National

RMNCAH QI Framework

Quality Improvement Secretariat

HEU, Health Service Division, MOHFW

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National

Reproductive Maternal Neonatal Child Adolescents Health (RMNCAH) Quality Improvement (QI) Framework

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Message

The Government of Bangladesh is committed to improve the quality of health services through strengthening the health system and effective utilization of available resources. I am pleased to know that the Quality Improvement Framework for RMNCAH has been developed for Bangladesh and is in the process of publication. This framework, which shadowed the WHO guideline, will guide us to monitor the health services quality and achieve the Universal Health Coverage (UHC), which is a goal of the Government to be achieved by 2030.

The Ministry of Health and Family Welfare established the Quality Improvement Secretariat (QIS) within the Health Economics Unit in 2015. The QIS is mandated to develop the standards, guidelines, and tools for improvement of quality of health services. In the meantime, several important documents related to quality standards and cares have been developed under the leadership of QIS. It is now the time to implement the quality standards at the health facilities across the country and monitor the indicators for decision making and further improvement.

I would like to appreciate the QIS for their hard work and innovative approaches to address the quality of services in the country. I would like to thank the experts who participated in and contributed to the development of this framework including the stakeholders, such as DGHS, DGFP, Save the Children, USAID, UNICEF, UNFPA and other development partners, health research organizations, professional bodies and specialists.

I anticipate more active roles of the QIS in achieving the UHC in Bangladesh.

Joy Bangla, Joy Bangabandhu

Long live Bangladesh.

Zahid Maleque

Dr. Md. Murad Hassan, MP
State Minister
Ministry of Health of Family Welfare
Govt. of the People's Republic of Bangladesh

Message

The Government of Bangladesh has targeted to achieve the Universal Health Coverage (UHC) by 2030. Accessibility to and quality of health care services are the major challenges to achieve the UHC. In order to address the quality of healthcare services, Ministry of Health and Family Welfare (MOHFW) has established the Quality Improvement Secretariat (QIS) in 2015 at the Health Economics Unit (HEU) which is responsible to develop the national standards, guidelines, SOPs and tools.

I am very happy to know that the QIS has developed the framework for the improvement of quality of reproductive, maternal, neonatal, child and adolescent health (RMNCAH) services. I believe this guideline would help the program managers and the service providers in designing, delivering and monitoring the quality RMNCAH services in Bangladesh.

I would like to appreciate the QIS for their leadership role in developing this and other guidelines for Bangladesh. Such guidelines are important for attaining the quality of services that the government is committed to achieve. I would like to thank the stakeholders and experts (DGHS, DGFP, Save the Children, USAID, UNICEF, UNFPA and other development partners, health research organizations, professional bodies and specialists) which have contributed in developing this document under the leadership of QIS.

Joy Bangla, Joy Bangabandhu

Long live Bangladesh.

Dr. Md. Murad Hassan, MP

Md Ashadul Islam
Secretary
Health Service Division
Ministry of Health of Family Welfare
Govt. of the People's Republic of Bangladesh

Message

Impressive progress has been made Bangladesh in reducing child and maternal mortality over the last decades. As a priority, it has been implementing a number of maternal, child and adolescent health programs for further improvements in child, maternal reproductive health outcomes, and many of the successful programs are now being progressively scaled up. While there has been progressive improvement in the coverage of reproductive, maternal, newborn, child and adolescent health (RMNCAH) services, there is evidence that these lifesaving interventions are not always delivered with sufficient quality. Poor quality of services may even be detrimental, harming the health of the individual as well as leading to adverse effects on future health-seeking behaviour of communities.

In addressing the issue of quality in Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCAH) services Quality Improvement Secretariat of the Ministry of Health and Family Welfare has developed the "RMNCAH QI Framework" which is expected to bring the quality of care at the centre of activities. The framework will promote the quality improvement across the Reproductive Maternal-Newborn-Child-Adolescent Health continuum at all levels that aims to achieve "effective coverage", meaning high and equitable coverage of quality care.

I hope that the program people and the health professionals will use the RMNCAH QI Framework for enhancing their contributions in their respective settings.

Md Ashadul Islam

Prof Dr Abul Kalam Azad
Director General
Directorate General of Health Services (DGHS)
Health Services Division
Ministry of Health and Family Welfare

Message

Bangladesh is committed to achieve the Sustainable Developmental Goals (SDGs) by 2030. One of the key issues of achieving the targets is to improve the quality of healthcare services and ensure universal health coverage.

Bangladesh has achieved remarkable progress in reduction of maternal, child and neonatal mortality during the past two decades. To achieve the current sector program and SDG goals, Bangladesh needs to continue its efforts to further reduce the maternal, child and neonatal deaths. Due to effective interventions, coverage and utilization of healthcare services have improved. With increasing numbers of births in health facilities, attention has to be given to the quality of care. Good quality care improves health outcomes and give clients, their families and the health care providers a positive experience. High-quality care is also integral to the right to health and the route to equity. This framework clearly defines the Reproductive, Maternal, Neonatal, Child and Adolescent Healthcare (RMNCAH) quality standards and indicators for measuring and monitoring the quality of services. I believe this document will be helpful to the providers and managers at all levels of healthcareservice facilities.

