Strategic Framework for Maternal Survival in Pakistan & Provincial Implementation Guidelines

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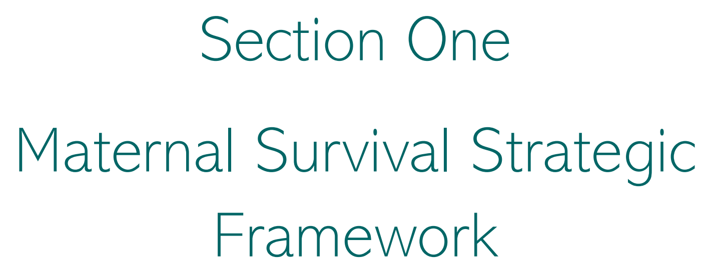
Section One
Maternal Survival Strategic
Framework

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Executive Summary

Pakistan needs to accelerate its efforts to bring in the health services reforms that are required to reduce maternal mortality ratio (MMR) to achieve the Sustainable Development Goals (SDG) by 2030. Although antenatal care (ANC) use and skilled birth attendance (SBA) have significantly increased over the last decade, the corresponding impact on maternal and neonatal health was not achieved due to the gaps in quality and access to reproductive, maternal, newborn, and child health (RMNCH) services. Pakistan recorded a 33% reduction in the MMR between 2007 and 2019, which could be attributed to better roads and communications and improved access to RMNCH services in the rural areas. However, poor and uneducated women and those residing in remote rural areas were still at higher risk of maternal mortality. Analysis of the data from national surveys on maternal mortality confirms that family planning, SBA, and access to emergency obstetric and newborn care (EmONC) were the key factors in preventing maternal deaths.

This Strategic Framework aims to facilitate provincial governments in achieving the universal health coverage goals in RMNCH, as outlined in the **National Health Vision**, the **Action Plan of MONHSRC**, and the **Essential Package of Health Services**. The proposed strategic guidelines were developed through extensive provincial consultations with health and population welfare experts, managers, and clinicians. The guidelines are in line with the **National Work Plan on Ending Preventable Maternal Mortality (EPMM), Every Newborn Action Plan (ENAP) and** the national strategies on **Newborn Survival** and **Midwifery.**

The proposed vision for the Strategic Framework is *"to create a Pakistan where every woman has access to quality maternal health care services, regardless of her location, income, or social status, envisioning a future where maternal mortality is reduced to near zero and every woman can experience the joy of motherhood without the fear of losing her life."*

The proposed strategic guidelines are set in the context of a robust health system which comprises public and private sector health facilities, and which is completely devolved to the provinces. Hence the guidelines only provide the strategic directions toward achieving the SDG targets, while it is expected that provinces/regions will develop their own costed implementation plans for health services reforms to upgrade RMNCH services and improve the quality of RMNCH care.

This document proposes to strengthen the continuum of care model for providing RMNCH care and to fully implement the universal health coverage approach to ensure that ANC, SBA, and EmONC services are available to all women regardless of their location and socioeconomic status. It proposes to upgrade the professional cadre of midwives (including community midwives) in order to achieve the international standards in midwifery. It also proposes to enhance the role of provincial healthcare commissions to enable them to enforce the essential standards of care in RMNCH services across all levels of continuum of care in public and private sectors.

The policy context used for developing the Strategic Framework includes the ongoing activities under the National Health Vision 2016-205, Essential Package of Health Services, Universal Health Coverage (UHC), National Midwifery Strategy (revised 2023), and the National Newborn Survival Strategy (2023). It identifies ten areas where strategic interventions are required, including the inter-sectoral reforms to ensure women's empowerment through education of girls and women and by improving access to social

and health services; strengthening of the continuum of RMNCH care; actions to mitigate the effects of climate change on maternal and newborn health; establishing effective mechanisms for monitoring quality of RMNCH care; taking steps to ensure equity in RMNCH care; upgrading midwifery training and supervision to meet international standards; and to effectively and comprehensively address the three delays in accessing EmONC which lead to maternal complications and mortality.

The Strategic Framework is accompanied with a document containing detailed implementation guidelines for the provinces and highlighting the need for close coordination between the federal Ministry of Health Services Regulation and Coordination (MONHSRC) and the provincial departments of Health and Population Welfare, as well as the provincial healthcare commissions.

Recognizing the successful implementation of the health insurance schemes for the poor, and of outsourcing the primary health care facilities in the rural areas to the private sector organizations which can better manage these facilities, it is recommended that these practices must be continued, enhanced, and expanded. At the same time, however, there is a need to regulate and closely monitor these initiatives.

Acknowledgements

We extend heartfelt gratitude to the Ministry of National Health Services Regulation & Coordination for identifying the need, initiating and playing a pivotal role in creation of the maternal survival strategic framework and implementation guidelines. Their commitment to advancing maternal, newborn and child care in Pakistan in accordance with Sustainable Development Goals (SDGs) and Universal Health Coverage (UHC) targets has been instrumental in shaping the direction of this document.

This would have been possible without unwavering support of the World Health Organization (WHO) throughout the development of this report. Their invaluable guidance and resources have significantly contributed to the success of this activity.

We would like to acknowledge the provincial and regional health and population welfare departments for their invaluable inputs in the development of the strategic framework and implementation guidelines. Their collaboration has enriched the content and has ensured that the strategies align with diverse need to various provinces and regions.

Special recognition goes to our esteemed development partners including the Peoples Primary Healthcare Initiatives (PPHI), Lady Health Workers (LHWs) Program and Maternal Newborn & Child Health Program. Their contribution has been integral to the success of this endeavor, reflecting a collective commitment to improve maternal, newborn and child health care outcomes in Pakistan.

We express our sincere appreciation to the dedicated reviewers whose insightful feedback and expertise have greatly enhanced the quality and credibility of this report.

Last but certainly not least, a profound thank you to all those involved in taking on and successfully completing this challenging assignment. Their dedication and hard work have been indispensable, and deserve our appreciation.

Abbreviations

AMTSL	Active Management of Third Stage of Labor
ANC	Antenatal Care
BEmONC	Basic Emergency Obstetric and Newborn Care
BHUs	Basic Health Units
CANC	Comprehensive Antenatal Care
CBOs	Community Based Organizations
CEmONC	Comprehensive Emergency Obstetric and Newborn Care
CMW	Community Midwife
CoC	Continuum of Care
DHDCs	District Health Development Centers
DHIS	District Health Information System
DHQ	District Headquarter
DHS	Demographic and Health Survey
DoH	Department of Health
ENAP	Every Newborn Action Plan
EPI	Expanded Program on Immunization
EPMM	Ending Preventable Maternal Mortality
ESSIs	Employees Social Security Institutions
FANC	Focused Antenatal Care
FP	Family Planning
FWC	Family Welfare Centre
FWW	Family Welfare Worker
GONGO	Government Organized Non-Governmental Organization
HCC	Health Care Commission
HDP	Hypertensive Disease of Pregnancy
HIPs	High Impact Practices
HSA	Health Services Academy Islamabad
ICMW	International Confederation of Midwives
IUCD	Intrauterine Contraceptive Device
KP	Khyber Pakhtunkhwa
LAM	Lactation Amenorrhea Method
LARCs	Long Acting Reversible Contraceptive Methods
LHVs	Lady Health Visitors
LHW	Lady Health Worker
LQAS	Lot Quality Assurance Sampling
M&E	Monitoring & Evaluation
MCPC	Managing Complications in Pregnancy and Childbirth
MDGs	Millennium Development Goals
MDSR	Maternal Deaths Surveillance and Response
MSDS	Minimum Service Delivery Standards

MICS	Multiple Indicator Cluster Surveys
MIMS	Maternal and Infant Mortality Survey
MMR	Maternal Mortality Ratio
MNCH	Maternal, Newborn, and Child Health
MONHSRC	Ministry of National Health Services Regulation and Coordination
MSU	Mobile Service Unit
NGOs	Non-Governmental Organizations
NIPS	National Institute of Population Studies
NMDs	Newly Merged Districts
NMNCH	National Program for Maternal Neonatal and Child Health
Ob/Gyn	Obstetrician/Gynecologist
PBS	Pakistan Bureau of Statistics
PDHS	Pakistan Demographic and Health Survey
PDS	Pakistan Demographic Survey
PHC	Primary Health Care
PHDCs	Provincial Health Development Centers
PMDC	Pakistan Medical and Dental Council
PMMS	Pakistan Maternal Mortality Survey
PMR	Perinatal Mortality Rate
PNC	Pakistan Nursing & Midwifery Council
PNMR	Perinatal Mortality Rate
PPFP	Postpartum Family Planning
PPH	Postpartum Hemorrhage
PPHI	People's Primary Healthcare Initiative
PPIUCD	Postpartum Intrauterine Contraceptive Devices
PPP	Public Private Partnership
PWD	Population Welfare Department
QA	Question Answer
QoC	Quality of Care
RHCs	Rural Health Centres
RHS	Reproductive Health Services
RHSCs	Reproductive Health Services Centers
RMNCH	Reproductive, Maternal, Newborn, and Child Health
RTIs	Regional Training Institutes
SDGs	Sustainable Development Goals
SOPs	Standard Operating Procedures
TT	Tetanus Toxoid
UHC	Universal Health Coverage
UNICEF	United Nations Children's Fund
UNFPA	United Nations Fund for Population Activities
WHO	World Health Organization

Definitions

Antenatal care (ANC) comprises the medical procedures and care during pregnancy with the objective to promote and maintain physical and mental health of the pregnant woman, preempt and manage complications, and prepare the pregnant women to plan for the birth, postpartum period, and breastfeeding. *Focused antenatal care (FANC)* is described as an approach that provides for individual assessment and customized decision-making by the provider with an aim for safety and health of the mother and the baby. *Comprehensive antenatal care (CANC)* is defined as the care during pregnancy which includes all the prescribed examinations, tests, and education and preparedness sessions of ANC.

Cesarean section (CS) is a surgical procedure performed to deliver the baby through surgical incisions made in the abdomen and the uterus, in the situations where vaginal delivery is not possible or is unsafe and/or when the health of the mother or the baby is at risk. The International Federation of Gynecologists and Obstetricians recommends that "Caesarean delivery should be recommended as the only medically reasonable alternative if, and only if, there is certainty of an evidence-base for the clinical judgment that Caesarean delivery is clinically superior to vaginal delivery".

Emergency Obstetric and Newborn Care (EmONC) is a set of life-saving interventions that treat the major obstetric and newborn causes of morbidity and mortality. EmONC has two levels of care: basic and comprehensive. The basic level offers: administration of intravenous /intramuscular antibiotics, anticonvulsants, and uterotonic drugs; manual removal of placenta; assisted vaginal delivery; removal of retained products of conception; and neonatal resuscitation. The comprehensive level of EmONC offers cesarean section and blood transfusion services, in addition to all the services of basic EmONC.

Induced abortion is defined as "termination of pregnancy using drugs or surgical intervention after implantation and before the embryo fetus has become independently viable (International Federation of Gynecologists and Obstetricians)". The *Abortion Rate* is the number of induced abortions per 1000 women of 15-49 years of age. Previous studies have indirectly estimated very high abortion rates in Pakistan. In Pakistan Maternal Mortality Survey (PMMS) 2019, the abortion rate turned out to be very low because women's response to direct questions about induced abortion is likely to be negative, particularly among the poor and uneducated women. In PMMS 2019, induced abortions were more commonly reported by educated women, urban women, and those in the higher wealth quintiles.

Maternal mortality ratio (MMR) represents the number of maternal deaths per 100,000 live births in a country or community over a specific period of time. A maternal death is defined as a death during pregnancy or $\leq$ 42 days of termination of pregnancy, regardless of the duration or site of pregnancy, due any cause related to complications of pregnancy, childbirth, or the postpartum period, but not from incidental/accidental causes. MMR is the most sensitive indicator of maternal health and of the quality and accessibility of maternal healthcare – particularly emergency obstetric care – in a country. It measures the risk of death due to direct or indirect obstetric complications in each pregnancy. Therefore, the *lifetime risk of maternal death* is an accumulation of the risk of maternal mortality during the reproductive life of a woman. MMR is used to measure the progress in maternal health status, quality of maternal healthcare services, the women's general state of health and wellbeing, and the women's status in society.

Perinatal Mortality Rate (PNMR) represents the number of stillbirths and deaths of newborn children within first 7 days after birth per 1000 live births in a country or community over one year. Like MMR, the PNMR is also considered a sensitive indicator of maternal health and maternal healthcare services and emergency obstetric care. Several of the risk factors of maternal and perinatal mortality overlap; indeed, some experts consider PNMR a proxy of MMR. At the policy level, PNMR should be included in all national and regional surveys to monitor progress toward EPMM. While surveys estimating MMR need very large sample size and expertise and are, therefore, very expensive, the PNMR can be much more easily included in routine surveys or district health information systems.

Postpartum (or post-pregnancy) family planning (PPFP) is defined as the start of a modern method of contraception immediately or as soon as possible after childbirth for optimal timing and spacing of pregnancies. PPFP can also be used to limit future births among women who do not desire to have any more children or who are likely to have high risk pregnancies. PPFP counseling is typically started during ANC to prepare the women for IUCD or implant insertion immediately after delivery; or to prescribe other methods of effective contraception to be started as soon as possible after childbirth or abortion.

Skilled birth attendant (SBA) is an accredited health professional - such as a midwife, doctor or nurse - who has been educated and trained to proficiency in the skills needed to manage normal (i.e. uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of women and neonates for complications. Traditional birth attendants, whether trained or not, are excluded from the category of "skilled attendant at delivery" (WHO).

Universal Health Coverage (UHC) is providing access to essential health services to everyone regardless of their ability to pay. It is a comprehensive approach to improve the health of population through national ownership and execution in low- and middle-income countries by highlighting governance and institutional arrangements, costs and affordability, feasibility, and sustainability.

Essential Package of Health Services (EPHS) is a set of 117 interventions that cover the core functions of the health system, such as prevention, diagnosis, treatment, rehabilitation, and palliation. The EPHS is delivered through five platforms: community, health centre, first level hospital (FLH), tertiary hospital (TH), and population-based activities. The EPHS is based upon the evidence from Disease Control Priorities, 3rd Edition (DCP3).

Introduction and Background

Globally, most maternal deaths occur in low-income settings. About 94% of maternal deaths occur in low-income and lower-middle-income countries, 20% of those in Southern Asia. It is because developing countries have low resources—both private and public—to spend on healthcare services and infrastructure. In many developing countries, less than half the births are attended by skilled birth attendants (SBA), increasing the risk of maternal mortality and jeopardizing the mother's health, and births at healthcare facilities often lack basic services such as infection prevention[1].

A majority of maternal deaths are directly caused by complications of pregnancy, childbirth and postpartum period. These include postpartum hemorrhage (PPH), high blood pressure in pregnancy, obstructed or prolonged labor, infections, and unsafe abortion, all of which are preventable and treatable with adequate healthcare and effective interventions such as access to modern family planning methods, antenatal care, and timely management by SBA with a supportive environment and backup emergency obstetric care.

Maternal health and survival are the responsibility of the family, community, and nation of the pregnant woman. Simply stated, a woman must not die while bringing a new life in this world. Therefore, the MMR truly and comprehensively sums up the status of women in a society. A maternal death should be considered a consequence of social injustice to the woman and not merely a result of medical complications during pregnancy, childbirth, or postpartum.

Ending Preventable Maternal Mortality (EPMM)[2] is a global initiative toward achieving the SDG target for MMR by improving maternal health and well-being through a holistic, human rights-based approach and by strengthening health systems along the principles of universal health coverage (UHC). It is based upon the following guiding principles:

- Empower women, girls, and communities.
- Integrate maternal and newborn health, protect and support the mother-baby dyad.
- Ensure country ownership, leadership, and supportive legal, regulatory, and financial frameworks.
- Apply a human-rights framework to ensure that high-quality reproductive, maternal, and newborn health care is available, accessible, and acceptable to all who need it.

EPMM has five strategic objectives:

- Address inequities in access to and quality of healthcare
- Ensure universal health coverage
- Address all causes of maternal mortality, morbidities, and related disabilities
- Strengthen health systems to respond to the needs and priorities of women and girls
- Ensure accountability in order to improve quality of care and equity

EPMM requires some cross-cutting actions such as improving the metrics, measurement systems, and data quality to ensure that all maternal and newborn deaths are counted; and allocating adequate resources and effective health care financing. It sets out ten major areas where intervention is required and which also serve as the milestones to monitor progress in each country. These include: Policies and

[1] World Health Organization, 2015, 2019.
[2] WHO and UNFPA: Ending preventable maternal mortality (EPMM): a renewed focus for improving maternal and newborn health and well-being (2015). https://www.who.int/publications/i/item/9789240040519

Plans; Quality of Care; Data for Action; Accountability; Research, Innovation and Knowledge Exchange; Investment; Health Workforce; Response and Resilience; Commodities and Supplies; and Equity.

EPMM Strategies	
Guiding principles	Empower women, girls, and communities
	Integrate maternal and newborn health, protect and support the mother-baby dyad
	Ensure country ownership, leadership, and supportive legal, regulatory, and financial frameworks
	Apply a human-rights framework to ensure that high-quality reproductive, maternal, and newborn health care is available, accessible, and acceptable to all who need it
Cross-cutting issues	Improve metrics, measurement systems, and data quality to ensure that all maternal and newborn deaths are counted
	Allocate adequate resources and effective health care financing
Strategic objectives	Address inequities in access to and quality of sexual, reproductive, maternal, and newborn healthcare
	Ensure universal health coverage for comprehensive sexual, reproductive, maternal, and newborn healthcare
	Address all causes of maternal mortality, reproductive and maternal morbidities, and related disabilities
	Strengthen health systems to respond to the needs and priorities of women and girls
	Ensure accountability in order to improve quality of care and equity

Maternal and newborn health is an extremely important area for healthcare interventions globally. In developing countries, it requires the most efforts for improvement of quality and accessibility of health services. Reducing maternal and newborn mortality was included in the Millennium Development Goals (MDGs) as wells in the Sustainable Development Goals (SDGs). Pakistan is a signatory to both MDGs and SDGs but was unable to achieve the MDG targets in maternal and neonatal mortality and health. High maternal, neonatal, and perinatal mortality rates, poor quality of RMNCH services and their inequitable distribution, extremely low levels of modern contraceptive use, and high unmet need of family planning are the major contributing factors that hinder Pakistan's progress in RMNCH. In particular, high maternal mortality and morbidity in Pakistan is caused by poverty, low status of women in society, lack of emphasis on education for women and girls, gross inequities in access to health services, poor quality of RMNCH services including emergency obstetric and neonatal care (EmONC), and social, financial, and physical barriers in the use of modern methods of family planning.

Pakistan is the fifth most populous country[3] and 46th largest economy (by nominal GDP) of the world; it also has the 6th largest active armed forces in the world. Paradoxically, Pakistan ranks 154th in the world by human development index and 93rd by quality of life index. Moreover, the country is struggling for

[3] With an intercensal population growth rate of 2.55%, Pakistan is also among the top 20 countries of the world having the fastest growing populations.

decades with the task of improving its reproductive, maternal, neonatal, and child health (RMNCH) indicators, in which it is lagging behind all of its neighboring countries with the possible exception of Afghanistan. Pakistan has the 26th highest under 5-year mortality rate in the world, and the highest neonatal mortality rate after Sub-Saharan Africa and Afghanistan.

The following is a summary analysis of the situation of maternal health and survival in Pakistan to identify the strategic directions for reducing maternal mortality and for improving the maternal health indicators in the country.

Pakistan has conducted two national surveys to estimate maternal mortality ratio (MMR) (Pakistan Demographic and Health Survey [PDHS] 2006-07[4] and Pakistan Maternal Mortality Survey [PMMS] 2019[5]). Prior to these surveys, regional data on maternal mortality was available from the Maternal and Infant Mortality Survey (MIMS) conducted by Aga Khan University Karachi in 16 districts of Balochistan and KP during 1991 – 1994[6]. The four Balochistan districts had higher MMRs than the 12 KP districts; the MMR was higher in remote districts where access to health facilities was difficult. MIMS results were also used to project the national level MMR through mathematical modeling (see table below).

The national MMR estimated through PDHS 2006-07 was 276 maternal deaths per 100,000 live births (95% confidence interval: 234 – 314). PMMS 2019, the first ever exclusive study of maternal mortality and morbidity in Pakistan, estimated the national MMR at 189 (95% confidence interval: 155 – 223)[7].

