MORE PUT 95**	
a.	Dai?	KMS	☐☐
b.	A **functioning*** basic health unit (BHU)?	KMS	☐☐
c.	A rural health centre (RHC)?	KMS	☐☐
d.	A functioning government dispensary.	KMS	☐☐
e.	A **functioning*** MCH Centre.	KMS	☐☐
f.	A female doctor.	KMS	☐☐
g.	A private doctor.	KMS	☐☐
h.	A dispenser or a compounder.	KMS	☐☐
i.	A family welfare centre (FWC) or somewhere else to get family planning services.	KMS	☐☐
j.	A hakeem.	KMS	☐☐
k.	A homeopath	KMS	☐☐
l.	A hospital.	KMS	☐☐

* Functioning facility: Presence of LHV or Midwife to provide required services on regular basis.

(A) INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT INTERVIEW:

_____

_____

_____

_____

_____

_____

COMMENTS ON SPECIFIC QUESTIONS:

_____

_____

_____

_____

_____

_____

ANY OTHER COMMENTS:

_____

_____

_____

_____

_____

_____

(B) SUPERVISOR'S OBSERVATIONS

_____

_____

_____

_____

(C) EDITOR'S OBSERVATIONS

_____

_____

_____

_____

PAKISTAN MATERNAL MORTALITY SURVEY 2019
FIELDWORKER QUESTIONNAIRE

PAKISTAN
NATIONAL INSTITUTE OF POPULATION STUDIES

LANGUAGE OF
QUESTIONNAIRE **ENGLISH**

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
100	What is your name?	NAME _____	
101	RECORD FIELDWORKER NUMBER	NUMBER . . . . ☐☐☐☐	

INSTRUCTIONS

Information on all Pakistan DHS field workers is collected as part of the Pakistan DHS survey. Please fill out the questions below. The information you provide will be part of the survey data file; however, your name will be removed and will not be part of the data file. Thank you for providing the information needed.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
102	In what province do you live?	PUNJAB . . . . 01 SINDH . . . . 02 KPK . . . . 03 BALOCHISTAN . . . . 04 GB . . . . 05 ICT . . . . 06 AJK . . . . 07 FATA 08	
103	Do you live in urban or rural area?	URBAN . . . . 1 RURAL 2	
104	How old are you? RECORD AGE IN COMPLETED YEARS.	AGE . . . . ☐☐	
105	Are you male or female?	MALE . . . . 1 FEMALE 2	
106	What is your current marital status?	CURRENTLY MARRIED . . . . 1 WIDOWED . . . . 3 DIVORCED . . . . 4 SEPARATED . . . . 5 NEVER MARRIED 6	
107	How many living children do you have? INCLUDE ONLY CHILDREN WHO ARE YOUR BIOLOGICAL CHILDREN.	LIVING CHILDREN . . . . ☐☐	
108	Have you ever had a child who died?	YES . . . . 1 NO 2	
110	What is the highest class you have completed? IF MA, MPHIL, PHD, MBBS, OR BSC/4 YEARS, WRITE `16'.	CLASS . . . . ☐☐	
111	What is your religion?	MUSLIM . . . . 01 HINDU . . . . 02 CHRISTIAN . . . . 03 PARSI . . . . 04 NO RELIGION . . . . 95 OTHER _____ 96 (SPECIFY)	
112	What is your ethnicity?	PUNJABI . . . . 01 PATHAN . . . . 02 SINDHI . . . . 03 MUHAJIR . . . . 04 BALOCHI . . . . 05 SARAIKI . . . . 06 OTHER	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP
		(SPECIFY)	96	
113	What languages can you speak? RECORD ALL LANGUAGES YOU CAN SPEAK.	ENGLISH .... A URDU .... B SINDHI .... C PUNJABI .... D SARAIKI .... E BALUCHI .... F PASHTO .... H OTHER _____ X (SPECIFY)		
114	What is your mother tongue/native language (language spoken at home growing up)?	ENGLISH .... 01 URDU .... 02 SINDHI .... 03 PUNJABI .... 04 SARAIKI .... 05 BALUCHI .... 06 PASHTO .... 07 OTHER _____ 96 (SPECIFY)		
115	Have you ever worked on a DHS survey prior to this one?	YES .... 1 NO 2		
116	Have you ever worked on any other survey prior to this one (not a DHS)?	YES .... 1 NO 2		
117	Were you already working for the National Institute of Population Studies (NIPS) at the time you were employed to work on this DHS?	YES .... 1 NO 2		→ 119
118	Are you a permanent or temporary employee of the National Institute of Population Studies (NIPS)?	PERMANENT .... 1 TEMPORARY 2		
119	If you have comments, please write them here.			

ADDITIONAL DHS PROGRAM RESOURCES

The DHS Program Website – Download free DHS reports, standard documentation, key indicator data, and training tools, and view announcements.	DHSprogram.com	
STATcompiler – Build custom tables, graphs, and maps with data from 90 countries and thousands of indicators.	Statcompiler.com	
DHS Program Mobile App – Access key DHS indicators for 90 countries on your mobile device (Apple, Android, or Windows).	Search DHS Program in your iTunes or Google Play store	
DHS Program User Forum – Post questions about DHS data, and search our archive of FAQs.	userforum.DHSprogram.com	
Tutorial Videos – Watch interviews with experts and learn DHS basics, such as sampling and weighting, downloading datasets, and how to read DHS tables.	www.youtube.com/DHSProgram	
Datasets – Download DHS datasets for analysis.	DHSprogram.com/Data	
Spatial Data Repository – Download geographically-linked health and demographic data for mapping in a geographic information system (GIS).	spatialdata.DHSprogram.com	

Social Media – Follow The DHS Program and join the conversation. Stay up to date through:

Facebook www.facebook.com/DHSprogram		**LinkedIn** www.linkedin.com/ company/dhs-program	
YouTube www.youtube.com/DHSprogram		**Blog** Blog.DHSprogram.com	
Twitter www.twitter.com/ DHSprogram			