I would like to appreciate the Quality Improvement Secretariat (QIS)of Health Economics Unit (HEU) for the leadership to prepare a framework for improving the quality of RMNCAH services since there was no such guideline for our country. I would like to thank all the stakeholders, such as DGHS, DGFP, Save the Children, USAID, UNICEF, UNFPA and other development partners, health research organizations, professional bodies and specialists and public health experts, who provided technical inputs in preparing this framework. I am optimistic that this document would be effectively used in the country to improve the quality of RMNCAH services.

Prof Dr Abul Kalam Azad

Md Shahadt Hossain Mahmud
Director General (Additional Secretary)
Health Economics Unit

Message

Article 15(a) of the Constitution of Bangladesh recognizes thebasicnecessity of life including medical care and the Government of Bangladesh (GoB), in line with this constitutional proviso, is mandated to provide Primary Health Care (PHC) to all the citizens of the country. In order to accomplish the mandate,GoB has initiated Essential Services Package (ESP) and also established a Quality Improvement Secretariat (QIS) under the Health Economics Unit (HEU) of the Ministry of Health and Family Welfare (MOHFW). The prime responsibilities of QIS are included with development ofguidelines, SOPs, tools and standards to improve quality of healthcare services toachieve Universal Health Coverage (UHC) and Sustainable Development Goals (SDGs) by 2030.

Meanwhile the government of Bangladesh has achieved tremendous success in providing health care services to the citizens. However, there is clear evidence that at this moment quality remains as a concern due to various reasons. As a matter of fact, there are wide variations in standards of health care within the health care delivery systems. Poor quality of care is considered as one of the key obstacles of achieving the SDGs and UHC by 2030. Considering this, the QIS has taken initiative to prepare a framework for improving the quality of Reproductive, Maternal, Neonatal, Child and Adolescent Healthcare (RMNCAH) services since there was no such guideline for the country.

This document is primarily based on the WHO's standards for improving quality of RMNCAH services. It focuses particular attention on people who have a strategic responsibility for quality health services.It is expected that this document will provide decision-makers, managers and service providers workingin health sector of Bangladesh with a systematic process of implementing and monitoring the quality of RMNCAH services. Furthermore, the standards and indicators as suggested in this document will help themto decide on which components of quality they wish to focus considering the local context.

The QIS has involved a wide range of stakeholder from GO, NGO, INGO and development partners(vizDGHS, DGFP, Save the Children, USAID, UNICEF, UNFPA),health research organizations, professional bodies and specialists (such as Pediatricians, Obstetricians & Gynecologists), and public health experts to develop thisframework. Also series of meetings and a national validation workshop with the stakeholders were held to finalize the document.

We hope this quality improvement guideline will be useful to policy makers, managers and service providers working at different levels in health sector to understand details about RMNCAH service standards and indicators to monitor and measure the progress. The Health Economics Unit expresses its gratitude to all the contributors for their technical assistance in preparing this important document and immensely believes that this document will be effectively used by the managers and service providers of health facilities at all tiers in Bangladesh.

Md Shahadt Hossain Mahmud

Preface

While there has been progressive improvement in the coverage of reproductive, maternal, newborn, child and adolescent health (RMNCAH) services, there is evidence that potentially lifesaving interventions are often delivered with insufficient quality. Several studies document that the quality of care provided to newborns and children is often poor, particularly at the hospital level and that severe deficiencies exist in the quality of interventions for maternal health, for both routine and emergency care. The same holds true for the quality of care provided within the private sector. Slow progress towards good health outcomes, as well as low utilization of health-care services in many settings, can be partially attributed to the poor quality of the services provided. Clearly, universal coverage of health-care services will not result in improved health outcomes and saved lives if the quality of the interventions is insufficient. Poor quality of services may even be detrimental, harming the health of the individual as well as leading to adverse effects on future health-seeking behaviour of communities.

In several recent meetings held in Member States of the South-East Asia Region on child, adolescent and maternal health, the national programme managers expressed the need to develop quality improvement (QI) systems across reproductive, maternal, newborn, child and adolescent health (RMNCAH) standard guidelines and assessment tools.

RMNCAH QI framework is a strategic framework for health service delivery has developed that must move beyond the traditional debates about provision of services at the community versus health facility and referral levels, or vertical diseasebased versus integrated programmes. Evidently, neither the provision of services through community health workers without a functioning referral system for the very sick, nor detached tertiary care facilities serving the few and leaving many to die uncounted in the communities, would provide as much value as a functioning system providing quality care for all newborns, children, adolescents and mothers across all levels.

The RMNCAH QI framework proposes a quality improvement (QI) system that extends across the RMNCAH continuum and at all levels of care and aims to achieve “effective coverage”, meaning high and equitable coverage of quality care. It delineates activities to take place at the national, divisional and the facility level.

This document will definitely improve the quality of health care for all mothers, newborns, children and adolescents by identifying and addressing the key areas for improvement and bottlenecks that hinder provision of care with appropriate quality at various levels.