National estimates of MMR from various sources, 1980 – 2019

Source/Agency	Period of Estimate	Method of Estimation	MMR (per 100,000 Live Births)	95% Confidence Interval
State of the World's Children (UNICEF)	1980-1995	Unknown	500	NA
The Progress of Nations (UNICEF), 1998	1994	Mathematical modeling	340	NA
Pakistan Reproductive Health and Family Planning Survey (NIPS) 2001	1990	Sisterhood method	533	NA
Midhet, F. in Proceedings of Annual Research Conference of Population Association of Pakistan (2002)	1991-1994	Mathematical modeling	279	220 – 339
Pakistan Demographic and Health Survey (NIPS) 2006-2007	2004-2006	National sample household survey	276	234 – 324
Inter-agency working group (UNICEF, WHO, WB, UNPD) 2016	2015	Mathematical modeling	178	111 – 283
Pakistan Maternal Mortality Survey (NIPS) 2019 [excluding AJK and GB]	2017-2019	National sample household survey	189	155 – 223

These data are not helpful in establishing the trends in MMR over the years. However, a comparison of PDHS 2006-07 and PMMS 2019 reveals that a major part of the decline in MMR occurred in the rural areas. In 2006-07 the MMR in urban areas of Pakistan was 177 (95% confidence interval: 117 – 236), while in

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

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

[6] Midhet F, Becker S. Impact of community-based interventions on maternal and neonatal health indicators: Results of a community randomized trial in rural Balochistan, Pakistan. Reproductive Health 2010; 7:30 (5 November 2010).

[7] *Both estimates exclude AJK and GB.*

2019, MMR in the urban areas declined to 157 (95% confidence interval: 103 – 262); hence the decrease was not statistically significant. On the other hand, in the rural areas, the MMR was 320 (95% confidence interval: 268 – 371) in 2006-07, and 185 (95% confidence interval: 144 – 225) in 2019 – showing a decline of 42% which was statistically significant. Moreover, the difference between urban and rural MMR was statistically significant in 2006-07 but not in 2019.

According to the two national surveys[8], the leading causes of maternal mortality in Pakistan are postpartum hemorrhage (PPH), hypertensive disease of pregnancy (HDP), postpartum infection, and post-abortion complications. In 2006, the distribution of these causes was: PPH 33%, HDP 10%, infections 14%, and abortion-related 6%, while 25% of maternal deaths occurred due to other obstetric causes and 13% due to indirect obstetric causes. In 2019, the distribution of these causes was: PPH 41%, HDP 29%, infections 6%, and abortion-related 10%, while 10% of maternal deaths occurred due to other obstetric causes and 4% due to indirect obstetric causes. This indicates a proportionate increase in the acute causes of death (PPH and HDP), which require high quality EmONC, and in the deaths due to complications of abortion.

Between 2006 and 2019, the MMR declined by 33% in Pakistan (excluding AJK and GB). At this rate, the MMR will be > 100 maternal deaths per 100,000 live births in 2030, higher than the global SDG target of 70 maternal deaths per 100,000 live births. However, it is possible to accelerate the reduction in MMR by improving the quality and accessibility of maternal health services across the country. It is encouraging to note that the MMR reduction was larger and more significant in the rural areas, eliminating the urban/rural difference in the MMR. The significant reduction in MMR in the rural areas was achieved by an increase in institutional deliveries and improved access to EmONC. The latter was made possible due to improved communications (due to the mobile phones surge in Pakistan), better transportation, and construction of new roads connecting the remote rural areas.

The risk factors of maternal mortality identified from the PDHS 2006-07 data were mother's age at birth (≥ 35 years), first birth, and history of a prior pregnancy loss. Women with at least secondary school education and those who had ever used a modern family planning method were at a significantly lower risk of maternal mortality. Women residing in remote villages (> 40 kilometers distance to a hospital providing EmONC services) and those residing in areas not covered by mobile phone services were also at a significantly greater risk of maternal death. There was no significant shift in these risk factors in 2019: mother's age at birth (< 20 years and > 34 years) and history of a prior pregnancy loss, and women residing in remote villages (> 35 KM from an EmONC facility) were at a greater risk of maternal mortality; while the women having secondary school education or above and those who had ever used a modern family planning method were at a significantly lower risk.

Both surveys found that the women who died due to maternal causes were more likely to receive ANC and/or to be delivered by a skilled healthcare provider (specialist, doctor, nurse, or LHV) during their last pregnancy. This indicates selective referral of high-risk women to higher level health facilities and skilled providers; i.e., the women having complications in pregnancy and delivery are more likely to be referred to a hospital, compared to the women having a normal pregnancy and delivery.

Women experiencing diabetes or hypertension during pregnancy were also at a greater risk of maternal mortality, compared to the women who did not experience these diseases during pregnancy. This finding again points to the fact that an improvement in the quality of obstetric care at all levels and stages is

[8] PDHS 2006-07 and PMMS 2019

essential; women with high risk pregnancies should receive proper care and closely monitored and should be referred to a suitable health facility for further investigations and treatment.

The factors that helped bring the modest decline in MMR between 2007 and 2019 were: Better communication services (mobile phones becoming a universal phenomenon in Pakistan) and improved access to EmONC services (many remote areas were connected to cities through paved roads). The proportion of women using maternal health services also increased considerably during this period. Women having ≥ 4 antenatal care visits from a skilled provider increased from 28% in 2006-07 to 51% in 2018 (PDHS 2006-07 and PDHS 2017-18); while deliveries in health facilities increased from 34% to 66%. However, the decline in MMR was not commensurate with the increases in antenatal care and skilled birth attendance, indicating gaps in the quality of care available to women. An example of the quality of care is the comprehensiveness of the antenatal care received by pregnant women, as reported in the PMMS 2019. Recent WHO guidance for antenatal care increased the number of contacts with healthcare providers during pregnancy from four to eight. The first visit should be in the first trimester and in each visit, the pregnant woman must receive the following services: blood and urine tests; blood pressure check; nutrition counseling; prescription of iron-folic acid tablets, and tetanus toxoid vaccination. According to the PMMS 2019 data, only 21% pregnant women (in three years preceding survey) reported to have received four or more contacts with healthcare provider which met all of these criteria. Urban women, those having secondary school education or above, and those in the highest wealth quintile were more likely to receive comprehensive antenatal care. Women in the highest wealth quintile were 11.5 times more likely to receive comprehensive antenatal care and 4.4 times more likely to give birth in a health facility than the women in the lowest wealth quintile (after adjusting for age, parity, education, and urban/rural residence).

PMMS 2019 estimated that perinatal mortality rate (PNMR) in Pakistan was 70 perinatal deaths (stillbirths and neonatal deaths within 7 days of birth) per 1000 live births, which is one of the highest in the world. There were no significant differences in PNMR between provinces or between urban and rural areas, although it was significantly lower in the highest wealth quintile (the richest 20% population) and among mothers having an education of 10th grade or higher while the women having no formal schooling were at the highest risk of experiencing a perinatal death. The policy implication is that the quality of newborn care must be improved: Birth asphyxia is a major cause of fetal death during delivery, which can be prevented by training the birth attendants in simple techniques like helping babies breathe. These techniques are explained well in the clinical practice pocket guide of World Health Organization, which incorporates new evidence-based guidelines on labor, delivery, postpartum care, and should be made an essential part of the training of all birth attendants including CMWs and LHVs[9].

Conclusions[10]

The in-depth analysis of PMMS 2019 data illustrates that the limited accessibility and poor quality of maternal health services are responsible for high maternal and perinatal mortality in Pakistan. Rural women and women belonging to lower socioeconomic strata are less likely to receive proper ANC and SBA services and, therefore, are at a greater risk. Hence the need to ensure universal health coverage with special focus on the provision of maternal health services to all women regardless of their residence and socioeconomic status. At the same time, the government must strive to improve the quality of ANC, normal delivery care and emergency obstetric and neonatal care across public and private sectors of healthcare.

[9] Early essential newborn care: clinical practice pocket guide, 2nd edition – World Health Organization 2022

[10] Adapted from a policy brief/discussion paper, prepared by Health Services Academy Islamabad; December 2022.

The take-home messages from the in-depth analysis of PMMS 2019 are:

- Vulnerable population subgroups such as poor and uneducated women, women residing in low-income urban areas and remote rural areas, and women in under-developed regions such as Balochistan are at a significantly higher risk of maternal mortality.
- Family planning, which emerged as a major protective factor against maternal death in both PDHS 2006-07 and PMMS 2019, plays a key role in improving women's health – particularly in reducing maternal and perinatal mortality.
- Although direct information on the circumstances of induced abortion is not available, there is strong evidence from PMMS and several previous studies that women may be using induced abortion as a method for family planning. This once again highlights the importance of family planning in improving MNCH in Pakistan.
- Although the rate of facility deliveries has significantly increased over the last decade, a corresponding reduction in MMR was not observed. This observation raises questions about the quality of MNCH care available to women, particularly ANC and delivery care. Although ANC is almost universal, only about one fifth of the women received comprehensive care during their ANC visits.
- Finally, the findings of PMMS 2019 suggest that wealth and education have a major role in uptake of ANC and SBA services. ANC and SBA are considered important interventions for the safety of mother and child. Providing SBA services to the poorest segment may increase its use—for instance, under the existing health insurance schemes. Information dissemination about the health benefits of ANC among uneducated women may increase compliance to it. A special communication could be made through LHWs.

Pakistan is certainly in a position to accelerate its progress toward achieving the SDG target of maternal mortality reduction by the year 2030. A sharp focus on and effective programming and financing for increasing the use of modern contraceptives, improving the quality of ANC, delivery care, and EmONC services, and strengthening the healthcare delivery systems would make it possible to bring in a substantial decline in MMR. Pakistan must aim to reduce its MMR at least by two-thirds by 2030 (to 90 maternal deaths per 100,000 live births, which would require an annual rate of reduction of 5.5%), as per WHO recommendations for the countries having a baseline MMR of < 420 in 2010[11].

[11] World Health Organization: Strategies toward ending preventable maternal mortality (EPMM), Executive Summary; WHO/RHR/15.03, WHO 2015

Purpose

´Mothers have often been seen as a means and not as ends. Health services have been targeted to mothers to help them to produce healthy babies, forgetting that there is a woman in the mother, who also has a right to health and survival. Society has an obligation to fulfill a woman's right to life and health, when she is risking death to give us life.' (Professor Mahmoud F. Fathalla)

Three quarters of a century after independence, women in Pakistan are still suffering from gender-based discrimination, as they are treated unequally in terms of access to education and healthcare. As a result, maternal mortality and fertility rates in Pakistan are higher than most developing countries. Pakistan faces an arduous struggle to meet the SDG Target 3.1 (Reduce the global maternal mortality ratio to less than 70 per 100,000 live births).

The proposed Vision Statement for reducing maternal mortality in Pakistan is:

"To create a Pakistan where every woman has access to quality maternal health care services, regardless of her location, income, or social status, envisioning a future where maternal mortality is reduced to near zero and every woman can experience the joy of motherhood without the fear of losing her life."

A sustainable and effective strategy for reducing maternal mortality in Pakistan must focus on the principles of Ending Preventable Maternal Mortality: ensuring universal access to quality maternal health care services, promoting gender equality, empowering women and girls, and strengthening the health systems across provinces and districts.

To achieve this vision, it is essential to establish a coordinated effort between the Ministry of National Health Services Regulation and Coordination (MONHSRC) and the provincial departments of Health and Population Welfare. The federal government should provide funding, resources, and technical assistance to the provinces to improve maternal health care services, while the provinces can work towards implementing policies and programs that are tailored to their specific needs and challenges.

The purpose of this document is to provide a strategic framework to facilitate the federal and provincial governments in achieving the universal health coverage goals in reproductive, maternal, newborn, and child health (RMNCH), as outlined in the **National Health Vision**, the **Action Plan of MONHSRC**, and the **Essential Package of Health Services**. This strategic framework follows the interventions identified in the **National Work Plan on Ending Preventable Maternal Mortality (EPMM)** which was endorsed by the MONHSRC and is in line with the **National Midwifery Strategy**. This Strategy is also aligned with the draft **National Newborn Survival Strategy** which was designed to achieve the objectives of **Every Newborn Action Plan (ENAP)** and proposes an integrated approach toward reducing the maternal and neonatal mortality in the country in form of a Joint ENAP-EPMM Work Plan.

Process

The Strategic Framework for Maternal Survival in Pakistan is the outcome of extensive consultations with the health managers, public health experts, and clinicians, both in the public and private sectors, which were held in Karachi, Quetta, Peshawar, Lahore, and Islamabad (where AJK and GB also participated). The purpose of the consultations was to deliberate upon strategies to address the issue of high maternal mortality in Pakistan to achieve the SDGs in maternal and child health. The guidelines for the provincial consultations were drawn from the work done nationally and globally during the last five years, most notably Ending Preventable Maternal Morality (EPMM) and the information gathered through What Women Want surveys.

The process of designing the strategic framework started from a review of the existing health policies and a situation analysis focusing on the causes, and risk factors of maternal mortality. This information was extracted from comparison of the two national surveys on maternal mortality (PDHS 2006-2007 and PMMS 2019). In addition, a broad assessment of the health services in public and private sector was also carried out. The consultative meetings in provincial capitals and Islamabad included the Health and PWD departments, local experts, representatives of donor agencies and NGOs, and renowned clinicians (see **Annex A** for a list of participants). The following outline of the proposed strategic framework was shared with the participants before each consultation:

Proposed outline for the strategic framework for maternal survival:

1. **Focus on women's health and well-being:**
    a. Promote women's empowerment and status in society through:
        i. Creating opportunities for education and employment for girls.
        ii. Legislation to recognize women's right to reproductive health.
        iii. Legislation to curb violence against women.
    b. Making public and private health facilities women-friendly.
    c. Promoting respect for girls and women in the society.
2. **Renewed focus on women's health:**
    a. Health and hygiene for women and girls.
    b. Special nutrition programs for women and girls under the social protection programs.
    c. Premarital counseling and screening for genetic disorders, HIV and STDs.
    d. Family planning information and services through community-based workers.
    e. Breastfeeding counseling and support.
3. **Improve quality and accessibility of maternal healthcare:**
    a. Identify and address the leading causes of maternal mortality (e.g., postpartum hemorrhage and pregnancy-induced hypertension).
    b. Address causes of induced abortion and provide quality post-abortion care.
    c. Improve quality and accessibility of blood transfusion services.
    d. Ensure provision of quality basic and comprehensive emergency obstetric and newborn care through rural health centers and district/sub-district hospitals.
    e. Enforce MNCH and family planning quality standards on public and private sector facilities.

Participants of the consultative meetings were provided with the following questions to keep the discussion focused and to elicit the recommendations and suggestions that could be incorporated into the draft of the strategic framework:

1. What steps can be taken immediately and on a short-term basis to promote women's empowerment in the society (e.g., legislation, policymaking, and mass media campaigns)?
2. Do we need national maternal survival strategic guidelines for hospitals and clinics?
3. How can rural health centers and sub-district/district hospitals be prepared to provide basic and comprehensive EmONC services?
4. What should be the role of provincial healthcare commissions in quality assurance of family planning and MNCH services in the for-profit and non-profit private sector?
5. What immediate steps are needed to align the blood transfusion services to ensure availability of safe blood products for women during pregnancy and childbirth?
6. How can we salvage the LHWs and CMWs to facilitate universal health coverage in MNCH?
7. What are the practical short-term and long-term strategies for integrating family planning into MNCH services?
8. Do we need a national policy to ensure that postpartum family planning is routinely offered to all pregnant women visiting for antenatal care across public and private health facilities?
9. Should obstetric surgery training be made mandatory for all male surgeons posted in sub-district and district hospitals?
10. Should there be universal guidelines for providing high quality and comprehensive antenatal care which are made mandatory to follow across public and private sector health facilities?

Consultative meetings started with introductory presentations on the situation of maternal health in Pakistan, which included a brief analysis of the data on maternal mortality and morbidity and utilization of RMNCH care services from the Pakistan Maternal Mortality Survey (PMMS) 2019. After a Question Answer (QA) session, participants were divided into four groups, each focusing on a specific issue:

1. How to improve and sustain the quality of RMNCH care in public and private sectors?
2. Should the training and deployment of LHWs and CMWs be revived and upgraded?
3. Is outsourcing of health facilities a viable solution for efficient use of government resources?
4. How to implement and sustain mechanisms for accountability of RMNCH Care?

All the discussions were videotaped with permission from the participants and extensive notes were taken during the discussions, particularly from the presentations of the smaller groups. Further discussions were made with key stakeholders of the provinces on the meetings' sidelines. The complete minutes of each provincial consultation were shared with the provincial participants and are available upon request. A summary of the outcomes of the provincial consultations is provided in **Annex B**.

Health Systems Context

Pakistan's first maternal and child health (MCH) program was launched in 1951 with the introduction of Lady Health Visitors (LHVs) as a new cadre of health workers to provide RMNCH care at community and primary care levels. The country's first family planning initiative was launched by an NGO in 1953, while family planning was officially introduced as a government initiative in the Third National Five Year Plan (1965-1970). During 1970s and 1980s, several programs to train the traditional birth attendants were also launched with technical and financial assistance from international donor agencies.

In 1990, Pakistan adopted its first National Health Policy comprising a vision and the guidelines for development of the national healthcare delivery system. Its goal was to provide universal coverage through enhancement of trained health manpower. The Policy put emphasis on RMNCH and primary health care (PHC). Its objectives directly relevant to MNCH were: to create a new cadre of LHWs (100,000 to be trained over the next ten years); to improve functioning of BHUs and RHCs; to provide food supplements to expectant and lactating mothers, infants, and children; and to incorporate family planning as an essential component into all healthcare intervention programs.

The National Health Policy was revised in 1997 to introduce a "vision" of the health sector development by the year 2010. The vision included provision of comprehensive and quality health care to all segments of society. In addition to a strong PHC program, a highly organized and well-equipped tertiary level care was to be made available at affordable costs. The revised policy reemphasized the need for integrating family planning into RMNCH services and improving nutritional status of mothers and children. It also outlined the need for strengthening district health systems to deliver essential elements of primary health care and for providing support mechanism in terms of training, logistics and supervision of health workers at all levels. It addressed the issue of lack of staff at the primary level health facilities and called for training of female workers as an essential element of human resource capacity building for the district health systems. The policy included directives to develop decentralization strategies in the organization, planning and management of the healthcare delivery system. Finally, it highlighted the need to improve referral systems to ensure equitable accessibility to emergency, secondary and tertiary health care services.

In April 2010, the Eighteenth Amendment of the Constitution of Pakistan was passed by the National Assembly, which devolved power to the provinces, resuming the country's status to a democratic republic from a presidential state. Health and population welfare were among the 15 ministries that were devolved to the provinces. It was expected that the provinces will give priority to universal health coverage and will work to improve the population's health status, particularly of women and children. After the devolution, overseas development assistance for health programs also shifted to provinces, again with emphasis on RMNCH.

Safeguarding women's reproductive health and rights has been on the agenda of provincial lawmakers. All provinces have passed legislation and/or promulgated public policies to protect women's reproductive health rights in one form or another: Sindh and KP passed the reproductive rights acts in 2019 and 2020, respectively (Sindh Reproductive Healthcare Rights Act; No. XV of 2019 and Khyber Pakhtunkhwa Reproductive Healthcare Rights Act; No. XXVIII of 2020). The Punjab Reproductive, Maternal, Neonatal and Child Health Authority was established through legislation in 2014 (Act VIII of 2014), and the Balochistan Commission of the Status of Women was promulgated through the Balochistan Commission on the Status of Women Act No. V of 2017.

Role of Federal Government:

The 18th Amendment highlighted the need for a shift in the federation's role in health sector. As a result, the Ministry of National Health Services Regulation and Coordination (MONHSRC) was created in 2013, which combined health and population welfare under one roof. Besides managing health and population services in Islamabad Capital Territory (ICT), the MONHSRC has the following functions:

- Regulation of medical and nursing education and medical, health, and population research;
- Management of federal funds allocated for research and development;
- Liaison and partnership with international organizations (WHO, UNICEF, UNFPA);
- Streamlining and supervision and support of national and international NGOs in health and population;
- Coordination with provincial departments in joint projects, policy development, and strategic planning for streamlining and facilitating activities to achieve Pakistan's global health responsibilities (such as SDGs);

The MONHSRC is responsible for developing national policy guidelines and action plans for advancement of country's health interventions. Some recent policy documents of MONHSRC are listed below:

1. *National Health Vision 2016-2025* vows to *"improve the health of all Pakistanis, particularly women and children, through universal access to affordable quality essential health services, and delivered through resilient and responsive health system, ready to attain Sustainable Development Goals and fulfill its other global health responsibilities."* It recognizes 'population explosion' and health system inequalities particularly with regard to RMNCH as major challenges and lists good governance, equity, innovation, and transparency as guiding principles.
2. *Action Plan 2019-2023*, prepared to augment the current health sector strategies and policies and to foster interventions for achievement of National Health Vision.
3. *Universal Health Coverage (UHC)* is a policy framework aiming to ensure that all individuals and communities can access quality health services without suffering financial hardship. It involves providing essential health services, including prevention, treatment, rehabilitation, and palliative care, to all citizens.
4. *Essential Package of Health Service (EPHS)* outlines a comprehensive set of preventive, curative, and rehabilitative health services deemed essential for population. It aims to ensure that all citizens have access to basic healthcare regardless of their socioeconomic status.
5. *Draft National Midwifery Strategy (Revised 2023)* aims at enhancing the quality of midwifery services by training, regulating, and deploying skilled midwives and promoting their role in providing comprehensive care to women and newborns during pregnancy, childbirth, and postpartum.
6. *Draft National Newborn Survival Strategic Framework (2023)* targets reducing neonatal mortality rates by outlining interventions and approaches aimed at improving the survival and health of newborns. It encompasses various aspects such as antenatal care, skilled birth attendance, essential newborn care, postnatal services, and community engagement.
7. *Report on Priority Setting and Development of Pakistan Universal Health Coverage and Essential Package of Health Services (2023),* which is an overview of the collaborative activities between the Ministry and the DCP3 Country Translation Program of LSHTM to support the country's UHC reforms and EPHS development.
8. *The EPHS and the Health Benefit Plans in Pakistan, a Crosswalk Analysis (2015-2016):* This landscape analysis was supported by USAID to identify the areas whether the country's health benefit plans (HBPS, including Prime Minister's National Health Insurance Program and *Waseela-*

e-Sehat, previously Benazir Income Support Program) were aligned with the EPHS to ensure UHC. The analysis discovered that only 5% of the services listed in the EPHS matched with those included in the HBPs and 67% services were included in the EPHS but not in the HBPs.

9. *Pakistan Human Resources for Health Vision 2018-2030:* The stated purpose of this document is to provide a national vision and common direction that harmonizes provincial and federal efforts to develop national strategies for human resource development for universal health coverage and sustainable development, focusing on the size, capability, and distribution of quality health workforce. The document aims to address the gaps between the required and actual health workers of different cadres. For example, it estimates a lack of over 700,000 nurses and midwives in the country by 2030!
10. *Annual Report of Health and Population Think Tank (2017-2018):* The report describes the establishment of a high-powered think tank of experts, including those from outside the country, which has a vision to address the pressing issues in health and population in Pakistan.

Role of District Health System:

Pakistan is a diverse country having wide variations in infrastructure and availability, quality, and access of health services. These differences dictate that a pre-designed, fit-for-all solution of MNCH problems cannot be devised. The average population size of the districts is large, a majority having population of one million or greater. After devolution in 2010, provincial health departments' role in district health systems management was reduced considerably. After outsourcing the primary level healthcare facilities (civil dispensaries and basic health units), the departments lost their direct management and operational control in most of the units comprising the district health system. Hence the district health officers' role should have been revised to focus on quality control, planning, and monitoring and evaluation. Unfortunately, this could not happen, resulting into a disintegration of the health system at the district level.

The districts' characteristics of population size and scatter, political and social environment, and the structure and quality of healthcare delivery system do have an impact on MNCH indicators. MMR can thus be predicted on the basis of district-level indicators of accessibility and availability of health services and the state of infrastructure development. The districts which are likely to have very high levels of maternal and neonatal mortality are: *Khuzdar, Chaghai, Zhob*, and *Kharan* in Balochistan; *Tharparkar, Umerkot, Thatta, Sujawal*, and *Kashmore* in Sindh; *Dera Ismail Khan, Kohistan,* and *Mansehra* in KP; and *Rajanpur, Dera Ghazi Khan,* and *Rahimyar Khan* in Punjab[12].

Features of the Healthcare Delivery System in Pakistan

Public sector healthcare delivery system in Pakistan cannot meet the requirements of a large and rapidly growing population. Public sector spending is typically on large hospitals. In Karachi, the largest city of Pakistan (population 20.38 million), there are seven tertiary care hospitals (average bed-strength: 500), three specialized hospitals, and 12 secondary care hospitals, but only 35 primary healthcare units in the public sector; while in the private sector, there are over 120 secondary and tertiary care hospitals and about 1,500 private clinics, dispensaries, and maternity homes[13]. On the other hand, the predominantly rural Tharparkar district of Sindh province (population 1.78 million), has only one secondary care hospital and about 60 smaller facilities (dispensaries, Basic Health Units, and Rural Health Centers) in the public sector, and just two secondary care hospitals and 25-30 clinics in the private sector.

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[12] Selection is based upon mathematical modeling using the proportion of rural population; health services infrastructure, coverage, and spread; and the state of the roads and communications as predictor variables (work in progress by Farid Midhet). Mathematical modeling is used by UN Maternal Mortality Estimation Inter-Agency Group to project country MMRs.

[13] Sources: Department of Health, Government of Sindh, healthwire.pk, and Google Maps.

Regulating such a complex healthcare delivery system comprising a vast array of facilities and services in the public and private sectors[14] is a challenge yet to be met by the provincial governments[15]. Each of the four provinces has a provincial health care commission (HCC), which is an autonomous government body with the mandate of keeping health services safe and accessible for the population. The oldest HCC is in Punjab (established in 2012) which has issued regular licenses to a little over 8,000 health facilities so far, while another 33,000 have been issued provisional licenses[16]. The HCCs of the other three provinces are far behind. At the national level, it is estimated that just about 20% of health facilities and hospitals (both in the public and private sectors) have been issued licenses by the HCCs[17]. These do not include the thousands of quacks and other untrained healthcare providers practicing illegally. While the focus of quality assurance by the authorities is mainly on medium to large size hospitals, the smaller clinics and facilities providing maternal healthcare are largely unregulated. In particular, quality of care in the private maternity homes is extremely poor, where the deliveries are often conducted by untrained birth attendants and the doctor is called only in case of a problem[18].

Out of pocket expenses cover about 70% of the outpatient consultations in the for-profit private sector in Pakistan, including maternal and child healthcare (with the exception of family planning)[19]. More than two-thirds of facility deliveries are conducted in the private sector hospitals and maternity homes: in 2017, out of those women who delivered in a hospital/health facility, 31.2% in urban areas and 35.6% in rural areas utilized a public sector health facility, respectively, while the remaining (68.8% and 64.4%) utilized a private sector health facility[20]. On the other hand, 43.5% of the current users of modern contraceptives got it from a public sector facility or Lady Health Worker (LHW), while only 22.4% got it from a private sector facility/clinic (including the facilities operated by non-profit organizations); the rest of the women got their contraceptive supplies from pharmacies or ordinary shops.

It may be noted that about 65% of the roughly 2,000 tertiary care hospitals in the country are in the public sector[21]. Moreover, most public sector hospitals are larger, having more inpatient beds and a wider array of specialist services when compared to the private sector tertiary hospitals (with the exception of a few prestigious private institutions); hence the complicated cases are more frequently referred to the public sector hospitals. Patients belonging to rural areas and lower socioeconomic strata are also more likely to utilize the public sector hospitals. Hence the bulk of the inpatient care is carried by the public sector, which has about 80% of all hospital beds in the country. Therefore, it is no surprise that MMR is usually the highest among the births occurring in the public sector hospitals due to the selective referral of high risk pregnancies and deliveries to these hospitals[22].

Public Sector Health Services

The provincial departments of health (DOH) and population welfare (PWD) operate the primary, secondary, and tertiary level health facilities, donor-supported vertical health programs (such as the

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[14] *http://www.emro.who.int/pak/programmes/service-delivery.html*

[15] *Kumar S.,* Comparison & Analysis of Healthcare Delivery Systems: Pakistan v. Bangladesh*. J Hosp Med Manage. 2017, 3:1.*

[16] Punjab Healthcare Commission website.

[17] This is the result of estimation in the cities of Karachi and Lahore.

[18] Malik, M., Prescott, K., Khalid, M. *et al.* Expectations and experiences of women regarding maternal healthcare services in Pakistan: challenges and lessons to be learnt. *J of Pharm Policy and Pract* **14**, 108 (2021).

[19] *Khalid, F., Raza, W., Hotchkiss, D.R. et al.* Health services utilization and out-of-pocket (OOP) expenditures in public and private facilities in Pakistan: an empirical analysis of the 2013–14 OOP health expenditure survey. *BMC Health Serv Res 21, 178 (2021). https://doi.org/10.1186/s12913-021-06170-4*

[20] *Pakistan Demographic and Health Survey 2017-18.*

[21] *Pakistan Economic Survey 2021.*

[22] Source: Various hospital-based studies of maternal mortality in Pakistan.

Expanded Program on Immunization-EPI), and community outreach programs such as the Lady Health Workers (LHW) program and mobile service units (MSUs). In addition, city governments and autonomous public sector corporations such as the Railways and the national airline have own and operate some of their own hospitals. The provincial Employees Social Security Institutions (ESSIs) also provide a range of health services through their hospitals and smaller health clinics. The PWDs offer family planning services through Reproductive Health Services Centers (RHSCs) attached to district hospitals, the Family Welfare Centers (FWCs), and outreach workers including male and female social mobilisers and family welfare assistants. PWDs also provide training in family planning for DOH and PWD staff through Regional Training Institutes (RTIs). The federal MONHSRC operates tertiary hospitals and smaller health and family planning facilities in Islamabad Capital Territory. Although not its mandate, the Ministry also channels donor support and provides policy guidelines and technical support to the provincial DOHs/PWDs (organogram of provincial health department is in **Annex C**).

Reproductive, maternal, neonatal, and child health (RMNCH) services in the public sector are most prominent at the lower tiers of the system, as follows:

Level*	Facility	Functions
Community	Lady Health Worker (LHW)	Provide primary health care and family planning services at the community level.
Midwifery	Community Midwife (CMW)	Provide midwifery care through small maternity homes in their own villages.
Midwifery (ANC only)	Basic Health Unit (BHU)	First contact health facilities, staffed and equipped to provide outpatient care (family planning, ANC, referrals).
Midwifery	Basic Health Unit (BHU) 24/7	BHUs upgraded to remain open 24/7, primarily to provide delivery care by SBAs (doctor, CMW, or LHV).
Midwifery & BEmONC	Rural Health Center (RHC)	Larger health facilities with outpatient and inpatient care and 24/7 services with delivery care and basic EmONC services.
Midwifery & CEmONC	District Headquarter (DHQ) Hospital	Secondary care/frontline hospitals offering medical and surgical care, emergency medical services, and RMNCH care and comprehensive EmONC (including cesarean section and blood transfusion services).
Referral level, CEmONC	Teaching/tertiary care hospitals	Usually having 500+ beds and all medical and surgical departments, catering to referrals from lower-level hospitals and health facilities.
***Level of continuum of RMNCH care**		

Provincial DOHs have outsourced the BHUs and RHCs and, in some cases, district hospitals to the private sector organizations[23]. In Sindh and Balochistan, the People's Primary Healthcare Initiative (PPHI) is a government-organized NGO (GONGO), which is headed by a current bureaucrat and governed by a Board of Directors that includes high level retired and serving government officials as ex-officio members. The 'health foundations', which operate as public-private partnership management boards in Punjab and KP have similar structures, with government officials serving as ex-officio members of the boards of governors. The most successful public-private partnership is in Sindh, where the PPHI operates almost all of the BHUs and civil dispensaries in the province, and where a number of higher-level facilities including the district hospitals have also been outsourced to the private sector non-profit organizations through its Public-Private Partnership Initiative (examples are the Indus Hospital, a charity-based commercial

[23] https://indushospital.org.pk/ and https://hands.org.pk/

enterprise and HANDS, a community-based NGO). In general, outsourcing of BHUs, RHCs, and civil dispensaries has resulted in ensuring that services are available through these facilities although the quality assurance mechanisms are still weak.

Private Sector Health Services

The formal private health sector comprises the for-profit health facilities run by qualified medical practitioners (clinics and small to large hospitals) and not-for-profit health facilities run by local and international NGOs and other national or community-based philanthropic organizations. The following is a rough classification of the formal private sector health facilities in Pakistan:

1. Private clinics and maternity homes, including community midwives
2. Secondary care non-teaching hospitals (bed strengths and offered services vary greatly)
3. Tertiary care non-teaching hospitals
4. Tertiary care teaching hospitals

The for-profit private health facilities are mainly concentrated in cities and towns, comprising generalist and specialist practices (including maternity clinics), and family practice clinics. Private hospitals greatly vary in size, staff, bed strength, and services – ranging from small (less than 50 beds) general hospitals to large tertiary care teaching hospitals in big cities. The quality of care also varies accordingly; while the larger hospitals come under the radar of HCCs, the smaller ones usually escape such attention; hence their services are unregulated. With the exception of a few large and famous private hospitals, private health facilities and hospitals are found to be unclean, mismanaged, and disorganized; they are also relatively expensive even though they cater to a significant proportion of the under-served poor population, particularly in urban low-income neighborhoods. Outpatient facilities including clinics and maternity homes are over-crowded. Several smaller clinics and maternity homes are owned by the doctors working in the public sector during the daytime; this is commonly seen in small towns and villages. Moreover, specialists working in the teaching hospitals in big cities also may have their private evening clinics. In small towns and peri-urban areas, maternity homes can be found that are owned by government doctors but run mostly by paramedics, even untrained Dais, who conduct normal deliveries and call upon the doctor only in case of need. Private diagnostic laboratories and sample collection points of famous hospitals are another emerging phenomenon in urban areas. It may be interesting to note that some military hospitals are open to the civilian population for consultation and even inpatient services on a fee for service basis; therefore, for civilians they provide an added opportunity for good quality services for a reasonable cost.

A relatively small number of non-profit private health facilities are run by NGOs and community-based organizations offering general practice to specialized care mostly focusing on maternal, newborn and child health (MNCH). Some international NGOs also provide services at subsidized rates through their own clinics or franchises established through contracting and training the existing private clinics. Their services are mainly concentrated in urban areas. Most of the centers, especially the franchise clinics, do provide other maternal and child health services in addition to family planning.

Besides the above, the private sector also includes informal providers such as unqualified birth attendants (e.g., Dais or traditional birth attendants, and quack birth attendants); *Hakeems* (practitioners of traditional herbal medicine), homeopathic doctors, and faith healers (who may also provide herbal medicines; as well as the unlicensed healthcare practitioners of western medicine (commonly called quacks). Partial data on Hakeems and homeopathic doctors are available from government sources but not on Dais and quacks. Dais or traditional birth attendants are still an important source of maternal

healthcare to the rural and urban poor women: According to the PDHS 2017-18[24], 24.3% of live births to women during five years prior to the survey were attended by traditional birth attendants (29% in rural areas and 14% in urban areas). Finally, medical stores (pharmacies) are also unregulated and often operated by untrained workers, and provide over-the-counter medicines, as well as consultation and prescription drugs without a doctor's prescription.

Rationale for National Maternal Survival Strategic Framework

Pakistan has failed to achieve its globally committed targets of improving the maternal and neonatal health indicators and pregnancy outcomes. In spite of being the first country in the region to initiate a maternal and child health (MCH) program in the early 1950s, and a national family planning program in the 1960s, Pakistan ranks among the lowest in RMNCH indicators – both globally and in comparison to neighboring countries. More importantly, the estimated number of maternal deaths occurring in the country – approximately 12,000 each year – is unacceptable and calls for immediate remedial actions.

Pakistan has tried various projects, programs, and health sector reforms – most of them motivated by foreign funding – to improve service delivery of RMNCH care. Unfortunately, none of them brought a significant and lasting change in the system. This was in spite of the fact that the country has sufficient resources – financial, technical, systemic, and administrative, as evident from progress in other areas of healthcare, most notably tertiary care and specialized institutions where successive governments have invested heavily. In RMNCH care, however, there is a lack of political will, as reflected in the health budgets. Bad governance and lack of accountability, coupled with a half-hearted approach toward enforcing standards, have further contributed to the failure of RMNCH oriented projects.

Pledges from the Karachi Declaration–October 2009 (signed by all Secretaries of Health and Population Welfare)

- *Promoting and enhancing skills of facility and community-based healthcare providers in essential newborn care including neonatal resuscitation and management of other newborn complications.*
- *Building upon the progress made in the ANC and PNC, expand early PNC visits and management protocols through facility and community-based healthcare providers.*
- *Ensuring availability of quality family planning services and products including emergency contraception in all public sector health facilities.*
- *Inclusion of the practice of Post Abortion care in policies, guidelines, protocols, and standards for health facilities at national level.*
- *The Ministry of Health and Ministry of Population Welfare [will] own, ensure resource availability for MNCH-FP services and operate a robust monitoring and evaluation system for effective implementation of MNCH-FP best practices.*
- *The national and international partners [are called upon] to prioritize and support the government in the scale up of MNCH-FP best practices in Pakistan.*

Pakistan's first national strategic framework for RMNCH was launched in April 2005 in a high level meeting presided over by the then Prime Minister. It led to a lot of interest from bilateral and international donors and with their help a national program for maternal, neonatal, and child health (NMNCH Program) was launched in 2006. The linchpin of the Program was a new cadre of midwives – the community midwives or CMWs – who were trained for a 2-year diploma which enabled them to start private midwifery practices in their own communities. The Program also attempted to strengthen the facility-based RMNCH care. An

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

evaluation of the Program three years after its launch revealed major weaknesses in almost all of its intervention areas[25]. With regard to CMWs, the evaluation noted that the Program had "*made progress in introducing a cadre of CMWs… The utilization of CMWs … was reported to be very low in Punjab: an average of 1.8 [deliveries] per CMW in one year. .. Successful delivery of services and referral by CMWs is marred by lack of trust by the community, weak transportation system, social and cultural gaps between CMWs and clients, and out of pocket payments for deliveries. The poorly defined roles and lack of supervision involving Lady Health Workers (LHW), Community Midwives (CMW) and Lady Health Visitors (LHV) has resulted in poor linkages among these three cadres ultimately affecting MNCH care at community level".*

Midwifery is a neglected profession and not just in Pakistan. Successive national programs for training health workers in midwifery have failed in Pakistan over the last several decades. The country has experimented with training of LHVs, pupil midwives, nurse-midwives, and community midwives, but the midwifery as a profession could never establish itself in Pakistan. The midwives feel out of place, disrespected, and not at par with the other health professionals. The poor state of midwifery is not restricted to Pakistan only: the 2016 report of the global consultation on providing midwifery care[26], including opinions from 2,470 midwifery personnel in 93 countries, reports the same impressions[27]. In 2021, White Ribbon Alliance launched a global campaign called 'What Midwives Want (WMW)', which interviewed 56,000 midwives in 101 countries. In Pakistan, the campaign was led by the Forum for Safe Motherhood who interviewed 6,145 CMWs, LHVs and nurse-midwives from across the country. The main demands that emerged from this exercise were: 1) "more and better supported personnel", reflecting that midwives wanted to be recognized as formal and established healthcare professionals with proper remuneration and benefits and career structure. , on-time payments, upgrading of scales, and additional manpower; 2) "need for supplies and functional facilities", reflecting their desire to work in well-equipped and functional environment; and 3) "professional development" indicating their aspiration for improved quality of education and continued professional training.