Dr Md Aminul Hasan
Director Hospitals & Clinics. DGHS
& Focal Person
Quality Improvement Secretariat
Ministry of Health of Family Welfare

Acronyms

UHC	Universal Health Coverage
SDG	Sustainable Development Goal
MDG	Millennium Development Goal
DHS	Demographic Health Surveys
MICS	Multiple Indicator Cluster Surveys
Gho	Global Health Observatory
BMMS	Bangladesh maternal mortality and health care
BDHS	Bangladesh demographic and health survey
SOP	Standard Operating Procedures
MNCH	Maternal Neonatal And Child Health
BENAP	Bangladesh Every Newborn Action Plan
HPNSP	Health Population and Nutrition Sector Program
MMR	Maternal Mortality Ratio
NMR	Neonatal Mortality Ratio
U5MR	Under Five Mortality Ratio
WHO	World Health Organization
STIs	Sexually Transmitted Infections
TFR	Total Fertility Rate
UHC	Universal Health Coverage
MNCAH	Maternal Neonatal Child and adolescent Health
SEARO	South East Asia Regional Office
QI	Quality Improvement
QIS	Quality Improvement Secretariat
MPDSR	Maternal and Perinatal Death Surveillance and Response
CRVS	Civil Registration and Vital Statistics
HR	Human Resources
NIDs	National Immunization Days

ARH	Adolescent reproductive health
EmONC	Emergency Obstetric and Newborn Care
KMC	Kangaroo Mother Care
EPI	Extended Program of Immunization
ARI	Acute respiratory infection
IYCF	Infant And Young Child Feeding
TFR	Total Fertility Rate
NRR	Net Reproduction Rate
FP-	amily Planning
EOC	Emergency Obstetric Care
PPH	Post Partum Hemorrhage
PSBI	Possible Serious Bacterial Infection
LBW	Low Birth Weight
SCANU	Special Care Newborn Unit
AMTSL	Active Management of Third Stage of Labor
ANC	Ante Natal Care
MIS	Management Information System
LMIS	Labour Market Information System
SAM	Severe Acute Malnutrition
CFR	Case Fatality Rate
DHIS	Data Aggregated Within Health Management Information Systems
IMCI	Integrated Management Of Childhood Illness
SRH	Sexual and Reproductive Health
QoC	Quality of Care
QIC	Quality Improvement Committee
WIT	Work Improvement Team
MDR	Multi Drug Regiment
PDCA	Plan Do Check Act

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Steps of Implementation at Health Facilities

Part-1

Background

1.1 Introduction

Considerable efforts have been given during the past two decades to reduce morbidity and mortality among mothers and children mainly through maternal and child health interventions. These efforts have substantially improved the utilization of services by children and women for delivery by skilled providers in developing countries. In spite of this, there are still 800 maternal and 7,700 neonatal deaths each day somewhere in the globe. An estimated 6.6 million children and young adolescents died in 2016 (5.6 million children under 5 years and 1 million children aged 5–14), mostly from preventable causes. Many of these deaths are occurring at the health facilities due to increased utilization of services. The outcome of the care in health facilities reflects the evidence-based practices used and the overall quality of services provided. Poor-quality services and care reduce the effectiveness of interventions and increase the risks for hospital acquired infections, life-long disability and death from avoidable complications and preventable causes. The quality of care depends on the physical infrastructure; availability of drugs, logistics and equipment; and presence of motivated providers and their capacity to deal with complications. Universal access to safe, effective, quality and affordable care for women, neonates, children and adolescents should be the priority to achieve the Universal Health Coverage (UHC and Sustainable Development Goal (SDG) goal 3 targets.

1.2 RMNCAH situation in South East Asian Countries

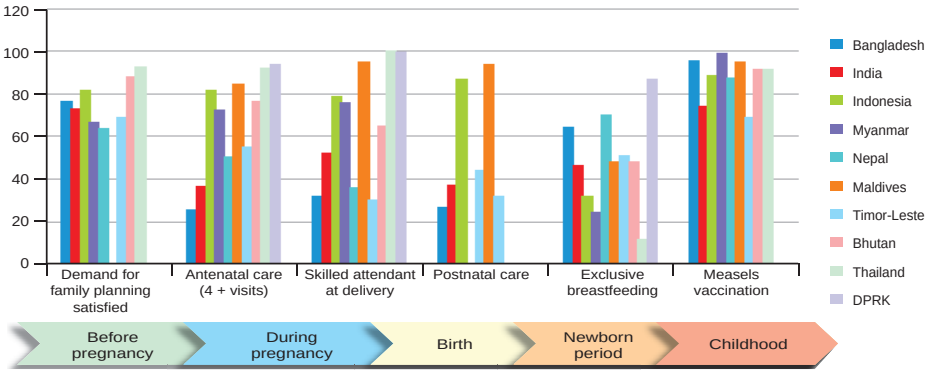
India, Indonesia, Myanmar, Bangladesh and Nepal have the highest burden of maternal and child mortality in the region. However, impressive progress has been made in the South-East Asia Region to reduce child and maternal mortality over the last two decades. Significant improvements in reproductive health outcomes have also been observed in the region. Member states have implemented maternal and child health interventions and adolescent-friendly health services that are now being progressively scaled up. Several countries of the region are trying to keep them on track to meet the Sustainable Development Goals (SDGs), especially the reduction of neonatal, child and maternal mortality.