Some of the other shortcomings in the implementation of NMNCH Program were noted as: lack of integration of family planning and MNCH services; unsatisfactory implementation of communication and advocacy interventions; more emphasis on construction, where the bulk of budgets were diverted; lack of competent strategic guidance (and leadership) at the federal and provincial levels; problems related with human resource management (unfilled positions, drop outs, and absenteeism of staff at health facilities); and inadequately trained staff. As the Program progressed, it was devolved to the provinces after the 18th Constitutional Amendment, which resulted into further slowing down of implementation.
Several other studies – both qualitative and quantitative – noted that: 1) a majority of CMWs did not have practical experience during their training; 2) the proportion of CMWs setting up their own private practice was low – the highest being about 20-24% in Punjab; and 3) CMWs suffered from lack of acceptance by the community and competition from other health workers (as noted above). "Compromised induction and training process" and "Flawed planning and implementation of program" were also cited as the reasons for failure of CMWs, in addition to harassment by community and health system and competition with other public sector providers of maternity services. Although CMWs were trained and supported by the government to establish private practices, most of them longed to work in health facilities or clinics

[25] Technical Resource Facility Islamabad: Mid-term Evaluation of National MNCH Program 2011-2012.

[26] WHO, ICMW, and White Ribbon Alliance: "Midwives' Voices, Midwives' Realities". 2016. WHO Geneva.

[27] An earlier report on State of the World's Midwives (2011) reported that only four of the 190 countries met the standard number of midwives.

but opportunities were scarce[28]. Another qualitative study of CMWs in Punjab noted that poverty worked as a push factor to establish private practice but needed courage and business acumen to meet the demands of the midwifery profession in the private sector[29].

A national strategy to address the country's long standing problems can only be successful if it addresses these and other structural weaknesses and takes a holistic approach toward health sector reforms, focusing on details, evidence-based interventions, human resource development, and strict monitoring and evaluation. Moreover, a strategy is a dynamic document, which is continuously updated and modified in the light of the lessons learned through its implementation. However, the most important criterion for a strategy to be successful is the commitment on part of its implementers – policymakers, health managers, and service providers.

Policy Context for National Maternal Survival Strategic Framework:

As noted above, the MONHSRC has been actively pursuing to develop policies and strategies for improving the health service delivery in the country. The UHC and EPHS have RMNCH services at high priority. However, the translation of policies into actionable strategies and further into positive outcomes require a thorough assessment of the present situation of human resources, infrastructure, and supply chains, followed by careful planning and implementation of the health services reforms and interventions required at the ground level. This document presents the Strategic Guidelines for the provinces to reduce maternal mortality by improving the accessibility and quality of RMNCH services. This document was prepared after extensive consultations with the provincial experts of maternal and child health, clinicians, and health systems specialists. The Guidelines are fully in line with the UHC and EPHS, and comprise outlines of intervention strategies that are based upon the evidence arising from the national demographic and health and maternal mortality surveys of Pakistan conducted over the last five years. A brief description of the UHC and EPHS is included here to provide a background for these guidelines:

Universal Health Coverage (UHC) Program:

UHC is a comprehensive, evidence-based, and participatory approach to improve the health of population through national ownership and execution in low- and middle-income countries. It highlights governance and institutional arrangements, costs and affordability, feasibility and sustainability and aims to provide access to essential health services to everyone regardless of their ability to pay, addressing the main sources of disease burden (Disease Control Priorities, 3rd Edition [DCP3]).

The UHC program consists of three components:

1. The Essential Package of Health Services (EPHS), which is a set of 117 interventions that cover the core functions of the health system, such as prevention, diagnosis, treatment, rehabilitation, and palliation. The EPHS is delivered through five platforms: community, health centre, first level hospital (FLH), tertiary hospital (TH), and population-based. The EPHS is based on the DCP3 evidence and recommended interventions for 18 priority areas.
2. The Highest Priority Package (HPP), which is a subset of the EPHS that targets the most cost-effective and impactful interventions for low-income countries. The HPP includes 108 interventions that are delivered through five platforms as well.

[28] Sarfraz M, Hamid S. Challenges in delivery of skilled maternal care - experiences of community midwives in Pakistan. BMC Pregnancy Childbirth. 2014 Feb 5;14:59. doi: 10.1186/1471-2393-14-59.
[29] Mumtaz Z, O'Brien B, Bhatti A, Jhangri GS. Are community midwives addressing the inequities in access to skilled birth attendance in Punjab, Pakistan? Gender, class and social exclusion. BMC Health Serv Res. 2012 Sep 19;12:326. doi: 10.1186/1472-6963-12-326.

3. The packages of intersectoral policies, which are a core set of 29 policies that address major risk factors for disease burden, such as environmental risks, addictive substance use, diet, injuries, and other risks. These policies are implemented by non-health sectors, such as fiscal, regulatory, information and built environment.

In Pakistan, the program is aligned with National Health Vision 2016–2025, which recognizes UHC as a top priority. It also supports Pakistan's commitment to achieve universal health coverage by 2030 as part of the Sustainable Development Goals (SDGs). The program has been developed with the support from London School of Hygiene and Tropical Medicine (LSHTM) and various other stakeholders, including public sector institutions, non-governmental organizations (NGOs), WHO and UNICEF, civil society groups, private sector actors, and media outlets. The UHC program is expected to have significant benefits for Pakistan's population in terms of improving health outcomes, reducing inequalities in access to health services, enhancing human capital development, promoting social cohesion and economic growth.

Essential Package of Health Services

Pakistan's EPHS aims to bridge the gap in healthcare access, especially in rural and underserved areas, and to improve health outcomes for all segments of population. Its implementation involves collaboration between federal, provincial, and local authorities, and partnerships with international organizations and NGOs to ensure effective delivery of essential health services nationwide. The key components of Pakistan's EPHS include:

1. ***Primary Healthcare Services:*** Focuses on basic health needs such as maternal and child health, family planning, immunizations, nutrition, and treatment for common illnesses.
2. ***Health Infrastructure Development****:* Aims to strengthen healthcare facilities, including basic health units, rural health centers, and dispensaries, ensuring they are equipped with necessary resources, infrastructure, and skilled personnel.
3. ***Healthcare Workforce Development:*** Emphasizes the training, recruitment, and retention of healthcare professionals, including doctors, nurses, midwives, and community health workers, to ensure adequate coverage and quality of care.
4. ***Essential Medicines and Supplies:*** Ensures the availability of essential medicines, vaccines, and medical supplies at healthcare facilities to guarantee access to necessary treatments.
5. ***Health Promotion and Disease Prevention****:* Engages in public health campaigns to raise awareness about preventive measures, hygiene practices, and disease control strategies within communities.
6. ***Emergency and Disaster Response:*** Prepares and implements plans for responding to health emergencies and natural disasters, ensuring timely and effective healthcare interventions during such crises.

Reproductive, Maternal, Newborn, and Child Health (RMNCH) is a major component in Pakistan's EPHS, which covers a wide range of interventions that address the health needs of women, children, and adolescents in Pakistan. The RMNCH components included in the EPHS are:

1. *Family planning:* This includes providing information and counseling on contraceptive methods, services for family planning, and management of complications related to family planning.
2. *Maternal health:* This includes providing antenatal care, skilled birth attendance, emergency obstetric care, postnatal care, management of complications related to pregnancy and childbirth, prevention and treatment of maternal infections and hemorrhage.

3. *Neonatal health:* This includes providing newborn screening and treatment for common conditions such as sepsis and jaundice, management of complications related to preterm birth and low birth weight.
4. *Child health:* This includes providing immunization against vaccine-preventable diseases such as measles, polio, tetanus, hepatitis B, child nutrition, management of common childhood illnesses such as pneumonia and diarrhea, and promotion of healthy growth and development.
5. *Adolescent health:* This includes providing comprehensive reproductive health education for adolescents aged 10 to 19 years old, prevention and treatment of sexually transmitted infections (STIs) such as HIV/AIDS, management of adolescent pregnancy and its consequences.

Strategic Approach

The program theory (the theoretical basis of using certain interventions to bring out the desired change in a situation) can encompass an implementation theory and a system for the mechanisms and processes which can make the interventions work in a given environment[30]. The theory of change used to drive this strategic framework takes an implementation perspective, and should therefore be realistically customized according to the local circumstances.

Pakistan is a large and extremely diverse country, having a health services spectrum that varies between provinces, urban and rural areas, and even between and within districts. The following framework must be adapted to the local needs and social and political environment. We propose to make such adaptations in the **Theory of Change (ToC)** framework according to the criteria of availability, accessibility, affordability, and quality of RMNCH services (**Annex D**).

Before embarking upon detailed planning (including preparation of the PC-1 documents if desired by provincial governments), it is important to conduct a situational analysis of public and private health services in each province. This could be a national project including all four provinces, AJK, and GB. Information could be generated efficiently through health services assessment surveys (HSAS) in the provinces using the lot quality assurance sampling (LQAS) methodology. The HSAS will identify the needs for infrastructure, human resources, and equipment and supplies in each province; however, the exact information about the specific needs for each district will have to be collected through existing district health offices. The results from HSAS will guide the planning of specific interventions for health services reforms and upgrading. The planning phase of the program will comprise data analysis and interpretation, developing broad guidelines within each province and separately for the remote rural, semi-urban, and urban areas, identifying the specific HR and construction/equipment needs of each district, and developing a detailed implementation plan with costing, in each province. After mobilizing the resources, the tasks of construction/renovation, procurement of equipment and supplies, training of healthcare providers at each level of continuum of care (CoC), updating of DHIS, setting up the QoC system, and licensing of health facilities by HCC should be carried out as closely concurrently as possible.

The strategic approach has emerged directly from the provincial consultations on maternal survival, including the discussions held on the sidelines with selected participants. as mentioned earlier, the consultations identified five areas of intervention:

1. Improving the quality of care across public and private health facilities
2. Revival of the Lady Health Workers Program
3. Redefining the training and job description of Midwives
4. Streamlining the outsourcing of public sector health facilities
5. Strengthening mechanisms for accountability of RMNCH services

An extensive literature review including a thorough study of all relevant national policy documents was carried out to collect evidence about factors responsible for significant reduction in the risks of maternal and perinatal mortality across developing world. The findings of the literature review were then matched

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[30] M Kabongo E, Mukumbang FC, Delobelle P, Nicol E. Combining the theory of change and realist evaluation approaches to elicit an initial program theory of the MomConnect program in South Africa. BMC Med Res Methodol. 2020 Nov 26;20(1):282. doi: 10.1186/s12874-020-01164-y.

with the recommendations from the provincial consultations and the following areas were identified for strategic interventions:

Extra-Health (Intersectoral) Initiatives:

Use female education, awareness campaigns, advocacy and community engagement to address the issues of low status of women in society, low literacy among women, and lack of recognition of women's reproductive health rights. This needs creation of a nationwide social and political environment where women's rights to education and health are recognized, respected, and implemented.

Legislation for Maternal Health:

Strengthen and implement the federal and provincial level legislation and policies to facilitate and ensure accessibility and affordability of quality RMNCH care to all women in Pakistan. Follow the principles of equity and care-according-to need to put special emphasis on the uneducated and poor women and those residing in remote rural and low-income urban areas. Legislation for mandatory reporting of maternal and perinatal deaths is also one recommended initiative, currently under development under the supervision of MoNHSRC.

Ensure Continuum of Care (CoC):

Streamline RMNCH services by reorganizing the levels of care according to the continuum of care (CoC) model comprising the community-based health workers, primary healthcare facilities, mid-level healthcare facilities, and secondary/tertiary care hospitals.

Mitigate the Effects of Climate Change on RMNCH:

Two major threats to reproductive and child care are the adverse effects of heat on pregnancy outcomes, particularly in the last few weeks of pregnancy, and disruption of RMNCH services during climatic disaster periods such as floods (particularly contraceptive use). Neither of these can be met with the health system alone, and an intersectoral effort at the highest level of the government is required.

Establish Mechanisms for Quality of Care:

Institutionalize quality assurance of RMNCH care across the board at all levels of health system, focusing on family planning, antenatal care, midwifery services, postpartum family planning, emergency obstetric and newborn care, nutrition, infection prevention, and breastfeeding.

Ensure Equity in RMNCH Care:

Improve accessibility and affordability of RMNCH care by making quality maternal healthcare services available to rural and poor women through strengthening of existing systems and programs. This could be achieved by fully implementing the UHC principles so that every woman can afford the quality RMNCH care that she needs, and is linked to the health system through the continuum of care model.

Make Health Facilities Women-friendly:

Introduce the concept of women-centered healthcare in training of healthcare providers and health managers: Pre-service and in-service training of healthcare providers, health managers, and public health experts must include women-centered healthcare, guided by the findings from the 'What Women Want' global campaign organized by White Ribbon Alliance[31].

[31] https://whatwomenwant.whiteribbonalliance.org/en

Upgrade Midwifery Care to Meet International Standards:

Special focus on quality of midwifery care: Initiate programs for upgrading the skills of existing midwives (CMWs and LHVs) to bring them at par with the ICMW standards; for updating the midwifery training curriculum and teaching methodology to meet the ICMW requirements; and for on-the-job training of nurses and medical officers in midwifery and obstetric care. A newly developed 3-year BS Midwifery curriculum has been launched which has been approved by the Higher Education Commission (HEC).

Address the Three Delays:

Address the three delays in approaching emergency care that significantly reduce the survival chances of women suffering from obstetric complications: a) Train LHWs in advocacy for birth preparedness; develop and enforce SOPs for LHWs/CMWs and at the midwifery level health facilities; introduce rules for referral decision at all midwifery level health facilities in both public and private sectors; *b)* facilitate accessibility of EmONC services by strengthening pre-hospital transportation; improve ambulance services particularly in remote rural areas; *c)* introduce and enforce QoC standards at the BEmONC and CEmONC health facilities under HCC supervision and monitoring; mandate all healthcare providers to investigate and report maternal deaths and near-miss obstetric cases. It is encouraging to note that the LHW curriculum has been revised in line with EPHS and a comprehensive retraining program has been devised in the priority districts identified for the Service Availability and Readiness Survey (SARA).

Institutionalize the High Impact Clinical Practices in RMNCH Care:

The RMNCH care delivery systems lag behind in adapting the novel and High Impact Practices (HIPs) that can improve quality of care, save lives, and significantly reduce maternal and perinatal mortality. For example, some very effective interventions have been available but not routinely utilized in Pakistan, such as postpartum family planning, self-injection of Sayana Press, use of misoprostol to prevent PPH and use of chlorhexidine for clean delivery.

Coordination between Government and Development Partners:

The international organizations including WHO, UNICEF, and UNFPA provide valuable technical and financial support to the Government in developing, implementing, and monitoring and evaluating the RMNCH programs. Similarly, national and international NGOs actively support the government's RMNCH initiatives. There is a need for better coordination within the development circles and between them and the government to avoid confusion in programming, duplication of effort and wastage of resources.

Aligning Government Strategies in RMNCH:

The proposed Guidelines for maternal survival strategies should be reviewed and implemented in the context of the broad national policies, most importantly the National Health Vision, UHC and EPHS. These Guidelines also need to be aligned with the National Midwifery Strategic Framework and the National Newborn Survival Strategic Framework; every effort should be made to avoid conflict with and duplication of activities listed in the other strategic documents. Therefore, the recommended next step is the formation of a national committee on RMNCH care reforms and strategic interventions.

Monitoring and Evaluation:

The primary purpose of these Guidelines is to present the outline of a health services reforms and intervention program in RMNCH to reduce maternal and perinatal mortality ratios/rates through a comprehensive set of social sector and health services interventions identified under the National Maternal Survival Strategic Framework. The desired areas of action for such program would be to improve the quality and accessibility of the RMNCH services, continuum of care in both public and private health

sectors, and at the same time, to advance women's rights to education and health and enhance women's status in the society.

To achieve these objectives, the interventions will need to be devised to produce the following outputs:

1. Improved access to and utilization of RMNCH care including family planning and EmONC.
2. Improved quality of RMNCH care components, particularly ANC, PPFP, delivery care, postpartum and neonatal care, and basic and comprehensive EmONC.
3. Establishment of functional, referral and pre-hospital transportation systems for obstetric and newborn emergencies.
4. A comprehensive management information system for monitoring and evaluation of strategic interventions.
5. Use of information for decision making and mid-course corrections of strategic interventions.

Further description of the outputs and the performance indicator to monitor their progress, along with the proposed data sources and critical assumptions, are listed in the Logical Framework (Annex **E**).

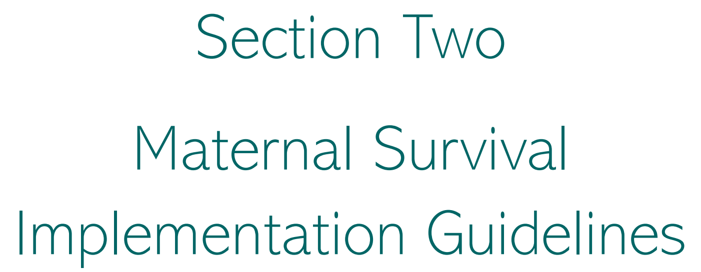
Implementation Steps:

There was consensus in all provincial consultations that Pakistan's health system needed course correction rather than overhauling. It was observed that the country needed programmatic and structural reforms in the health system, aligned with its national policies of universal health coverage, essential package of health services, and priority to the health and wellbeing of women and children. The healthcare delivery systems – including an elaborate service delivery and management infrastructure in the public sector and a wide range of (largely unregulated) all levels of health facilities in the private sector – were capable of delivering quality healthcare to women and children. It was also noted that the problems of poor accessibility and affordability for certain segments of population could be overcome with careful planning and redistribution of available resources.

These Guidelines are a compilation of the deliberations and recommendations of the provincial departments of Health and PWD across Pakistan, as well as other experts of RMNCH and health systems within the provinces. Hence the Guidelines provide a comprehensive and inclusive strategic framework to each province for developing a customized health services reform agenda.

A separate section on the implementation guidelines for the provinces has been prepared, which incorporates the recommendations arising from the provincial consultations. It provides detailed instructions on how to materialize the practical steps under each of the twelve strategic approaches listed in the present document.

MONHSRC must play the role of coordination and streamlining, and providing technical assistance to the provinces. We recommend the formation of a **National Committee for RMNCH reforms**, which could serve as the platform for providing guidance, technical assistance, and monitoring and evaluation. However, devising detailed provincial intervention plans and ensuring their successful implementation should remain the responsibility of the provincial governments.


Section Two
Maternal Survival
Implementation Guidelines

Preface

Maternal mortality is an important problem, requiring the highest level of efforts for improvement of quality and access of health services. Maternal and newborn health has consistently remained on the global development agenda; it was an important area of intervention for achieving the Millennium Development Goals (MDGs), and has been retained in the Sustainable Development Goals (SDGs). Pakistan was unable to achieve the targets for reducing maternal and neonatal mortality. To achieve the SDG targets in maternal and newborn health by the year 2030, Pakistan will require extra ordinary efforts to improve the quality and accessibility of maternal health services. The major obstacles are poor quality of maternal, neonatal, and child health (MNCH) services and their inequitable distribution, low levels of modern contraceptive use, and high unmet need of family planning.

Although Pakistan has made modest progress in reducing the maternal mortality ratio (MMR) in recent years, it is not sufficient to achieve the target of bringing the MMR to below 70 maternal deaths per 100,000 live births by 2030 (SDG 3.1). The high number of maternal deaths is determined by multiple factors including inequities in access to health services, low socioeconomic status, poor quality of emergency obstetric care (EmONC) services, lack of family planning and counseling services, and lack of a professionally trained cadre of midwives.

The Strategic Guidelines for Maternal Survival in Pakistan were prepared after extensive consultations with the provincial departments of health and population welfare, as well as clinicians, public health experts, and representatives of national and international NGOs. The purpose of the Strategic Guidelines is to develop evidence-based health services reforms and interventions that will ensure significant improvements in reproductive, maternal, newborn, and child health (RMNCH) service delivery across public and private sectors with a focus on reducing maternal and perinatal mortality.

This document contains the implementation framework for the Strategic Guidelines. The framework includes the interventions proposed for improving the quality of RMNCH services with special emphasis on maternal healthcare. The implementation framework is meant to help the provincial departments of health and population welfare and the provincial healthcare commissions in developing their intervention programs focusing on quality improvement of maternal healthcare in public and private sectors. This framework includes a description of the twelve strategic areas identified in the Guidelines, an implementation plan and a list of activities proposed at each level of continuum of care – which would facilitate costing and budgeting processes, and a list of high impact practices that have been proven to save mothers' lives and which should be introduced in maternal health services at appropriate levels of care.

It is envisaged that the strategic interventions proposed in this document will be implemented within the existing government systems without the need for a novel program. Provincial departments of health should channel these interventions through their existing district health offices. Moreover, the provincial and district coordinators of Maternal, Newborn, and Child Health (MNCH) Program should take the primary responsibility of planning, implementation, and monitoring of these interventions.