Though progress has been made with the expansion of coverage of essential interventions in South East Asian Countries, maternal and child mortality rates

remain high in some of the countries (Fig 1.1–1.4). Available data show that there are still scopes for improving the coverage further. None of the available data provide information on the quality of healthcare services. Reductions of under-5 and maternal mortality in relation to MDG targets are shown for all the 11 South-East Asian Countries (Fig 1.2-1.4).

While there has been progressive improvement in the coverage of reproductive, maternal, newborn, child and adolescent health (RMNCAH) services, there is evidence that potentially lifesaving interventions are often delivered with insufficient quality. Several studies documented that the quality of routine and emergency care provided to newborns and children is often poor, particularly at the hospitals. The same is true for the quality of care provided within the private sector. Slow progress towards good health outcomes as well as low utilization of health-care services can be partially attributed to the poor quality of the services. Clearly, universal coverage of health-care services will not result in improved health outcomes and save lives if the quality of the interventions is insufficient. Poor quality of services may even be detrimental and may harm the health of the individuals leading to adverse effects on future health-seeking behavior of communities.

Figure 1.1: Coverage (%) along the continuum of care (without adolescent health) for countries in the South-East Asia Region



Source: Countdown country (Bangladesh, India, Indonesia, Myanmar and Nepal) profiles [primary source: Demographic Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), and other national sources]; for Bhutan, DPR Korea, Maldives, Thailand and Timor-Leste, data were extracted from latest DHS and/or MICS where available. No data were available for Sri Lanka.

Figure 1.2: Under-5 mortality rates (deaths/1000 live births) in the South-East Asia Region, by year

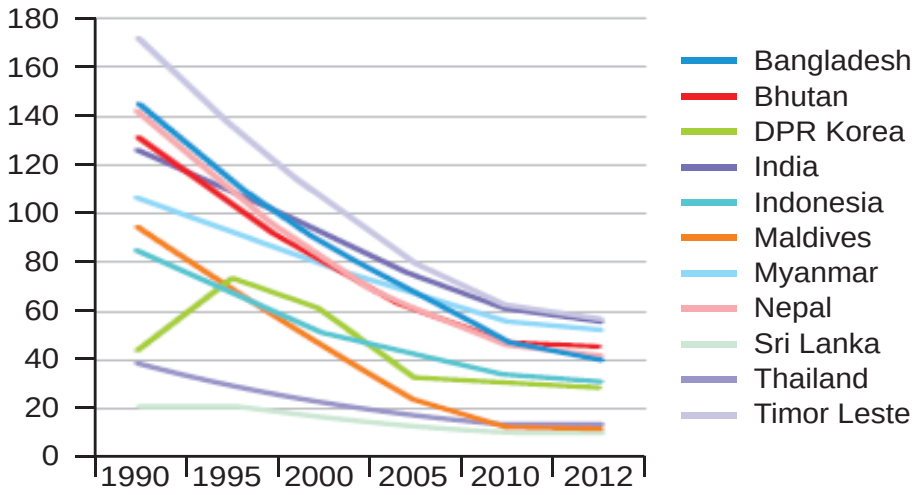


Figure 1.3: Maternal mortality ratios (maternal deaths/100 000 live births) in the South-East Asia Region

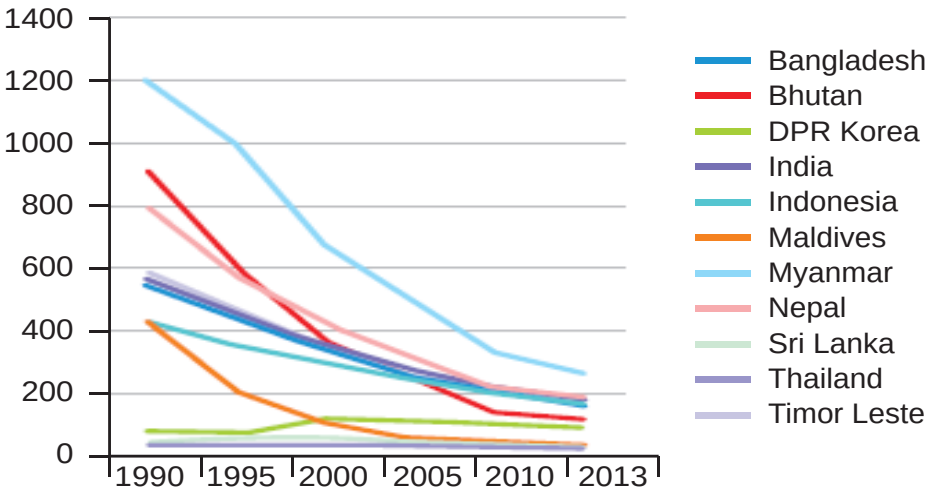
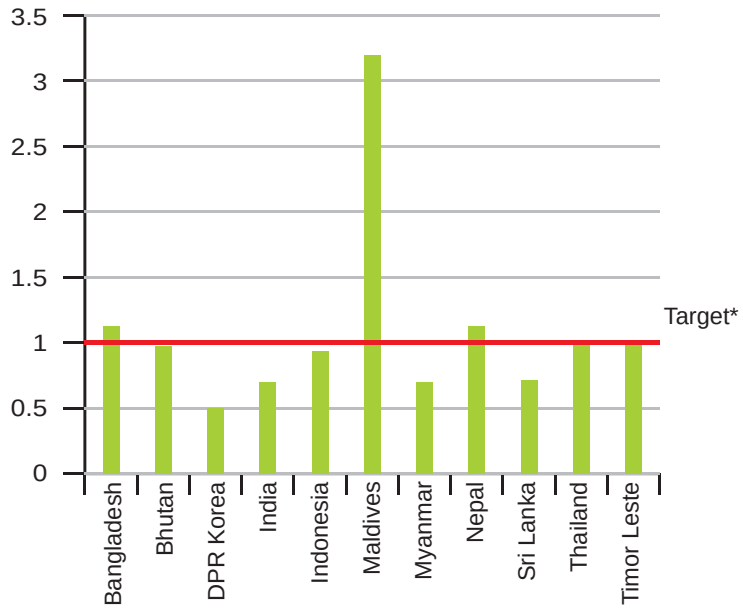


Figure 1.4: Progress towards MDG 4 in the South-East Asia Region



Target: Countries that reach the dotted red line have achieved MDG 4 and reduced the under-5 mortality rate by two thirds between 1990 and 2015; bars above the dotted red line indicate exceeding the target, bars underneath indicate insufficient progress. Source: Global Health Observatory Data Repository; http://www.who.int/gho/en/

1.3 RMNCAH situation in Bangladesh

1.3.1 Maternal, newborn and child health situation:

Bangladesh has made steady progress in improving reproductive, maternal and child health outcomes during the last decades. Child mortality has declined by over 20 percent since 2008 and the country has achieved a total fertility rate of 2.3 [BDHS 2014]. Between 1989-1993 and 2010-2014 periods, neonatal mortality, infant mortality and under 5 mortality rates declined by 46%, 56% and 65%, respectively. Thus, Bangladesh has achieved its MDG 4 target for under five mortality of 46 deaths per 1000 live births by 2015 [BDHS 2014]. Stunting, which remained stubbornly high over the past two decades, has also started to decline.

Maternal mortality has also declined significantly – from 570 in 1990s to 196 per 100,000 live births in 2016 – a reduction of 66% [BMMS 2016]. Half of the pregnant women now receive skilled care at childbirth [BMMS 2016] and about one third [34%] receive postnatal care within 48 hours of delivery [BDHS 2014]. The cesarean section rate has increased from 3% in 2001 [BMMS 2001] to 31% in 2016 [BMMS 2016], which is beyond the maximum UN recommended rate of 15%. Despite these progresses, Bangladesh could not achieve maternal and some of the indicators for child health Millennium Development Goals (MDGs). Many women, neonates, children and adolescents continue to experience morbidity or die from preventable conditions that have proven and cost effective interventions. Access to quality reproductive, maternal, newborn, child and adolescent health (RMNCAH) care services remains a challenge across all levels of care including equity among population subgroups, and between rich and the poor.

The "Promise Renewed: Bangladesh Calls for Action to End Preventable Child Deaths by 2030", was launched in July 2013 with 11 prioritized interventions related to maternal, newborn and child health. Bangladesh Maternal Health Strategy has been revised and Standard Operating Procedures (SOP) are developed for MNCH related care. A bottleneck analysis has been conducted for "Bangladesh Every Newborn Action Plan (BENAP)" that revealed a set of priority maternal and newborn interventions. Several high impact interventions are on its way to deliver through a comprehensive newborn care package.

The SDG targets set for newborn and child mortality are to reduce the neonatal mortality as low as 12 deaths per 1,000 live births and under-five mortality as low as 25 deaths per 1,000 live births by 2030. Bangladesh is currently implementing the 4th sector program, the Health Population and Nutrition Sector Program 2016-2022 [HPNSP 2016-2022]. Maternal and child health is one of the priority areas in the sector program with the emphasis on 24/7 quality of care from health facilities. The targets set for MMR, NMR and U5MR are 121 per 100,000, 18 per 1000 and 34 per 1000 live births, respectively by 2022 [HPNSP 2016-2022].

1.3.2 Adolescent and reproductive health status:

WHO defines adolescent as people between 10 and 19 years old. The vast majority (85% of total world adolescent population of 1.2 billion) of the adolescents live in developing countries. Bangladesh has an adolescent population of approximately 29.5 million, amounting to one-fifth of the country's total population. This age-group widely varies by their physical, mental and social characteristics. The physical and emotional well-being of adolescents in the context of reproductive health includes their ability to remain free from early or unwanted pregnancy, unsafe abortion, sexually transmitted infections (STIs) including HIV/AIDS, and sexual violence and coercion.