How to apply the Implementation Framework:

Provincial planning committees should carefully study the Strategic Framework for Maternal Survival in Pakistan, which contains an in-depth analysis of the problem, and national and global evidence to suggest

which strategic directions are necessary to achieve the SDG targets by 2030. The historical perspectives outlined in the Strategic Framework highlights the reasons for the failure of previous interventions; the situation analysis of the health systems identifies the gaps in planning, governance, and resource utilization; and the strategic directions guide the policymakers, planners, and health managers toward the pathways for course correction, and toward finding the solutions to the complex and multi-faceted problem of high maternal mortality in Pakistan.

It is important to recognize that there is no magic bullet to solve national problems. Strengthening of health systems is a tedious process that includes the following steps:

a) Analyzing the present situation to identify the gaps and shortcomings in RMNCH service delivery in the province and to highlight the specific needs of each district in terms of infrastructure, human resources, and equipment and supplies.
b) Identifying the gaps and weaknesses in the provincial governance and accountability systems and preparing recommendations for course correction.
c) Strengthening and expanding the role of provincial healthcare commissions in RMNCH quality of care, with special emphasis on EmONC services in public and private sectors.
d) Careful planning, prioritizing, and costing of the required interventions that will ensure continuum of RMNCH care and improve the access and quality of healthcare. This exercise should be carried out in each district by the district health team.
e) Consolidating the intervention plans from districts to prepare a provincial implementation plan that includes a detailed list of interventions, their costs, and plans for mobilization of available resources. The provincial implementation plan should be realistic and dynamic – in that it could be modified according to the local context.
f) Provincial departments of Health and PWD must work with other sectors and the political government to ensure that the essential inter-sectoral interventions for maternal survival are also in place (see the chapter on Strategic Directions for details).

This document lists the summary recommendations based on the provincial consultations which can be used by the provincial governments to identify the steps toward health services reforms and to prepare a budgetary analysis. The document then provides detailed descriptions of the strategic directions to steer the health system toward building a robust health system which is responsive to the women's reproductive health needs at each stage of their reproductive life, and in which the RMNCH services are available to all women regardless of their location or socioeconomic status. The strategic directions include recommendations for: *a)* establishing a functional continuum of RMNCH care model; *b)* carrying out the reforms in the health services quality assurance mechanisms; *c)* upgrading and strengthening midwifery services across public and private sectors; and *d)* addressing the three delays in accessing EmONC which are responsible for maternal deaths. The strategic directions provide the background as well as the details of the specific interventions proposed in this Framework. The following section summarizes the strategic interventions to ease of budgetary planning. The last section contains a monitoring and evaluation plan. Finally, the Theory of Change model and the Logical Framework from the Strategic Framework are also annexed in this document for easy reference.

Implementation Guidelines

The National MNCH Program is still active in the provinces. Instead of creating another project, or developing a new program, it will be best if the NMNCH Program's provincial directorates lead the health services reforms agenda presented in the National Maternal Survival Strategic Framework. Hence it may be proposed to address the Strategic Framework as an attempt to the revival of the NMCNH Program.

It is proposed that to take the following steps for implementation of the Strategic Framework:

1. Set up a RMNCH Reforms Committee at the federal level under the MONHSR&C, comprising key persons in the ministry and having provincial representation. This Committee will provide technical support to the provinces to plan and implement the strategic interventions. The Committee may also work with concerned ministries and provincial departments to advocate for improving women's status, ensure girls' education, and facilitate legislation and policymaking for women's empowerment and reproductive health rights.

2. Strengthen or set up the provincial directorates of the NMNCH program by upgrading the Provincial NMNCH Coordinators and by amalgamating the RMNCH services in the province, with special focus on making family planning service delivery an integral part of the RMNCH services package. Hence the NMNCH cell will be monitoring the RMNCH interventions and services in the DOH as well as PWD.

3. Conduct a detailed assessment of the health services to figure out the details of the work at hand after identifying the gaps:

    a. Evaluate the availability and quality of RMNCH services in the provinces through a sample survey; and carry out a mapping exercise of the RMNCH services in major cities, AJK and GB;
    b. Identify what needs to be done to meet the international standards for availability of facilities and human resources for RMNCH care in each district; this will be done by the DOH and PWD offices in each district using standard assessment formats; and
    c. List the interventions in terms of construction, repairs and renovations, equipment, supply chains, human resource (training and recruitments) and develop a budgeted implementation plan for the next five years (2024 – 2029).

4. The phases in the health services reforms exercise would be as follows:

    a. National sample survey for health services assessment (availability and quality);
    b. Develop national guidelines for QoC in RMNCH care which will be adapted by the provincial HCCs and enforced under the provincial government's authority;
    c. District-based assessment of the needs in terms of construction, repairs and renovation, HR, equipment and supplies, and new recruitments.
    d. Develop budgeted plans for: i) health facilities upgrading; ii) supply chain management, particularly for contraceptives; iii) curriculum development and arrangements for on-the-job training of currently active LHVs and midwives; iv) revised curriculum and upgraded training institutions for midwifery training as per international standards; and v)

assessment of the training needs of the other RMNCH care providers (FWWs, doctors, nurses, obstetricians); vi) developing on-the-job training and supportive supervision mechanisms for all healthcare providers; and vii) budgeted plans for enforcing QoC standards by the provincial HCCs in the public and private sector health facilities.

   e. Setting up and/or upgrading M&E systems and performance indicators to monitor the progress in the health services reforms interventions (see Logical Framework).

5. The implementation should be the responsibility of the provinces and the authority for the interventions and their M&E should be devolved to the districts, under direct supervision of the provincial NMNCH Program teams.

6. The budgets for the reforms should be generated from the government resources to the extent possible. Any support from the donors should be restricted to technical guidance and M&E.

7. For the sake of transparency and to prevent the misuse of funds and pilferage, a provincial monitoring cell should be established with support from and under supervision of development partners (WHO, UNFPA, UNICEF), to keep the process transparent and maintain objectivity.

8. The budgeting exercise may be carried out under the PC-I document preparation, as and when needed. It is best to carry out this exercise for each of the following activities:

   a. National Health Services Assessments (HSAs) to baseline the availability and quality of RMNCH care;
   b. Mapping of RMNCH facilities in major cities at national, provincial level and in AJK and GB, along the lines of the Service Availability and Readiness Assessment Survey currently being conducted in selected districts;
   c. District-based assessment of health services to identify Human Resources and material needs;
   d. Training needs assessment (TNAs) in each district (as described above);
   e. Establishing and/or upgrading the midwifery training schools;
   f. Establishing Quality Assurance systems for the private sector under provincial HCCs;
   g. Carrying out the construction, repairs/renovations, and equipment work;
   h. Upgrading the supply chains for medicines and contraceptives;
   i. Setting up or upgrading/expanding blood transfusion services in each district;
   j. Implementing standard operating procedures for referral of complicated cases;
   k. Robust monitoring and evaluation mechanisms.

Analysis of Activities to Guide Budgetary Allocations

Strategic Direction	Activities	Resources	Cost elements
Extra-Health Initiatives: **Education, awareness campaigns, advocacy and community engagement.**	Women's education and awareness; media campaigns; community engagement	LHW; media; Departments of Health, PWD, Social Welfare, and Education	TV adverts LHW training Community meetings Advocacy campaigns
Legislation and policymaking at federal and provincial levels **to facilitate and ensure accessibility and affordability of quality RMNCH care.**	Desk reviews; data analysis; policy formulation; legislative work; expert meetings;	Federal departments; national and provincial assemblies; professional organizations;	Consultancy work Experts meetings Advocacy campaigns Policy dialogues
Streamline RMNCH services **through continuum of care (CoC) model.**	Expert meetings; data analysis; policy formulation;	MONHSR&C; provincial DOH and PWD; health systems experts;	Consultancy work Experts meetings Policy dialogues Training of health managers
Institutionalize quality assurance of RMNCH care across the board **at all levels of health system.**	Desk reviews of QoC guidelines; expert meetings; writing of rules and regulations;	MONHSR&C; provincial DOH and PWD; provincial HCCs; quality experts;	Consultancy work Advocacy campaigns Consultative meetings Training of health managers
Improve accessibility and affordability of RMNCH care.	Training of LHWs and facility-based workers; health insurance and CCT; telemedicine and apps development;	Government financing; BISM & Sehat Sahulat; MONHSR&C; provincial DOH and PWD; health apps and telemedicine expert organizations;	Training programs Insurance and CCT Software development Adverts on TV M&E/audit activities
Training of healthcare providers and health managers in women-centered healthcare.	Curriculum and training methodology development; training activities; job-aids; posters and signage for display in facilities;	MONHSR&C; provincial DOH and PWD; professional organizations; media; training experts; media;	Consultancy work Training programs TV adverts Printing activities Facility upgrades
Special focus on quality of midwifery care **through pre-service and in-service midwifery training.**	Curriculum development for pre-service and in-service training; upgrading of MW schools; practical sites preparation; licensing rules and regulations;	MONHSR&C; provincial DOH and PWD; PNMC; Midwives Association; SOPGP; MW experts; medical education experts;	Curriculum MW schools' upgrades Theory Tutors Practical supervisors OSCE experts Licensing activities
Addressing the three delays in approaching EmONC.	Community and MW level providers training in danger sign recognition; pre-hospital transport; EmONC facility upgrades; training of EmONC providers;	MONHSR&C; provincial DOH and PWD; SOGP; public health experts; media; community leaders; local governments; PMDC; ob/gyn teachers;	3-level training Ambulance services Community meetings Communication tools Upgrading of EmONC QoC monitoring Hospital info systems

Strategic Directions

Strategic Direction 1: Extra-health Interventions for Maternal Survival

Women's empowerment entails the ability of the woman to make decisions – or be a significant part of the decision-making – for herself and her family in all personal, social, and health related matters such as: 1) education, marriage, and employment; 2) family planning; 3) choices of medical care as and when needed; 4) mobility to seek family planning, ANC, delivery care, and postnatal care; and 5) protecting herself against violence, abuse, and exploitation.

Women, including adolescent girls,should be able to have access to women-friendly health services and to use family planning without prejudice. They should have access to and be able to afford menstrual hygiene products. A civilized society would emphasize creating a safe environment for girls' education and women's employment; respect for women would be a part of the culture of a civilized society.

The following steps will initiate the foundation of a civilized society where women have equal rights and respect as men and help create an environment conducive for maternal health and survival:

1. Domestic violence laws: effective legislation to prevent domestic violence against women of all kinds at the home and community level; providing legal protection to the women and girls against domestic violence, abuse, and forced marriages.
2. Water and sanitation: provision of clean and safe drinking water, sufficient water for domestic use, and functional sanitation systems in all villages and low-income urban neighborhoods.
3. Biogas and solar energy: financial support and loans to communities and families to encourage the production and use of clean and affordable energy sources to ensure availability of light and fans in all homes in the rural and low-income urban areas.
4. Women's education and awareness at home; text and voice messages to women through easy to use apps on family planning, antenatal care, delivery services, information on health services, birth preparedness, and pre-hospital transportation, etc.
5. Girls' education: special emphasis on encouraging and motivating girls' education and making schooling up to matriculation mandatory through laws and by increasing community awareness; providing support to NGOs and community organizations for initiatives for home tutoring of girls for the matriculation examination where needed.
6. Combating climate change: develop interventions focusing on mitigation of excessive heat and its effects on maternal health and pregnancy outcomes to prevent discomfort to women during pregnancy, delivery, and breastfeeding; preventing premature births, stillbirths, and early neonatal deaths caused by high ambient temperatures especially during the last weeks of pregnancy and during breastfeeding.
7. Disaster preparedness and management to ensure continuation of essential maternal health services including family planning, antenatal care, and intrapartum and postpartum care for women during floods or other natural disasters; ensuring that health facilities are protected from floods; ensuring that pre-hospital transportation is available during the disaster periods

Strategic Direction 2: Legislation and Policies for Maternal Survival

More comprehensive legislation and realistic policymaking is needed to guarantee universal access to quality maternal health services, irrespective of socio-economic status or geography. This includes access to prenatal care, skilled birth attendants, EmONC, family planning services, and postnatal care. The laws and the policies should provide the legal cover to:

1. The standards for quality of maternal health services, ensuring that healthcare providers are adequately trained, maintain professional competence, and follow evidence-based practices to minimize maternal morbidity and mortality.
2. Facilitate training and licensing of midwives and other qualified SBAs.
3. Mandate availability and accessibility of EmONC by providing referrals and transportation.
4. Emphasize the importance of patient awareness and informed consent, ensuring that women are informed about their reproductive rights, options, and potential risks and benefits of various medical interventions before and during pregnancy and childbirth.
5. Protect the rights and dignity of pregnant women, their right to privacy, confidentiality, and respectful care during maternity services.
6. The regulation and licensing of midwives by Pakistan Nursing Council.
7. Mandate public awareness campaigns about maternal health and family planning, and the importance of seeking professional assistance during pregnancy and childbirth.
8. Establish mechanisms for accountability and oversight, such as the creation of maternal mortality review committees, which can investigate maternal deaths and recommend improvements.
9. Ensure adequate budgetary provisions and resource allocation for maternal health services, guaranteeing that funds are available for infrastructure, training, and service delivery.
10. Ensure financial support and/or incentives to pregnant women, particularly those from marginalized communities, to encourage early and regular prenatal care visits; and expand health insurance coverage to include FP and maternal healthcare services, reducing financial barriers to accessing care.

Strategic Direction 3: Continuum of RMNCH Care

The Continuum of Care (CoC) model is a comprehensive approach to maternal and neonatal health that aims to provide integrated and continuous care throughout pregnancy, childbirth, and the postpartum period. The CoC model is designed to address the complex and interconnected factors that contribute to maternal and neonatal mortality and morbidity, including inadequate access to healthcare services, poor quality of care, and social and economic factors. The components of CoC are:

Pre-conception care involves health education, counseling, and medical interventions before pregnancy to optimize their health status and reduce the risk of adverse pregnancy outcomes.

Antenatal care involves regular check-ups during pregnancy to monitor their health and the health of their baby. Antenatal care helps to identify and manage complications early on, reducing the risk of maternal and neonatal mortality.

Skilled birth attendance involves access to adequately trained and licensed healthcare providers during childbirth. Skilled birth attendance helps to prevent complications during childbirth and reduce the risk of maternal and neonatal mortality.

Emergency obstetric and neonatal care (EmONC) involves providing timely and appropriate lifesaving care for women and newborn babies who experience complications during pregnancy or childbirth.

Postnatal and newborn care provides women and their newborn babies with follow-up care after childbirth to monitor their health and the health of their baby. Newborn care includes screening for congenital disorders, management of infections, and support for breastfeeding.

Basic and Comprehensive EmONC Services
EmONC is a set of life-saving interventions to treat major obstetric and newborn causes of morbidity and mortality. These functions are further classified as basic EmONC and comprehensive EmONC levels of care[32]. **The following services are included in the BEmONC:** 1) Intravenous /intramuscular administration of: antibiotics to prevent postpartum infection or treat infection due to abortion complications; anticonvulsant agents for the treatment of toxemia of pregnancy (preeclampsia and eclampsia); and uterotonic drugs for controlling the postpartum hemorrhage (PPH); 2) Manual removal of the placenta; 3) Assisted vaginal delivery (e.g., using vacuum extraction); 4) Removal of retained products of conception; and 5) Neonatal resuscitation[33]. **While CEmONC comprises all of the above functions plus:** 6) Caesarean sections; and **7)** Blood transfusion services.

The functions of a broad-spectrum CoC model for Pakistan can be outlined as follows:

STAGE	CoC LEVEL			
Platform	**Community**	**Midwifery**	**BEmONC**	**CEmONC**
	LHW/CMW	**BHU/RHC**	**RHC/THQH/DHQH**	**DHQH/Tertiary**
Pre-marital	Counseling and education	Genetic counseling, family planning info	-	-
Pre-pregnancy	Family planning and nutrition information	Contraceptives, treatment of anemia	-	-
Pregnancy	Nutrition in pregnancy, birth preparedness, referral support	Antenatal care TT immunization	Management of pregnancy complications	Management of pregnancy complications
Delivery	Referral, home delivery by MW if needed	Normal delivery, episiotomy, neonatal resuscitation	All seven elements of BEmONC; PPIUCD, PP Implant	All nine elements of CEmONC; PPIUCD, PP Implant
Postpartum and neonatal care	Early initiation of exclusive breast feeding, nutrition advice, referral support	Postpartum and newborn care, initiation of exclusive breast feeding, maternal nutrition, PPFP, referral for complications	All seven elements of BEmONC; PPIUCD, PP Implant	All nine elements of CEmONC; PPIUCD, PP Implant
Post-birth	Family planning, infant and child care and breastfeeding practices.	Breastfeeding support, family planning including LAM, nutrition, immunization.	Care of congenital anomalies of newborn, treatment of anemia.	Care of late complications of postpartum period; severe malnutrition.

[32] *Source: WHO, UNICEF, UNFPA, AMDD. Monitoring emergency obstetric care: a handbook; Geneva: World Health Organization; 2009.*
[33] Detailed procedure for neonatal resuscitation is available on: https://medicalguidelines.msf.org/en/viewport/ONC/english/10-2-neonatal-resuscitation-51418320.html

Strategic Direction 4: Institutionalize Quality Assurance of RMNCH

Quality of healthcare is the evidence-based knowledge in the form of a set of standards that guide service delivery in a uniform and consistent manner to achieve the desired outcomes of healthcare. WHO defines quality of healthcare in terms of: **effectiveness** (evidence-based healthcare for those who need them); **safety** (avoiding harm to the people whom the care is intended for); and **people-centered** (focusing on fulfilling the individual needs and preferences). *Quality of RMNCH care* should be defined in the context of woman-centered care, which should be timely, efficient, and equitable.

Quality of care (QoC) is a continuous process, and not a one-time intervention, which is based upon evidence-based quality standards and requires well organized management and monitoring systems; it should be broad enough to cover the complete spectrum of services provided at the facility and the expected role of the health workers in provision of these services. Participants of the provincial consultations believed that the national quality standards of Pakistan were in line with the international criteria for quality in MNCH. However, insufficient training of staff in quality of care, lack of resources such as trained staff, infrastructure, equipment, and supplies in the public sector made it difficult to enforce the standards. Another important observation by the participants was that the incomplete skills sets among healthcare providers and lack of training of health managers in QoC implementation and supportive supervision hindered the delivery of quality RMNCH care. Poor quality was also attributed to bad governance and lack of accountability. Involvement of local governments and citizens' groups in QoC monitoring and implementation may facilitate enforcement of standards. Another problem identified was the lack of harmony between donor-funded projects; donor assistance for capacity building (both technical and financial) should be channeled through a comprehensive pre-planning at the DOH/PWD level and used for improving the system rather than initiating new interventions unless convincing evidence exists to justify their implementation.

Key steps proposed for improving QoC in RMNCH are:

- *Strengthen Workforce* - invest in training and deploying more skilled healthcare workers, especially in rural and remote areas. This includes midwives, nurses, and obstetricians;
- *Emphasizing Evidence-Based Practices* - promote the use of evidence-based guidelines and protocols to ensure that healthcare providers are following best practices in maternal care;
- *Upgrade and equip healthcare facilities* with essential resources, including medical equipment, medications and other supplies, and infrastructure improvements.
- *Engage local communities* to raise awareness about maternal health, encourage regular prenatal care, and foster a sense of ownership and accountability for healthcare services.
- *Integrate maternal health with child health and family planning services* to provide comprehensive care that addresses the broader health needs of women.
- *Ensure that healthcare facilities are equipped to handle obstetric emergencies* and develop efficient referral systems to transport patients to appropriate facilities when necessary.

- *Establish the systems for collecting, analyzing, and utilizing maternal health data* to track progress and identify areas for improvement.
- Explore innovative financing options, such as health insurance schemes and conditional cash transfers, to make maternal healthcare services affordable.
- Implement quality assurance mechanisms, including clinical audits and feedback loops, to continuously monitor and improve the quality of care.

A missing link in QoC is incomplete and ambiguous introduction of quality in most health professions' pre-service training. Introducing continuous on-the-job training as a part of supportive supervision is needed to ensure QoC. Such trainings, however, should be monitored through an effective training management information system to avoid duplication and ensure follow-up.

Based upon the evidence from previous projects, the following tools may be considered for QoC:

1. *Standard-based management and recognition (SBMR)*[34], is a methodology used by Jhpiego which entails regular scrutiny of service providers through a predefined system of regulations, and where good performance is recognized and encouraged.
2. *Use of Job-aids:* Guidelines for healthcare providers to carry out a routine task as per standards; the job-aids are clear, simple, pictorial signs, designed for at-a-glance consultation. Examples are job-aid for insertion of postpartum IUCD or implant; reminder to healthcare providers to introduce family planning to clients visiting the OPD for any reason; etc.
3. *QoC meetings:* Regular staff meetings in the health facility or clinical departments to discuss issues related with quality, and to investigate adverse events.
4. *Display of standards in the facility in local language:* to inform the patients of their rights and responsibilities and to educate them to expect and demand quality treatment.
5. *Laws to enforce standards in private sector health facilities:* enforced through Healthcare Commissions (HCCs), these laws should be detailed enough to clearly defined the expected level of QoC in all private sector health facilities.
6. *Upgrading and reinforcing existing standards such as Minimum Service Delivery Standards (MSDS*[35]*) and Managing Complications in Pregnancy and Childbirth (MCPC*[36]*):* This task should be carried out by HCCs.
7. *Strict application of* maternal deaths surveillance and response (MDSR) system by forming maternal death review committees under supervision of HCCs and making law for mandatory reporting of maternal and perinatal deaths all over the country.

Strategic Direction 5: Improve Accessibility and Affordability of RMNCH Care

Access to quality maternal health care is essential to reduce maternal mortality and improve the overall well-being of women and infants. The barriers related to affordability and accessibility hinder pregnant individuals from receiving timely and adequate care. Strategies to enhance accessibility and affordability of RMNCH care in Pakistan should include:

1. Reviving the LHWs and bringing them up to the pace of development with help of technology such as mobile applications and improved skills to provide home-based care.
2. Introducing telemedicine, mobile health clinics, and remote supervision of LHWs, to reach pregnant women in underserved regions. These technologies allow remote consultations and monitoring, reducing the need for long-distance travel.
3. Improve pre-hospital transportation and ambulance services to provide subsidized or free transportation options to ensure that pregnant women can reach healthcare facilities promptly, especially during emergencies.

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[34] Edgar Necochea Débora Bossemeyer: *Standard-based management and recognition – A Field Guide.* Published by Jhpiego, Baltimore, MD, USA, 2010.

[35] MONHSRC Islamabad Healthcare Authority Notification of December 2021: (https://ihra.gov.pk/wp-content/uploads/2021/12/draft-of-MSDS-2021.pdf)

[36] WHO: Managing complications in pregnancy and childbirth (https://www.who.int/publications/i/item/WHO-MCA-17.02)

4. Establish maternity waiting homes in far-flung areas to accommodate pregnant women in a safe place before delivery.
5. Mobile applications for women to provide information about maternal health, nutrition, vaccinations, appointment reminders, and guidance for prenatal and postnatal care.
6. *Task Shifting:* Train non-physicians, such as midwives and nurses, to perform tasks traditionally handled by doctors, making care more accessible in resource-limited settings.
7. *Health Insurance:* Implement or expand health insurance programs that cover maternal health services, reducing the financial burden on pregnant individuals and their families.
8. *Conditional Cash Transfers* to provide financial incentives to pregnant women for seeking prenatal and postnatal care and delivering in healthcare facilities.
9. Offer subsidies for maternal health services, medications, and medical equipment to make them more affordable for low-income individuals.
10. Ensure that essential maternal health services, such as ANC and deliveries, are available free of charge or at reduced costs at public healthcare facilities.
11. *Collaborate with private healthcare providers* to negotiate lower prices for maternal health services and medications, making them more affordable to a broader population.
12. Improve the efficiency of the *supply chain* for medications and medical supplies to reduce costs and ensure a steady availability of essential resources.
13. *Prioritize preventive care* through health education and family planning programs to reduce the need for costly interventions and complications during pregnancy and childbirth.

Strategic Direction 6: Introduce Women-centered Healthcare

Woman-centered healthcare refers to a holistic approach that prioritizes the unique health needs of women, encompassing culturally sensitive, accessible, and affordable services that address reproductive health, maternal care, family planning, nutrition, and gender-specific health issues. The goal is to empower women, reduce disparities, and improve overall well-being. It focuses on the "woman's unique needs and expectations; recognizes her right to choice, control and continuity of care; and addresses her social, physical, psychological, and cultural needs and expectations. It acknowledges that a woman and her unborn baby do not exist independently of the woman's social and emotional environment, and incorporates this understanding in assessment and provision of health care"[37].

Woman-centered healthcare is a holistic approach to prioritize the woman's physical, emotional, and psychological well-being and to emphasize her autonomy and preferences. Key principles of woman-centered care include: respect and dignity; respect for privacy; autonomy; communication; emotional support; continuity of customized care by friendly providers in familiar settings; and shared and informed decision making.

The initial steps to promote woman-centered healthcare in Pakistan are:

- Train healthcare providers to adopt woman-centered care by respecting women's choices, ensuring privacy, and providing emotional support during pregnancy and childbirth.
- Include woman-centered healthcare in the pre-service and in-service training curricula for all levels of health professionals.
- Making health facilities woman-friendly (ensure privacy in waiting areas and examination rooms, provide clean bathrooms with running water, and safe child playing areas.
- Train healthcare providers in communicating with women with respect and empathy.

[37] Nursing & Midwifery Board, Department of Health, Govt. of Australia: https://www.health.gov.au/resources/pregnancy-care-guidelines/part-a-optimising-pregnancy-care/providing-woman-centred-care

Strategic Direction 7: Special focus on Quality of Midwifery Care

Attempts to create a distinct, proficient, and dedicated professional cadre of midwives who meet the international standards of training, practical experience, and competencies have not been successful in Pakistan. As of 2022, Pakistan had only 42,000 registered midwives (including nurse-midwives, LHVs, and CMWs[38]) or 1.7 midwives per 10,000 population. According to WHO criteria, countries having a physician/nurse/midwife ration of less than 25/10,000 are more likely to fail in providing optimal maternal healthcare, while this ratio in Pakistan is just 15/10,000[39].

With rapidly increasing trend of institutional deliveries[40], it is time to salvage the midwifery profession as a cadre of professionals who are exclusively dedicated to the practice of midwifery and who meet the international standards of training and practical experience according to the ICMW guidelines. The present scenario of several different cadres of midwives having different types and lengths of midwifery education, and a majority of them having received no practical training during education, is not conducive for achieving the maternal health targets. This calls for streamlining the midwifery profession in Pakistan through quality training and exposure to practical experience, career pathway, and a well-deserved professional recognition. The training programs must be designed to equip midwives with the knowledge and skills necessary to deliver quality care in resource-constrained settings.

Midwifery Training Program

The key contents of a comprehensive midwifery training program for Pakistan must include:

- Anatomy and Physiology, focusing on female reproductive system
- Antenatal Care – contents, procedures, benefits, risk assessment
- Intrapartum Care – to learn the skills of safe and clean delivery and identify danger signs
- Neonatal Care – including neonatal resuscitation, cord care, immediate breastfeeding
- Postpartum Care – including neonatal care and identification of danger signs and infection
- Family Planning and Reproductive Health, with focus on postpartum family planning
- Infection Prevention and Control – with an ability to use antibiotics and analgesic drugs
- Cultural Sensitivity and Communication – with an understanding of local taboos and practices
- Referral to EmONC – early recognition of obstetric and neonatal danger signs and prompt referral
- Community Health and Outreach – including having contacts with LHWs and local leaders
- Ethical and Legal Considerations – focusing on woman-centered care
- Continuing Education – support for continuously improving skills and knowledge
- Clinical Practice and Supervision – including practical training especially of normal delivery
- Research and Quality Improvement – with an ability to read and adapt new technologies
- Mental Health and Self-Care – recognizing and referring psychological problems among women

The ICMW list of competencies for midwifes include the following[41]:

1. General competencies: focusing on accountability as health professional, relationship with women and other providers and care activities that apply to all aspects of midwifery practice.

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[38] Pakistan National Midwifery Strategy

[39] WHO Eastern Mediterranean Region: health workforce (Pakistan's profile)

[40] PDHS 2017-18 reports that 60% of the deliveries in prior five years were conducted by a doctor, and only 9% by a nurse, midwife, LHV, or CMW. Ideally, all normal deliveries should be conducted by trained midwives only.

[41] ICMW: Essential Competencies for Midwifery Practice (2018 update); https://www.internationalmidwives.org

2. Competencies specific to pre-pregnancy and antenatal care – about health assessment of the woman and fetus, promotion of health and well-being, detection of complications during pregnancy and care of women with an unintended pregnancy.
3. Competencies specific to care during labor and birth – assessment and care of women during labor that facilitates physiological processes and safe birth; immediate care of the newborn; and detection of complications in mother or newborn.
4. Competencies specific to the ongoing care of women and newborns to address the continuing health assessment of mother and newborn, health education, support for breastfeeding, detection of complications, and provision of family planning services.

The strategic direction is to develop and initiate training programs at a national scale which should include the following steps:

- Upgrade the knowledge, skills, and competencies of the existing active midwives (CMWs and LHVs) to bring them at par with the ICMW standards through customized training after conducting a training needs assessment. There should be emphasis on practical training and addressing the gaps in competencies[42].
- Implement the newly updated midwifery training curriculum[43] and teaching methodology for training of new midwives to meet the ICMW requirements. The new curriculum and teaching methodology should be developed by experts in midwifery and technical assistance from other countries of the world that have successfully implemented the midwifery training.
- Develop short courses for on-the-job training of nurses, physicians (particularly female medical officers), and obstetricians to bring them up to date with the state-of-the-art technologies in midwifery, essential obstetric care, and EmONC

Strategic Direction 8: Address the Delays in Approaching EmONC

The delays in decision making to seek higher level medical care in case of an obstetric complication; in transporting the woman to an EmONC facility; and in starting the treatment once the woman has arrived at the EmONC facility are well recognized factors causing maternal mortality. These delays to receive emergency care significantly reduce the survival chances of women suffering from obstetric complications. Each of the three delays requires focused interventions to address the causes of the delay, as suggested below:

- *The First Delay:* The primary responsibility of decision making to seek medical care in case of obstetric emergencies rests on the person who is attending the birth; in case of home deliveries, it could be a traditional birth attendant, while in institutional delivery, the attending physician or midwife will inform the family about the decision. Pregnant mothers and their families should be prepared during ANC and LHWs. SOPs should be prepared for the SBAs to help decide upon referral to EmONC. The rules for referral decision should also be displayed at all midwifery level health facilities in both public and private sectors, along with the phone numbers of the local ambulance service.

- *The Second Delay:* Facilitate accessibility of EmONC services by improving pre-hospital transportation and providing functional ambulance services, particularly in remote rural areas. Local transporters (such as taxi drivers) may also be trained and motivated to volunteer to be a part of the pre-hospital transportation service.

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[42] Pakistan Pregnancy, Childbirth, Postpartum & Newborn Care training modules are available for this purpose.
[43] Pakistan Nursing and Midwifery Council (https://pnmc.gov.pk/)

- *The Third Delay:* Introduce and enforce QoC standards at the BEmONC and CEmONC health facilities under HCC supervision and monitoring; ensure that all required equipment and supplies, including back up electricity generators, are available and functional; improve and expand the blood transfusion services and organize a group of voluntary blood donors; mandate all healthcare providers to investigate and report maternal deaths and near-miss obstetric cases.

Strategic Direction 9: Mitigate the Effects of Climate Change on RMNCH:

Pakistan has seen a significant rise in ambient temperatures due to the global climate change; while this change has been felt mostly in the southern and plain areas, no part of the country has remained unaffected: floods, melting of the glaciers on high mountains, sudden fluctuations in temperature, droughts, and forest fires have been experience across the country.

The rise in ambient temperature particularly during summer months led to various health concerns. It has been proven that a mere 1-degree Celsius rise in ambient temperature during last two weeks of pregnancy may increase the risk of pre-term delivery by about 5%[44]. Exposures to high temperatures during third trimester of pregnancy have been linked to premature births, stillbirths, and neonatal mortality; heat also affects breastfeeding capacity and practices of women, leading to malnutrition among infants, particularly during the first month of life[45]. Rural and low-income urban areas are ill-equipped to mitigate the impacts of high ambient temperatures during summer and monsoon months, leading to an increase in heat-related illnesses such as heat stroke and respiratory disorders, and vector-borne diseases such as dengue fever and malaria[46].

The floods of 2022 in Pakistan had direct impact on the women, particularly with regard to their access to RMNCH services. Many health facilities were damaged and closed for weeks; access to health facilities was also blocked due to flood waters and damaged access roads. Thousands of families were displaced and spent several months in make-shift camps. Therefore, many pregnant women had to deliver in camps or at homes without access to SBA. Pregnant women's ANC visits were also disrupted. Family planning services were also affected and women who were using a modern method of family planning had to discontinue and were at risk of becoming pregnant.

It is obvious that health system alone cannot meet the impact of floods and climate change, and there is a need for higher level inter-sectoral planning and financial support from the provincial governments. In areas where pregnant women may be exposed to higher ambient temperatures, the LHWs and the Health and PWD departments may promote planning of the births accordingly. Women should also be made aware of the effects of hot climate on their pregnancy and provided support to mitigate the effects of the rise in the temperatures.

Provincial and district disaster management authorities must be prepared to address the effects of heavy rains and floods on the RMNCH service delivery and make plans to combat with such situations. The district's Health and Population Management Teams must meet ahead of the rainy season to develop detailed plans to ensure that the services could be continued without interruption during the monsoon

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[44] Mathew S, Mathur D, Chang AB, McDonald E, Singh GR, Nur D, Gerritsen R. Examining the Effects of Ambient Temperature on Pre-Term Birth in Central Australia. Int J Environ Res Public Health. 2017 Feb 4;14(2):147. doi: 10.3390/ijerph14020147. PMID: 28165406; PMCID: PMC5334701.

[45] Basu R, Malig B, Ostro B. High ambient temperature and the risk of preterm delivery. Am J Epidemiol. 2010 Nov 15;172(10):1108-17. doi: 10.1093/aje/kwq170. Epub 2010 Oct 1. PMID: 20889619.

[46] Amnesty International 2023: https://www.amnesty.org/en/documents/asa33/6823/2023/en/

season. These should include plans to protect the health facilities from rain and floods and to provide safe transportation to health workers to reach the health facilities during monsoon season.

Strategic Direction 10: Institutionalize high impact clinical practices:

The RMNCH care delivery systems in Pakistan lag behind in adapting the novel and high impact practices that can improve quality of care, save lives, and significantly reduce maternal and perinatal mortality. For example, some very effective interventions have been available but not routinely utilized in Pakistan, such as postpartum family planning, self-injection of Sayana Press, use of Misoprostol to prevent PPH and use of Chlorhexidine for clean delivery.

It should be noted that the key clinical practices to save women's lives in pregnancy, childbirth, and postpartum period are ANC, SBA, postpartum care, EmONC, and family planning. These practices should be grounded in a human rights approach to maternal and newborn health; governments should focus on eliminating significant inequities that lead to disparities in access, quality, and outcomes of care within and between districts and provinces, urban and rural areas, and socioeconomic classes.

Innovative clinical interventions have been developed to manage common obstetric complications in maternal healthcare, particularly in low-resource settings. There is sufficient evidence to support their use in low-resource settings to facilitate the delivery of high quality healthcare to women during pregnancy, childbirth, and postpartum period, and particularly in dealing with obstetric emergencies:

- *Non-pneumatic anti-shock garments (NASG):* NASGs are a low-cost, low-tech device that can be used to stabilize and resuscitate hypovolemic shock in pregnant women.
- *Misoprostol* [47] *:* Misoprostol is a prostaglandin that increases uterine tone and decreases postpartum bleeding. It can be used both as prevention and treatment of PPH and can be administered sublingually, orally, vaginally, or rectally.
- *Automated blood pressure devices:* These devices are tailored for low-resource settings and can help monitor blood pressure during pregnancy, which is essential for identifying and managing preeclampsia.
- *Single-use obstetric emergency kits:* These kits contain essential supplies and equipment for managing obstetric emergencies, such as postpartum hemorrhage.
- *Portable obstetrical ultrasound equipment:* This equipment can be used to diagnose and manage obstetric complications, such as fetal distress and placenta previa.

PPH is the leading cause of maternal mortality in Pakistan, causing over 40% of all maternal deaths, and needs to be managed through standardized bundles of care including the following components:

- *Readiness:* Ensuring that all necessary equipment and supplies are available and that staff is trained to respond to PPH.
- *Recognition and prevention:* Identifying women at risk of PPH and taking steps to prevent it, such as administering uterotonics after delivery.
- *Response:* Providing prompt and effective treatment for PPH, such as uterine massage, fluid replacement, and tranexamic acid.
- *Reporting and systems learning:* Collecting data on PPH cases and using it to improve QoC.

The most important strategy is to ensure that effective treatment and prevention regimens of maternal health are available across the continuum of care. The most commonly found gaps in service provision

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[47] Anderson JM, Etches D. Prevention and management of postpartum hemorrhage. Am Fam Physician. 2007 Mar 15;75(6):875-82. PMID: 17390600.

are found at the community level and in primary care facilities. The following table lists the interventions according to the level at which it should be available.

Intervention/category (Resources)	Community	MW	BEmonC	CEmONC
Delay first pregnancy after marriage (media/LHWs/PHC facilities)	✓	✓		
Modern Contraceptives (condoms, pills, injections) (LHWs, PHC facilities, FWCs, mobile units)	✓	✓	✓	✓
Modern Contraceptives (LARCs) (PHC facilities, FWCs, mobile units, BEmONC facilities)		✓	✓	✓
Modern Contraceptives (Permanent methods) (BEmONC/CEmONC facilities, RHS centers)		✓	✓	✓
Post-abortion care (with PPFP) (BEmONC/CEmONC facilities, RHS centers)			✓	✓
ANC guidelines for pregnant women (LHWs, media, PHC facilities)	✓	✓	✓	✓
ANC guidelines for providers (HCC, Provincial DOH, MONHSR&C)		✓	✓	✓
Introducing FP in first ANC visit (LHWs, PHC facilities, media)	✓	✓	✓	
PPFP technologies: IUCD, Implants, LAM, & Progestin only pills (MONHSR&C)		✓	✓	✓
Clean delivery kits for facility deliveries (Provincial DOH)	✓	✓		
Chlorhexidine use to prevent infections (MONHSR&C)	✓	✓		
Use of Magnesium Sulphate in pregnancy (MONHSR&C)	✓	✓	✓	
Misoprostol for prevention and management of PPH (MONHSR&C)		✓	✓	✓
Bundles for PPH (MONHSR&C)		✓	✓	✓
Active management of third stage of labor (AMTSL) (MONHSR&C)		✓	✓	✓
Use of plasma expanders after blood loss (MONHSR&C)		✓	✓	✓
Use of antibiotics in pregnancy and postpartum (MONHSR&C)		✓	✓	✓
Helping babies breathe (Provincial DOH, PHC facilities)		✓	✓	✓
Cord care technologies (PHC facilities)		✓	✓	✓

Annexes

Annex A: List of Participants Provincial Consultations

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114.	Dr Farid Midhat	Consultant	Forum for Women Development & Research

Annex B: Summary of provincial consultative meetings

All the sessions were video-taped with the consent of the participants and extensive notes were taken from the final presentations of the smaller groups on their assigned tasks. These notes have been used while formulating the proposed strategies and interventions included in this document. A summary of the discussion points, ideas, and suggestions emerging from each of the four small group discussions is provided as follows.

Quality of Care

Quality of healthcare is evidence-based knowledge that defines the degree to which the desired outcomes of health services are achieved in a country or community. WHO defines quality of healthcare in terms of: **effectiveness** (evidence-based healthcare for those who need them); **safety** (avoiding harm to the people whom the care is intended for); and **people-centered** (focusing on fulfilling the individual needs and preferences).