Adolescence is a period of learning and building confidence in a nurturing environment. They are, on the other hand, exposed to various risks and challenges. Sexual activity during adolescence (within or outside marriage) puts them at risk of sexual and reproductive health problems. These include early pregnancy, unsafe abortion, sexually transmitted infections including HIV/AIDS, under-nutrition and sexual coercion and violence. The median age of marriage for women in Bangladesh is 16.1 years, and 59% percent of women aged 20-24 years marred before age 18. Thirty one percent of the adolescents (15-19 years) are already mothers or pregnant with their first child. Use of modern contraceptives is low among the adolescents [BDHS 2014].For many of these sexually active adolescents, reproductive health services, such as provision of contraception and treatment for sexually transmitted infections are not available or are provided in a way that makes adolescents feel unwelcome and embarrassed. As a result, adolescents are more likely to rely on resources outside the formal health care system, such as home remedies, traditional methods of contraception, clandestine abortion or medicines from shops or traditional health practitioners.

The total fertility rate (TFR) in Bangladesh has declined from 6.3 in 1975 to 2.3 in 2014. Overall, 62 percent of currently married women at reproductive age use a contraceptive method, of which 54% use modern contraception [BDHS 2014]. One of the key concerns for family planning programs is the discontinuation rate of contraception. The BDHS 2014 data indicate that 30% of contraceptive users stop using a method within 12 months of starting. Discontinuation rates are higher for temporary methods like condoms (40 percent) and pills (34 percent) than for longer-term methods like implants (7 percent) [BDHS 2014]. Quality counseling along with effective management of complications by the health care providers could reduce the discontinuation rates.

Health service providers play a major role in providing adolescent and reproductive health services, such as management of the health related and behavioral problems, and counseling services for promotion and prevention of health problems. Health care providers can also support to influence the communities, religious leaders, and politicians to understand the health needs of the adolescents and importance of working together to address the needs.

Recent studies in different countries identified a number of health system challenges for providing quality of care that include uneven distribution of skilled and motivated health workforce, insufficient financing, weak supply chain management for essential commodities, and poor quality and utilization of routine data for evidence-based decision making. In addition, socio cultural and economic barriers for accessing health services continue to limit demand. An ambitious investment framework is, therefore, required to accelerate the

scale-up of quality RMNCAH services through enhanced domestic and external resources, and align all stakeholders around prioritized investments to progress towards Universal Health Coverage (UHC).

1.4 Quality of care in the regional countries

Published and unpublished data show that the quality of care for maternal, newborn, child, reproductive and adolescent health is unsatisfactory in all the regional countries including Bangladesh. To make further progress towards ending preventable maternal, newborn and child mortality, improvements in quality of care would be crucial. Lack of triage and inadequate assessment, late treatment, inadequate supply of drugs, poor knowledge on treatment protocols and insufficient monitoring were the key factors observed across the regional countries. Practitioners were often neither aware of nor followed evidence-based guidance on best practices.

Indonesia, for example, has increased skilled birth attendance from 41% in 1992 to 82% in 2010, but maternal and infant mortality continue to remain high. Similarly, in Bangladesh, delivery by skilled providers has increased to 50%, but decline in maternal mortality ratio is stalled since 2011 as indicated by the latest maternal mortality survey [BMMS 2016]. One of the main reasons cited for the halt of maternal mortality reduction is inadequate quality of services. Evidence from small-scale studies indicates that quality of care continues to pose a challenge. High coverage by skilled attendants will have an impact only when these attendants perform the basic life-saving procedures when needed. Several member states have scaled up the provision of adolescent friendly health services. Assessment of quality of such services in a number of countries has shown poor compliance to national standards of adolescent friendly services.

1.5 The continuum of care as part of quality services

The continuum of care can be defined over the dimension of time (throughout the life cycle, including before and during pregnancy, childbirth, the newborn period, childhood and adolescence), and over the dimension of place or level of care (community, first level health facility, referral hospital). Evidence-based packages of interventions for MNCAH, family planning, and safe abortion care have been defined and published. These packages of services will save lives and avert the majority of preventable deaths, if they are delivered with high coverage and quality across all levels of care in the continuum with functional linkages between levels of care in the health system and between service-delivery packages. Services to be provided throughout both dimensions of the continuum are illustrated in table 1.

Table 1.1: Interventions and packages of services for improving maternal, newborn, child and adolescent health along the continuum of care to be delivered at all different levels of service facilities

Levels of care	Reproductive health	Maternal health	Newborn health	Child health	Adolescent health
Hospital	– Emergency Care – Case management of STIs/HIV – Elective abortion – Post-abortion care – Treatment of medical conditions, side effects and/or complications	– Emergency obstetric care – Skilled care at birth – Management of complications of pregnancy, childbirth and immediate postpartum period, including caesarean section, blood transfusion, hysterectomy induction/ augmentation of labour – PMTCT	– Newborn resuscitation – Management of newborns with severe illness	– Emergency care – Case management of severe illness	– Emergency care – Case management for STIs/HIV – Elective abortion – Post-abortion care – Treatment of medical conditions, side effects and/or complications
Health facility	– Counselling and provision of the full range of family planning methods – Prevention and management of STIs/HIV – Elective abortion – Referral	– Monitoring of progress of pregnancy and assessment of maternal and foetal well-being including nutritional status (4 antenatal care visits) – Detection of problems complicating pregnancy – Referral	– Newborn resuscitation – Rooming in – Exclusive breastfeeding – Infection prophylaxis and treatment – Immunization – KMC – Identification, initial management and referral of newborns with any sign of severe illness – Referral	– Integrated management of childhood illness – Immunization – Malaria: Insecticide treated bed nets – Nutrition, including vitamin A and zinc – Care of children with HIV – Referral	– Integrated management of childhood illness – Immunization – Malaria: Insecticide treated bed nets – Nutrition, including vitamin A and zinc – Care of children with HIV – Referral
Community	– Health promotion and education – Adolescent and pre-pregnancy nutrition – Distribution of contraception methods, including emergency contraception – Identification of signs of domestic and sexual violence and referral – Prevention of STI/HIV	– Information and counselling – Birth planning, advice on labour, danger signs and emergency preparedness – Education about clean delivery, and early care for neonates including warmth, immediate and exclusive breastfeeding	**Promotion and support for:** – Exclusive breastfeeding – Thermal protection – Infection prevention – Care of a small baby – Recognition of problems, illness and timely care seeking, routine care visits – Birth registration	**Promotion and support for:** – Breastfeeding and appropriate complementary feeding – Recognition of problems, illness and timely care seeking – Identification and referral of children with signs of severe illness – Identification and management of diarrhoea, pneumonia and malaria	– Health promotion and education – Nutrition – Prevention of violence, smoking, HIV/AIDS and STIs, unwanted pregnancies, malnutrition and community support for youth-friendly health services

Abbreviations: PMTCT, prevention of mother-to-child transmission; STI, sexually transmitted infection; KMC, Kangaroo mother care

Note: Adapted from Conceptual and Institutional Framework of the Partnership for Maternal, Newborn and Child Health; WHO Packages of Interventions for Family Planning, Safe Abortion Care, Maternal, Newborn and Child Health; and Continuum of Care for Maternal, Newborn, and Child Health: from Slogan to Service Delivery by Kerber KJ, de Graft-Johnson JE, Bhutta ZA et al.

1.6 Goal and outcomes of the regional RMNCAH framework

The goal of the regional RMNCAH framework is to improve the quality of reproductive, maternal, newborn, child and adolescent health services through

- Identifying the key areas for improvement
- Addressing bottlenecks that hinder the provision of care
- Implementing a continuous and sustainable quality improvement (QI) system

Following RMNCAH outcomes, set by the WHO for the regional countries, are targeted to be achieved by 2020. The South East Asia Regional Office (SEARO) of WHO will support all the member countries to achieve these outcomes. The outcomes to be achieved are:

- A national quality framework is developed
- Quality standards and clinical protocols are developed in line with international standards
- Tools are developed for the assessment of quality of care against set standards and clinical protocols
- Assessors have been trained to assess quality of care against set standards, and assessments have been carried out
- A QI mechanism is established and a collaborative improvement approach is being implemented
- A reporting mechanism is established for quality of care, patient safety and adverse events

To be able to reach the targets and to provide quality of care at all levels of the healthcare system, several inputs need to be in place, notably human resources, infrastructure, drugs, supplies and equipment. These inputs need to be used appropriately and efficiently to ensure that health services are delivered according to standards and to ensure that the targets are reached with desired outcomes, i.e., the improved health of women, newborns, children and adolescents are achieved.

Part-2

RMNCAH Quality Improvement Framework for Bangladesh

2.1 RMNCAH QI Framework

This document presents the Reproductive, Maternal, Neonatal, Child and Adolescent (RMNCAH) Quality Improvement (QI) Framework for Bangladesh, which is evolved through Quality Improvement Secretariat (QIS) led consultative process involving a wide range of stakeholders. The RMNCAH QI framework is linked with WHO's Regional Framework that proposes a QI system across the maternal, neonatal, child and adolescent health continuum and all levels of care. The RMNCAH QI framework envisions a Bangladesh where there is no preventable deaths of women, newborns or children, and no preventable stillbirths; where every pregnancy is wanted; every birth is celebrated and accounted for; and where women, babies, children, and adolescents are free of HIV/AIDS, survive, thrive and reach their full social and economic potential.

The framework is developed by the guiding principles of respecting human and reproductive health rights, promoting equity and gender equality, ensuring a responsive health system to client needs, and leadership and ownership at all levels. Emphasis has been given on achieving results by enhancing accountability through effectively leveraging performance incentives, optimizing efficiency through improved productivity and integrating RMNCAH service delivery with other vertical programs (such as STI/HIV, tuberculosis, malaria etc.) while ensuring continuum of care. This framework is built on unique strengths of a growing private sector, developing partners and a vibrant civil society through strategic engagement and partnerships. The framework also highlights the need for a multi sectored approach to address key social determinants that impact RMNCAH outcomes, such as education, safe water and sanitation, transport, communication, food security as well as gender equality.

The key strategies driving this framework aim to address: 1) Disparities in equitable coverage through investments in underserved areas and accelerated action for underserved and marginalized populations including the urban slum residents; 2) Bottlenecks that prevent the delivery and scale-up of proven high impact, evidence-based interventions; and 3)Vital gaps in the health system to support an efficient and effective delivery of the high impact RMNCAH interventions through optimizing existing and mobilizing new public and private sector investments in the health sector.