- There was consensus that quality of care (QoC) was a continuous process and not a one-time intervention and that it should comprise following of evidence-based procedures through effective management and continuous monitoring.
- QoC should be broad enough to cover the complete spectrum of services provided at the health facility and the expected role of the health workers in provision of these services.
- There was also agreement that the national quality standards were in line with the international criteria for quality in MNCH. However, insufficient training of staff in quality of care, lack of resources such as trained staff, infrastructure, equipment, and supplies in the public sector made it difficult to enforce the standards.
- The current problems of lack of human resources and poor performance of available staff are interrelated. These should be addressed by enhancing supportive supervision, providing good incentives to health workers to encourage them to stay and perform well, and taking steps to reduce absenteeism. It was noted that these objectives were achieved by outsourcing (see below).
- At the district level, integrate vertical programs into one streamlined MNCH service delivery intervention.
- Focus on readiness assessment of the health facilities in the public sector using standardized evaluation methods. All facilities must meet the minimum criteria of readiness to deal with MNCH service delivery according to their level.
- Current models for quality assurance (QA) may be studied. PPHI Sindh reportedly has effective QA procedures, which should be replicated. There should be comprehensive and integrated capacity building (and continued medical education) plans focusing on QA in MNCH care including family planning. The existing infrastructure and human resources of the National MNCH Program may be utilized for this purpose with technical support from Provincial Health Development Centers (PHDCs).
- All donor assistance for QA and capacity building (both technical and financial) should be channeled through a comprehensive pre-planning at the DOH/PWD level. Such assistance should be used for revitalizing existing structures and not for initiating uncharted programs unless convincing evidence exists to justify their implementation.
- Engaging local government systems and ensuring that women are in the leadership roles will facilitate QA at primary health facilities and community-based health and family planning workers.

- QA should have a multi-sector and multi-focus approach instead of focusing only on the health system. There is a need for community awareness and citizens' voice to create the demand for QA (and for a social awareness to support women who are the victims of poor quality of services).
- QoC depends upon the providers' professional skills; therefore, there is a need for high quality pre-service training and continuous on-the-job training (as a part of supportive supervision), which should be closely monitored to avoid duplication[48].
- The strategy should include actionable steps rather than theoretical planning, along with details of implementation, and clear guidelines on how the strategic objectives were to be achieved.
- Governance is the key element in QA and this should start from the top, with the use of official and formal QoC standards that are enforced across the board without exception. The standards should be customized according the level and the spectrum of services provided at the facility. Any deviation from standards for any reason including non-availability of staff, equipment, and supplies should be reported.
- The QoC framework should include standards on infrastructure, HR (skilled staff, competencies), equipment, supplies, utilities, and support services. It should be responsibility of the facility in-charge to ensure that all the elements necessary for QoC are available.
- Protocols for PPFP, nutrition, breastfeeding, emergency procedures, patient safety, and infection prevention should be available and staff trained in their application. These should be used as the criteria for quality monitoring along with patient satisfaction indicators.
- Job-aids to help staff in following the standards should be posted in appropriate places such as the OPD, laboratory, and the labor room.
- QoC should be monitored through service statistics including number of deliveries and mandatory reporting of complications and near-miss cases and maternal, neonatal, and fetal deaths monitored through Maternal and Perinatal Death Surveillance and Response (MPDSR)[49].
- Clinical audits should be introduced to assess facility readiness for QoC and to educate the staff on QoC definitions and indicators.
- *Role of Provincial Healthcare Commissions (HCCs):*
    - Role of HCCs should be defined by these questions: *What is the mode of enforcement of regulations? Do the laws empowering HCCs have any teeth? Are there examples of enforcement of HCCs regulations in the country, which can be replicated?*
    - The regulation processes of HCCs regulations are evolving and need support, particularly with regard to MNCH. Political and operational obstacles exist in full implementation which must be removed.
    - HCCs should play a more active role to regulate the private sector.
    - HCCs should try to bring uniformity in service delivery across the board and must develop strategies to overcome the obstacles in their work of enforcing the standards of quality and the licensing process and by upgrading the existing standards such as MCPC and BSDS.
    - Licensing and service delivery standards should be reviewed and updated for all facilities providing MNCH services, particularly private sector maternity homes.
    - HCCs should oversee the entire spectrum of MNCH services including family planning and PPFP.

[48] A model training management information system developed by MCHIP in Sindh is functional in provinces.
[49] Specific circumstances in which quality of care carried high importance were the management of postpartum hemorrhage (PPH), pre-eclampsia, and post-abortion complications, using the international standards of care available for these situations. Preventive use of misoprostol and the clinical and implementation outcomes of the E-MOTIVE trial should be used for definition, prevention, and 'bundle approach' of PPH, and to develop national guidelines for PPH management.

- Each near-miss case and maternal death should be notified to the HCC, which should supervise confidential inquiries. HCCs should expedite implementation of maternal deaths surveillance and response (MDSR) system by forming maternal death review committees.
- The complaints department personnel should be trained to investigate the adverse events in MNCH by using uniform and integrated standards across all levels and sectors of health system.
- HCC should monitor the number of C-sections and the use of clinical criteria for C-sections, and enforce recordkeeping for post-surgery inquiry if needed.

Revival of the Lady Health Workers (LHWs) Program:

The LHW Program began in the 1990s as the 'National Program for Primary Healthcare and Family Planning', and the original responsibilities of the LHWs included basic MNCH care at household and community including counseling, referrals, treatment of minor ailments, support for continuation of treatment prescribed by doctors including contraceptives supply, and support and follow-up of ANC and family planning clients.

- There was consensus on restoring LHWs' original role in the community and free them from any additional responsibilities that were not part of their job description; and to strengthen and formalize their association with the BHUs/CDs serving their communities. There was also consensus upon declaring the LHWs an integral part of the RMNCH Continuum of Care.
- All participants recommended resumption of the selection, hiring, and training of new LHWs with the aim to provide coverage to 100% rural areas. During the process of enlisting and training new LHWs, every effort should be made to resist the political interference which leads to selection of unsuitable candidates and those unlikely to become active after training.
- New LHWs' training should be outsourced to organizations having such expertise and resources. The LHWs pre-service and in-service training curriculum is overdue for revision and updating. Similarly, the LHWs' supervision system should be updated and modernized using smartphones.
- LHWs should have uninterrupted supply of medicines and contraceptives as per their job description. The LHWs' management information system should be used for evidence-based decision making. Current hurdles in efficient work of LHWs include low morale, logistic problems, mobility issues, and lack of supplies, which should be removed.
- LHWs should have a role in non-medical interventions to reduce maternal mortality including social awareness, family and community support, and transportation. They should be able to educate, motivate, and refer pregnant women for antenatal care, institutional delivery, and PPFP.

Role of Midwives in Prevention of Maternal and Newborn Mortality

Pakistan introduced its first national MCH program through training of Lady Health Visitors (LHVs), who staffed the MCH centers in primary health facilities, providing MCH care including ANC and conducted safe and clean home deliveries. Resource constraints never allowed this program to flourish and a majority of deliveries continued to occur at home by untrained birth attendants. A number of safe motherhood initiatives during the last five decades have experimented with training of *Dais* (traditional birth attendants), introducing Pupil Midwives, and, more recently, the CMWs. Unfortunately, none of these programs were successful. The CMWs were introduced under the National MNCH Program to bring skilled birth attendance closer to women's homes in the rural areas. The program ran into problems from the beginning, including a flawed selection process; poor quality of pre-service training; lack of facilities to provide full range of practical training; and lack of post-deployment supervision and support. As a whole

the program failed to achieve its targets as planned. Presently in Pakistan, the LHVs and CMWs are both recognized as midwives and are licensed as such by the Pakistan Nursing Council[50].

There was consensus among participants in all provinces that Pakistan needed professional midwives who met the international standards of training and had the competencies required by International Confederation of Midwives (ICMW). Specific recommendations included:

- Improve the quality of pre-service training, with special emphasis should be on practical training, to meet the ICMW standards. It was noted that presently the LHVs and CMWs were undertrained and needed upgrading of their qualification by further training to meet the ICMW requirements as per WHO recommendations. They should be offered additional training and re-licensing options (retraining may be outsourced to organizations in private sector, such as established midwifery training schools). District hospitals and postgraduate institutes should be used for practical training of midwives.
- The concept of setting up birthing stations of CMWs may be reconsidered on a public-private partnership basis.
- Pakistan Nursing Council (PNC) may be approached with these recommendations and to request an appropriate title for the new cadre (*Nurse-Midwife* was proposed to uniformly describe licensed midwives).
- It was noted that there was a need to revise the SOPs, job description, policy, and regulations for midwives which may require new legislation.
- A system for QA of midwifery across all levels of MNCH care should be developed in public and private sectors under the HCC. Moreover, ensure that the midwives were also trained to conduct safe and hygienic home deliveries where there was no other option.
- Address the professional bias against CMWs/LHVs manifested by doctors and specialists through awareness campaigns and introduction of codes of conduct. Steps should also be taken for social security and protection of midwives working in remote areas.
- Also ensure continuous professional development, career structure, salary structure, performance monitoring, supplies and equipment, and support services. These steps were deemed imperative for the midwives posted in primary health facilities in the rural areas.
- There was a need to establish effective referral systems and pre-hospital transportation arrangements for obstetric and newborn emergencies.
- Incentivize CMWs and LHVs working in public sector through an improved service structure. Those working in private sector should be provided supportive supervision, brought under the ambit of HCC, and included in the coverage by District Health Information Systems.
- PPFP should be an integral part of the job description of CMWs and LHVs and they should be properly trained and equipped to carry out this task.
- All midwives should be fully trained in early and emergency neonatal care including the management of birth asphyxia.
- Primary health facilities (BHUs and RHCs) should be staffed and equipped to provide the full spectrum of continuum of MNCH care from ANC to skilled birth attendance, to postpartum and newborn care, to infant and child care and immunization.
- 'Operational merging' of the PWD and DOH workers (FWWs, CMWs, and LHVs) was recommended to avoid duplication and increase coverage. This would require extensive

[50] As of 2022, Pakistan Nursing Council had registered 17,389 LHVs; 7,396 CMWs; and 16,478 registered midwives (includes nurses who complete a diploma in midwifery after 3-years nursing training; nurse-midwives are usually posted in hospitals).

additional training and a strong management structure. It was also noted that LHWs and CMWs/LHVs had their distinct places in the continuum of MNCH care.

Outsourcing of Public Sector Health Facilities

The departments of health in all provinces have operational public-private partnership initiatives under which the public sector health facilities (mostly BHUs and RHCs) have been outsourced to private organizations. The provincial budgets for these facilities are transferred to the operating agency as a one-line item, which empowers the operating agency to use these funds freely and more efficiently. There was consensus that outsourcing has improved the availability and quality of MNCH services at primary level health facilities. Noted that outsourcing was distinct from public-private partnership whereby the latter comprised financial and technical contribution from both sides. Also noted that the advantage of outsourcing over normal operation was mainly in governance where the former had more power to enforce the rules and standards.

- Outsourcing should preferably be done in the remote areas where government supervision is weak; it should be monitored regularly through key performance indicators.
- The issue of low budgetary allocations for MNCH at primary level health facilities was identified and it was highly recommended to increase the funds to meet the minimum requirements of infrastructure, human resources, equipment, and supplies.
- The private sector partners (implementing organizations) must ensure community participation in supporting their facilities so that the staff working there feels comfortable. Formation of village committees for MNCH was recommended with support from reputable community development organizations such as RSPN.
- The approach for ensuring 24/7 availability of trained midwives at primary health facilities, especially in remote areas, was proposed to appoint at least three CMWs and/or LHVs in each facility and to provide incentives to these workers to encourage sustainability.
- The purpose of outsourcing should be upgrading of the infrastructure of the healthcare delivery system of the government for greater efficiency, cost-effectiveness, accountability, and quality of care. The current system of outsourcing to private sector should be evaluated and the gaps and shortcomings should be identified and addressed.
- Government should strengthen its role in monitoring and evaluation, supervision, and quality assurance; monitoring should include supply chain and procurement systems.
- Accountability of the implementing organizations under the existing rules and regulations should be strengthened and the issue of district health office losing interest and ownership of its outsourced facilities should be addressed.
- The issues of incentives, disincentives, and conflicts of interest should be addressed in outsourcing. The outsourced health facilities remain within the ambit of HCCs and must follow the QA standards and have systems for clinical audit, and technical and financial monitoring.
- The quality parameters for outsourcing should be clearly defined at the expression of interest stage and be monitored through pre-qualification and renewal of contract. All outsourcing should be carried out under a regulatory framework. Outsourced facilities and assets must remain the property of the government.

Accountability of RMNCH Programs and Services

Accountability refers to the policies and procedures that one party uses to defend and accept responsibility for its actions. Accountability in health programs has been defined to have the elements of clearly stated goals or objectives of the program, close monitoring of the interventions that make progress

toward achieving those goals and objectives possible, and a system for evaluation of the final outcomes of the program with the provision of assign responsibility for the program's failures, if any[51]. Thus, the crucial components of accountability are: the loci of accountability (who is responsible for what in the system); the domains of accountability (e.g., competence, ethics, financial performance, access, and community benefit); and the formal and informal procedures of accountability.

- Most participants agreed that the levels of accountability should be clearly identified and any exercise of accountability should be carried out at the levels of community (which should include social accountability), district, and province.
- The focus of accountability should be on all aspects of healthcare expenditure including national programs such as NMNH Program; provinces' health expenditure and its impact; district performance in health; and donor assisted interventions.
- Specific to the RMNCH interventions, at least one high level exercise of technical and financial accountability should be carried out at the national and provincial levels, which should investigate the performance of programs, departments, and interventions against their stated goals and objectives.
- Reasons for failure, malfunction, or under-achievement of the programs and interventions should be identified and responsibilities assigned. Similarly, thematic audits for evaluating the outcomes of funds allocation to various programs should be carried out from the donors' and taxpayers' perspectives.
- Introduce clinical audits at the health facility level. Such audits should be carried out for ANC, delivery care, C-sections performed, EmONC services, ambulance services, etc.
- MDSR committees should be notified in all districts who should share their data with HCC and PMDC regularly for accountability.
- At the community level, audit and accountability systems for health services should be established with participation of local governments.
- Accountability should include the private sector to determine its role in RMNCH care and how to make it responsible and answerable for providing quality maternal healthcare at affordable prices.
- Regulation of MNCH service delivery in the private sector should be carried out by government (through HCCs) with help from community and professional societies (e.g., SOGP, PMA).
- MNCH and family planning should be included in the training programs of District Management Group (DMG).
- Revive the role of District Technical Committees (DTC) to link QoC with accountability and to investigate problems in procurement and supply chain processes.
- The accountability systems and processes should be constructive and consultative rather than being coercive and administrative. They should be based upon the principles of confidentiality, diplomacy, positive criticism, and professionalism. Root causes of the failures should be identified and redressed. Clinical and social self-audits should be introduced in the health facilities, particularly in secondary/tertiary care hospitals.

[51] Denis JL. Accountability in healthcare organizations and systems; Healthcare Policy: 2014 Sep;10(Spec issue):8-11.

ANNEX C: Proposed Guidelines for Health Sector Reforms

Goal:

The goal of these guidelines is to reduce the MMR through a comprehensive set of health system reforms in both public and private sectors.

Strategic Objectives:

1. To organize the RMNCH services to provide a continuum of care from pre-pregnancy to postpartum.
2. To enhance the quality of RMNCH care across the board at all levels of health system.
3. To ensure the provision of quality RMNCH services through public and private health facilities, including family planning, antenatal care, midwifery services, postpartum family planning, emergency obstetric and newborn care, nutrition, infection prevention, and breastfeeding.
4. To train LHWs, CMWs, midwives, physicians, and obstetricians in woman-centered healthcare.
5. To improve the accessibility and affordability of quality RMNCH services at all levels.
6. To formalize and upgrade the midwifery professionals through high quality training program according to the standards of International Confederation of Midwives.

Proposed Reforms:

Provide Maternal Healthcare Services through Continuum of Care Model:

1. **Community-Based Lady Health Workers (LHWs)**
   a. Train and deploy LHWs to identify pregnant women and provide education on maternal and newborn health and family planning.
   b. Ensure regular home visits to monitor pregnancies and refer women to primary healthcare facilities; discuss birth preparedness; and introduce postpartum family planning (PPFP).
   c. Upgrade LHW Information System; mandate LHWs to report maternal deaths.

2. **Primary Healthcare Facilities (BHUs/RHCs):**
   a. Strengthen PHC facilities for providing essential maternal and newborn care services through infrastructure development, repairs and renovations, training and deploying of healthcare providers with desired competency levels; and providing equipment and supplies.
   b. Train the staff to provide ANC, normal delivery, postpartum and neonatal care, neonatal resuscitation, PPFP, recognition of obstetric and neonatal danger signs; and referral to higher level facilities.
   c. Strengthen supply chains to ensure continuous availability of essential equipment, supplies, and medicines including contraceptives.
   d. Develop referral systems and protocols for timely transfers of high-risk cases.
   e. Link with ambulance services for transportation of complicated cases to higher level hospital.
   f. Ensure data entry in DHIS on MNCH indicators; mandate reporting of maternal and perinatal deaths, and near-miss maternal complications.

3. **Primary Healthcare Facilities (Private Sector):**
   a. Assess the capacity to provide essential maternal and newborn care services (ANC, normal delivery, postpartum and neonatal care, neonatal resuscitation, PPFP, recognition of obstetric and neonatal danger signs; and referral to higher level facilities).
   b. Examine infrastructure (focusing on accessibility, space, privacy, cleanliness, and utilities); and availability of proper equipment and supplies;

c. Evaluate the qualifications and competencies of the healthcare providers.
d. Ensure that there is continuous availability of essential equipment, supplies, and medicines including contraceptives.
e. Ensure that staff is trained in identification of high-risk cases and emergency situations; and referral mechanisms are in place for complicated cases and links to ambulance services for pre-hospital transportation are functional.
f. Require the private sector health facilities to regularly provide information on RMNCH indicators, including maternal and perinatal deaths and near-miss obstetric complications, to the DHIS.

4. **Mid-Level Healthcare Facilities (RHC/THQH/DHQH):**
   a. Enhance the capacity of mid-level healthcare facilities to handle complicated cases and provide BEmONC services by providing necessary training to the staff, and upgrading the health facilities as necessary through construction, repairs and renovations, utilities, equipment, and supplies.
   b. Establish 24/7 emergency obstetric and newborn care services.
   c. Develop referral systems and protocols for timely transfers of high-risk cases.

5. **Mid-Level Healthcare Facilities (Private Sector Secondary Hospitals/Maternity Clinics**):
   a. Evaluate the capacity of the facilities to handle complicated cases and provide BEmONC services: competencies and skills of the healthcare providers; adequacy of infrastructure (space, privacy, cleanliness, and utilities); availability of equipment and supplies.
   b. Ensure that the facility is fully operational with trained staff available for 24/7 handling of emergency obstetric and newborn care services.
   c. Evaluate the availability of referral and transportation systems.

6. **Secondary/Tertiary Care Hospitals (DHQH/Tertiary Hospitals/Private Hospitals):**
   a. Set up the triage system and fully equipped and staffed emergency room for obstetric and newborn complications, and waiting areas for attendants.
   b. Equip the secondary/tertiary care hospitals with specialized maternal and neonatal care units including specialized labor rooms, obstetrical rooms, and neonatal intensive care units.
   c. Promote collaboration between levels of care to ensure smooth transitions.
   d. Set up the systems for accepting referrals and providing feedback.
   e. Initiate confidential inquiry of all maternal deaths using standard procedures.

Ensure Quality Assurance of Maternal Healthcare:

1. **Family Planning:**
   a. Develop and enforce quality standards for family planning services.
   b. Conduct regular audits and assessments to monitor compliance.
   c. Train healthcare providers in contraceptive counseling and methods.

2. **Antenatal Care and Postpartum Family Planning:**
   a. Establish quality assurance mechanisms for antenatal care and postpartum family planning services.
   b. Monitor adherence to guidelines and protocols.
   c. Ensure comprehensive counseling on family planning during antenatal care.
3. **Midwifery Services**:
   a. Develop quality standards for midwifery services.

b. Provide ongoing training and mentorship for midwives.
c. Conduct competency assessments and regular evaluations.

4. **Emergency Obstetric and Newborn Care:**
   a. Implement standardized protocols for emergency obstetric and newborn care.
   b. Ensure timely availability of essential drugs and equipment.
   c. Regularly simulate emergency scenarios for healthcare providers.

5. **Nutrition, Infection Prevention, and Breastfeeding:**
   a. Integrate nutrition counseling into maternal healthcare services.
   b. Enforce infection prevention measures in healthcare facilities.
   c. Promote exclusive breastfeeding through counseling and support.

6. **Improve Accessibility of Maternal Healthcare:**
   a. Strengthen Existing Systems:
      i. Enhance transportation networks to facilitate access to healthcare facilities.
      ii. Establish emergency transport services for obstetric emergencies.
      iii. Expand healthcare facilities in underserved areas.
   b. Health Insurance Schemes:
      i. Introduce community-based health insurance schemes to reduce financial barriers.
      ii. Advocate for government support and subsidies to make healthcare affordable.

7. **Introduce Women-Centered Healthcare:**
   a. Training Programs:
      i. Incorporate gender-sensitive training in pre-service and in-service training for healthcare providers.
      ii. Promote women's participation in healthcare decision-making.

8. **Develop Midwifery Training Program:**
   a. Establish midwifery schools and programs aligned with International Confederation of Midwives (ICM) standards.
   b. Ensure comprehensive training of midwives to provide high-quality care during pregnancy, childbirth, and the postnatal period.
   c. Encourage midwives to work in various healthcare settings, including rural areas.

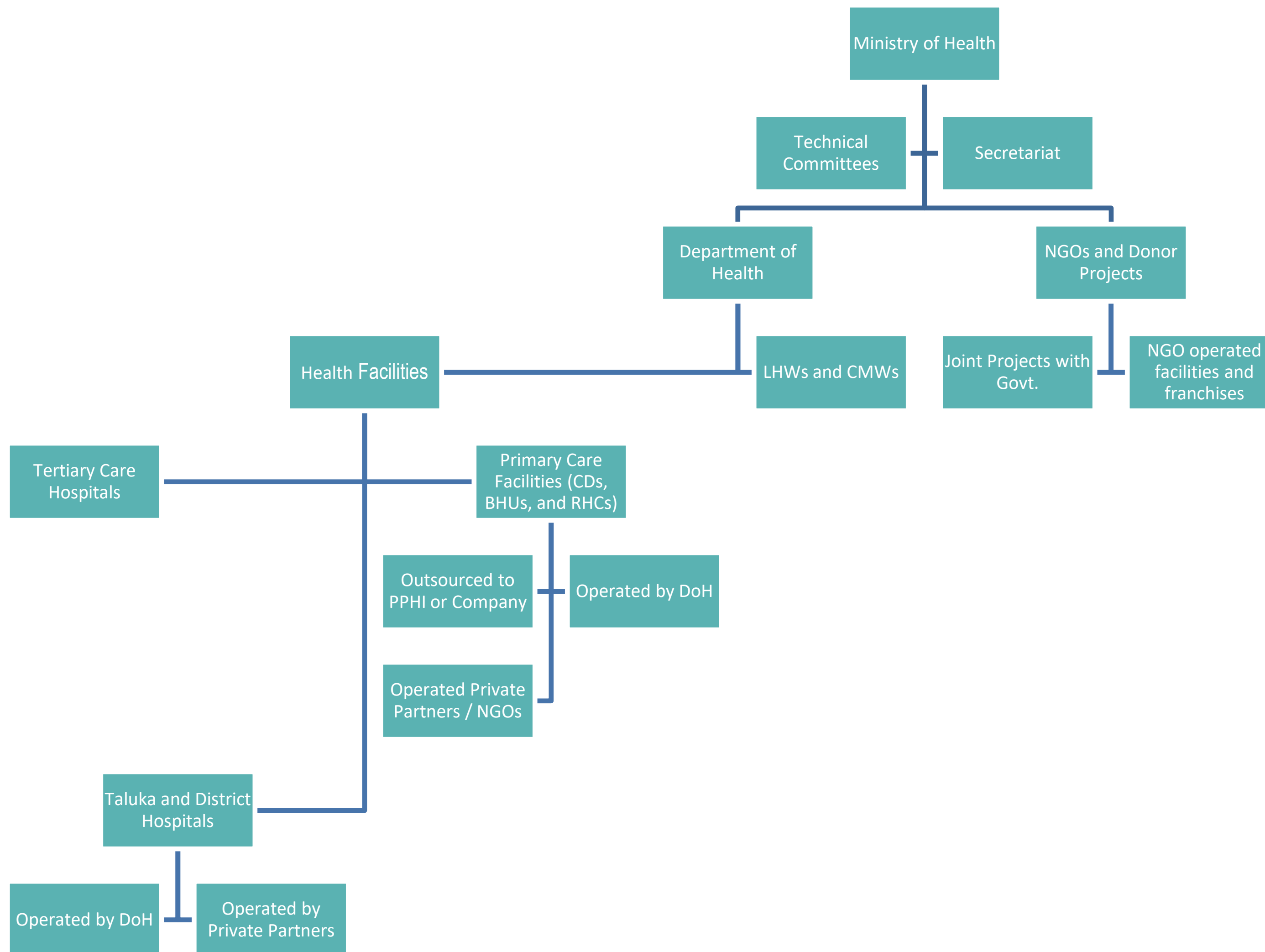
9. **Address the Three Delays in Approaching Emergency Care:**
   a. Delay in Seeking Care:
      i. Conduct community awareness campaigns on recognizing obstetric emergencies.
      ii. Promote the importance of seeking care promptly during pregnancy and childbirth.
   b. Delay in Reaching Care:
      i. Improve transportation networks and ambulance services.
      ii. Establish help lines and hotlines for immediate assistance.
   c. Delay in Receiving Care:
      i. Ensure healthcare facilities are equipped, staffed, and trained for EmONC.
      ii. Conduct regular drills and simulations to prepare healthcare providers for emergency situations.

Monitoring and Evaluation (Facility Level Data Collection):

1. Develop a monitoring and evaluation framework to track progress and assess the impact of interventions.
2. Regularly collect data on maternal and perinatal mortality rates, service utilization, and quality indicators.
3. Conduct periodic assessments and evaluations to identify areas for improvement.

STAGE	**M&E Indicators by CoC LEVEL**			
Platform	**Community LHW/CMW**	**Midwifery BHU/RHC**	**BEmONC RHC/THQH/DHQH**	**CEmONC DHQH/Tertiary**
Pre-marital	Premarital counseling sessions (#)	Couple counseling session (#)	Premarital screening & genetic counseling (PMSGC) sessions (#)	Premarital screening & genetic counseling (PMSGC) sessions (#)
Pre-pregnancy	# women reached with FP & nutrition information	# women received contraceptives; iron	# women received contraceptives; iron	# women received contraceptives; iron
Pregnancy	# women reached with information on ANC, nutrition & birth preparedness; # of referrals for ANC	# women received ANC, TT; # referrals for hi-risk pregnancies	# women managed for complications of pregnancy	# women managed for complications of pregnancy
Delivery	# of referrals for facility delivery; # of home deliveries by birth attendant type;	# of: normal delivery; episiotomy; neonatal resuscitation;	>Plus: # needing basic EmONC; # PPIUCD/PP Implant insertions; near-miss cases; maternal and neonatal deaths	>Plus: # needing CEmONC; # near-miss cases and maternal and neonatal deaths investigated;
Postpartum and neonatal care	# women who started exclusive breast feeding; # women referred for complications;	# of: postpartum & neonatal care visits; PPFP acceptors; referrals for complications;	>Plus: # cases received for complication management; # referred to CEmONC;	>Plus: # cases needing CEmONC care; # near-miss cases and maternal and neonatal deaths investigated;
Post-birth	# women continuing FP; growth monitoring of infants; breast feeding; and infant feeding practices;	# women received routine and post-birth FP; advanced support for breastfeeding; treatment of anemia; immunization;	# referrals of newborn babies by reason; # of FP clients served by method; # referrals and treatment of anemia.	# of women provided care for complications of postpartum period; severe malnutrition; # of FP clients by method.

Annex D: Organogram of Provincial Health Departments



Annex E: Theory of Change [Strategic Guidelines for Maternal Survival]

Problem Statements	
Public Health Concerns	- High maternal and perinatal mortality and morbidity - High fertility and low use of modern contraceptives - Poor quality of antenatal, intra-partum, postpartum, and neonatal care - Accessibility of quality emergency obstetric and newborn care
Major Obstacles	- Gaps in the continuum of maternal and neonatal healthcare - Absence of standard midwifery care due to lack of qualified midwives - Deficient financing of maternal and neonatal healthcare in the public sector - Inefficient quality assurance systems for maternal and neonatal healthcare across public and private sectors
Access Barriers	- Women's status in society, low education, restricted mobility, and compromised empowerment - Inadequate and inefficient home-based primary health care through community health workers - Lack of organized pre-hospital transportation, particularly in the rural areas - Availability, accessibility, and affordability of maternal and neonatal healthcare and family planning
Government Action	- Lack of political commitment toward women's reproductive health rights and maternal and neonatal healthcare - Inconsistencies in government's rhetoric and action regarding maternal and neonatal health - Absence of coherent policies on the financing, quality assurance and human resource development for health - Absence of a national strategy for maternal and neonatal health and survival
Technical Difficulties	- Limited provincial resources for maternal and neonatal health after the devolution - Lack of coordination between federal and provincial health and population welfare departments - Provincial healthcare commissions largely ineffective in enforcing quality standards in healthcare - Lack of a clear and coherent national policy on women's health and reproductive rights

Pathways to Impact			
Inputs & Processes	**Activities & Outputs**	**Outcomes**	**Impact**
Health services assessment (HSA) to identify the gaps in RMNCH care in public sector health facilities at the community, midwifery, BEmONC, and CEmONC levels.	Health facility survey using LQAS in the four provinces (excluding NMDs) in remote rural, rural, and urban/peri-urban strata in public and private sectors. Mapping of services in major urban areas and NMDs.	Focused situational analysis including data on infrastructure, HR, equipment & supplies, utilization, and QoC of family planning, antenatal care, delivery care, BEmONC, and CEmONC.	Data thus collected to help in detailed planning and costing of the strategic interventions proposed in this document and provincial and district levels.
Preparation of detailed implementation plans with budgets and available resources and financing.	District-level planning and budgeting exercises resulting in provincial PC-1 documents comprising strategic interventions (construction, purchases, training, recruitment).	The process of upgrading of RMNCH services started; DHIS updated; M&E plans finalized; QoC systems in place.	Infrastructure developed for an operational 4-tiered continuum of care (CoC) model implemented in each district according to local needs.
Skilled healthcare workforce: retraining of LHWs, CMWs and LHVs, training of new Midwives, licensing, and recruitment (LHWs, Midwives, doctors, and Ob/Gyn specialists).	Training needs assessment of all cadres of healthcare providers; developing and pretesting pre-service and in-service training modules; practical training sites; support for assessment and licensing.	Optimally skilled healthcare providers (esp. Midwives meeting the international standards), who have received the minimum required practical experience and are licensed by competent authorities.	HR prepared and deployed for an operational 4-tiered continuum of care model in each district, which is customized according to local needs.
Updating service delivery standards and strengthening quality assurance and accountability mechanisms.	Updating service delivery standards at each level to meet international requirements; HCCs charged with the responsibility of licensing and QoC.	Public and private facilities providing RMNCH care meet international standards and are under direct supervision of HCC.	Improved and sustained quality of RMNCH care in the district across public and private sector health facilities at each level of of care.
Developing customized modules for dynamic on-the-job training and supportive supervision of the facility-based staff; and updating of training curriculum for Midwives according to WHO standards.	Conducting a rapid assessment of training needs for in-service training, and adapting and/or updating national and international competency-based curricula for pre-service training of Midwives.	On-the-job training and supportive supervision systems developed; training curricula of Midwives updated according to ICMW criteria; training schools and institutions identified and readied.	Fully trained human resources available to staff each the midwifery, BEmONC, and CEmONC levels of RMCNH care in the districts.
Revival and strengthening or LHWs' role in community health education, and awareness programs.	Training need assessment of LHWs and updating pre-service and in-service training curricula.	Refresher training for current LHWs and training of newly recruited LHWS under the revised curriculum.	LHWs better prepared to provide community-based RMNCH care as part of CoC model.
Collaboration with CBOs, NGOs, international organizations, and private sector partners.	Mapping of the ongoing and future projects and programs in public and private sector.	Developing strategies to integrate all interventions to avoid duplication and wastage of resources.	An integrated program for improving RMNCH care in Pakistan standardized for each province/district.
Revising outsourcing and public-private partnership frameworks.	Evaluation of PPP initiatives in the provinces.	Guidelines for coordination between PPP and district health system.	Better coordination resulting into improved function of CoC model.

Key Assumptions	- The provincial governments will be ready to provide administrative and financial support to develop and implement the program for strengthening RMNCH services. - Legislation and policymaking, as and when needed, will be accomplished to facilitate implementation. - All stakeholders including the departments of health and population welfare, the private sector partners, provincial HCCs, and PMDC and PNC will support program implementation. - District health management and healthcare providers at all levels will be motivated enough to make the program successful. - International and bilateral donor agencies will support by providing technical and financial help as needed.
Risks and Mitigation	- Delays in legislation, policymaking, and financing from the government side (focused advocacy campaign to bring all stakeholders on the same page; seeking political support from the highest tiers of government). - Lack of human resources and logistic difficulties in retraining of CMWs/LHVs and training of Midwives (mobilizing all available resources including midwifery/LHV and nursing schools, DHDCs and PHDC, district hospitals, and PPHI-operated training institutions; engaging BHU and RHC staff in the training). - District health managers (DOH, PWD, PPHI, etc.) are not fully on board with the program (focused advocacy and orientation of key leaders at the district level; including them at each stage of planning). - Poor response from international and bilateral donor agencies (engagement of the development partners at the planning stage; striving to raise funds from within country resources including government, PPP partners, and philanthropic organizations; seeking support from local and national NGOs to provide logistic and technical support).

Annex F: Strategic Guidelines for Maternal Survival, Pakistan: Logical Framework

Narrative Summary	Performance Indicators	Means of Verification	Critical Assumptions
Goal To reduce maternal and perinatal mortality ratios/rates through a comprehensive set of social sector and health services interventions identified under the National Maternal Survival Strategy. **Purpose** To improve women's status in society and the quality and accessibility of the RMNCH services continuum of care in both public and private health sectors.	Reduce maternal mortality ratio (MMR) to 70 - 100 per 100,000 live births by 2030 from the current 186 per 100,000 (2019); Reduce perinatal mortality rate (PNMR) to less than 35 per 1,000 live births by 2030 from the current 70 per 1000 (2019) Reduce total fertility rate to < 3.0 by the 2030 from the current 3.6 (2017) Reduce neonatal mortality rate to less than 30 per 1,000 live births by 2030 from the current 39 (2017)	National surveys designed and conducted by National Institute of Population Studies (NIPS) and Pakistan Bureau of Statistics (PBS) with donor support: Demographic and Health Survey (DHS); Pakistan Demographic Survey (PDS); and Multiple Indicator Cluster Surveys (MICS). *Recommended specially designed Baseline and End-line Surveys.* Other special/localized surveys; Aggregated data from District Health Information System (DHIS).	Timely completed provincial planning and budgetary frameworks for the proposed interventions. Political and economic stability in the country is achieved and sustained. Political commitment with financial support for girls' education, women's employment; and focus on women-friendly and women-centered health services. Provincial governments will be on board with the interventions within their health programs.

Narrative Summary	Performance Indicators	Means of Verification	Critical Assumptions
Output-1 Improved access to and utilization of maternal and neonatal health and family planning services including EmONC services.	Increased numbers of licensed midwives trained and practicing; District-wise numbers of BHUs (day clinics and 24/7) and RHCs providing RMNCH care (including all modern contraceptives and with no stock-outs) meet the WHO and UNFPA standards. Meet the WHO standards for availability of adequately staffed and equipped basic and comprehensive EmONC facilities (including neonatal emergency care units) in each district (baseline TBD). Increased proportion of pregnant women who made ≥ 4 ANC visits to 75% from the current 51% (2017) and of the women who received *comprehensive ANC* to 50% from the current 21% (2019). Increased proportion of institutional deliveries to 85% from the current 66% (2017). Increased modern contraceptive prevalence rate (mCPR) to 55% from the current 24% (2017). Reached the target of PPFP: proportion of pregnant women receiving PPFP to be 20% or above (baseline NA).	DHS/PDS MICS for district level data DHIS aggregated data LHWIS aggregated data Hospital information systems data from public and private EmONC facilities. Periodic district surveys (facility-based review of medical records every 6-12 months)	Appropriate and timely financing for repairs/renovation, upgrading, and staffing of public sector health facilities is available. Upgrading of public sector health facilities is diligently carried out. Provincial Health Care Commissions are fully staffed and equipped to actively monitor quality and regulate private sector health facilities. Updating and monitoring of the *Sehat Sahulat* schemes is implemented. Sustained and reliable government investment in social sectors, particularly girls' education, water and sanitation, and community-based women's awareness programs.

Narrative Summary	Performance Indicators	Means of Verification	Critical Assumptions
Output-2 Improved quality of maternal and neonatal health care and family planning, with particular focus on ANC, PPFP, delivery care, postpartum and neonatal care, and Emergency care.	Quality assurance standards and procedures for each level of CoC are developed and adapted by provinces and districts. At least 80% of the health facilities at each level of CoC meet or exceed at least 80% of the standards. Healthcare providers' training in QA standards is completed for all public sector providers. Provincial HCCs enforce QA standards to all private sector health facilities in each district. Maternal and perinatal deaths are reported and confidential inquiries conducted; near-miss obstetric complications are reported and discussed in CPCs.	District progress reports Training management information systems Periodic QoC evaluation surveys by provincial HCCs (annual) Special surveys including clinical audit exercises and patient exit interviews conducted at least once a year	Realistic and action-oriented support from provincial and district governments, line departments, and provincial HCCs. HR requirements are met on time and are sustained; vacancies and absenteeism of staff are dealt with promptly and decisively. Local planning, decision making and management are devolved to the district level with adequate resources and supportive supervision from the provincial authorities. There is no political resistance from the private sector health facilities in accepting the HCC regulations and supervision.

Narrative Summary	Performance Indicators	Means of Verification	Critical Assumptions
Output-3 Streamline referral and pre-hospital transportation systems and services for obstetric and newborn complications and emergencies.	Needs for ambulances in public sector health facilities assessed and submitted for procurement and deployment. Connected all midwifery level facilities with at least two types of pre-hospital transportation systems (public/private). Development of referral protocols for obstetric and newborn complications, completed and endorsed by MONHSR&C and provincial DOHs. Training of doctors and midwives at midwifery and BEmONC/CEmONC level facilities in referral protocols for obstetric and newborn complications.	DOH reports on ambulance services in districts; community supported pre-hospital transportation systems; and communication mechanisms. DHIS: Number of referrals made from midwifery and BEmONC level health facilities to higher level hospitals. DHIS: Number of cases of obstetric and neonatal complications received and treated at the CEmONC level.	Provincial governments will provide the budgets for procurement, operation, and maintenance of ambulances. Community-based pre-hospital emergency transportation systems will be set up and connected with emergency telephone numbers. Federal MONHSR&C and provincial DOHs will jointly develop referral protocols for obstetric and newborn complications.

Narrative Summary	Performance Indicators	Means of Verification	Critical Assumptions
Output-4 Setting up and/or upgrading the management information systems for monitoring and evaluation of strategic interventions. **Output-5** Use of information for decision making and mid-course corrections of strategic interventions.	Data collection and analysis and dissemination of results on a regular basis to all concerned; the proposed framework of indicators for data collection and dissemination is as follows: Maternal, neonatal and perinatal mortality Causes of maternal mortality Causes of perinatal mortality Numbers and causes of near-miss cases mCPR ANC visits (all) ANC visits (comprehensive care) Tetanus Toxoid vaccinations in pregnancy Institutional deliveries by SBA-category Caesarean sections performed Upgraded M&E frameworks and data collection strategies for RMNCH indicators adopted by provincial DOHs, with quarterly reporting and biannual provincial M&E meetings to present and discuss the progress and problems in implementation.	M&E Reports from districts M&E Reports from DOHs Special surveys including MICS and PDS Aggregated data from DHIS and LHWIS Provincial and District planning documentation and budgets	M&E systems are in place, functional, quality controlled, and upgraded to generate information required from community (LHWs), midwifery level facilities (BHUs, RHCs) and BEmONC and CEmONC level facilities (district hospitals, tertiary care hospitals). M&E Reports are generated on a regular basis and feedback is provided by provincial DOHs. Provincial HCCs are staffed and equipped to provide support in M&E operations in districts.