Community engagement will be the key to generating demand, promoting behavior change and enhancing social accountability. The progress on improvements in quality, productivity and efficiency will be tracked through strengthened routine data, independent surveys, and implementation research of innovations. Impact and outcome level indicators in reducing neonatal, infant, and under-five mortality rates, and maternal mortality ratio (MMR) will be tracked through population based surveys. The developed Maternal and Perinatal Death Surveillance and Response (MPDSR) helps to identify and register maternal and perinatal deaths, and support appropriate actions to be implemented to prevent them. In addition to routine data, active citizens' participation and feedback, independent verification and progress reviews will be used to track achievements of the investments made in RMNCAH. Strengthening Civil Registration and Vital Statistics (CRVS) will be an essential intervention to inform better planning and enhance accountability to results. Improving data quality, analysis, use and implementation research to generate regular information on program costs and effectiveness will be the key investment priority. The Quality Improvement Secretariat (QIS) of MOHFW will enhance coordination to ensure that donor support is aligned to the sector goals for ensuring quality of care.

2.2 Vision, Mission and Goal of RMNCAH QI framework

2.2.1 Vision:

Universal access to quality of care for every mother, newborn, child and adolescent including reproductive health at all levels of care.

2.2.2 Mission:

To ensure universal access to quality of care for reproductive, adolescent, maternal, newborn and child health through stepwise national QI approach.

2.2.3 Goal:

To improve the quality care for mother, newborn, child and adolescent by identifying and addressing key areas and bottlenecks that hinder provision of quality services by 2030.

2.3 Guiding principles

This document is developed using the following guiding principles.

2.3.1 Maternal health:

- Continuum of care by ensures access to high impact evidence-based maternal health care for all women along the two facets of continuum of care – along the different stages of life cycle and along the levels of health service delivery structure.

- Ensure optimum standards by establishing a system for continued improvement in quality of care of maternal health using standard evidence-based quality management framework.
- Address the rights and equity for coverage by promoting equity and gender equality for all program interventions. Representation and participation of the disadvantaged and marginalized groups will be ensured in planning to management mechanisms to cater the needs. Equity and Rights in service delivery is not an individual's concern rather a responsibility of the health system intertwined under integrated program approach because the providers are often the same at facilities or community for various type of interventions.
- Ensure accountability in service delivery by focusing on availability, reliability and quality of care at all level with due responsiveness the Citizen's Charter or Watch Groups to ensure an effective system through continuous feedback mechanism.
- Encourage partnership to complement interventions in minimizing the service gaps and avoiding duplications. The health system will recognize the contribution of the private sector in maternal health service delivery.
- Introduce innovations for improvement by conducting operations research. Innovations will be encouraged to applied science, and technology to develop country specific program/interventions in maternal and neonatal health. Effectiveness trials will strengthen health system to achieve results-based operational management. New initiatives will endeavour to set standards that would go beyond those set previously.

2.3.2 Neonatal health:

- Prioritize and improve home and community practices through accessing quality and affordable health care services as a basic human right.
- Strengthen facility-based health care by ensuring equity at all levels of health service system. Improve effectiveness and efficiency of health services to ensure optimum utilization of available resources and realization of maximum benefits out of it.
- Improve human resources (HR), logistics and supplies by strengthening the health system
- Integrate services for neonates by ensuring the continuum of care from adolescence through pregnancy, childbirth and on to childhood and of continuum of services from home to community to facility.
- Innovative approaches for neonatal care by engaging multi-sectoral response, and sound public health policy and practice based on evidences

2.3.3 Child health

- Improve health and development of children through universal access and utilization of quality newborn and child health services.
- Establish enabling policy environment and advocacy for adequate resource allocation.
- Rapid scaling up of effective evidence-based interventions
- Increase valid immunization coverage of all vaccine preventable diseases and maintain polio free status, maternal and neonatal tetanus elimination status and reduce measles morbidity by keeping continues focus on low performing districts and urban municipalities. Undertake national immunization days (NIDs) for measles and other supplementary immunization campaigns and introduce new and under used vaccines.
- Ensure the provision of quality home and facility-based newborn and child care services including inpatient management of sick newborns/children. Prevention and management of malnutrition in high priority districts and focused facilities.
- Promote demands for services, particularly by the poor and the excluded. Support to increase capacity of households and community to identify danger signs and seek care for sick newborns and children.
- Promote practices of parents, caretakers and community on specific safety behaviours and equip them with lifesaving skills to protect their children from being injured.
- Develop GO/NGOs coordination to address child health development

2.3.4 Adolescent and reproductive health

- Adolescent reproductive health (ARH) guideline will be linked to overall development issues for attainment of the highest standard of reproductive health by adolescents. The adolescents will be empowered to take decisions and act upon them with the support from all the gatekeepers. Access to information, affordable services and communication facilities will be made available for development of ARH to the highest standards.
- The ARH guideline will be embedded in all national planning frameworks related to human development and be integrated in the development planning of the country at national and sector levels.

- The ARH guideline will have special focus on marginalized and high risk adolescent groups, including the poor, adolescents living in rural areas, and disabled.
- The guideline will be gender sensitive and will address the discriminatory practices in order to provide adolescent girls an enabling environment to grow and thrive.
- Effective interventions with capacity building of adolescents and institutions will be considered as elements of sustainability.
- Improve adolescents' knowledge on reproductive health issues by organizing effective community- based dissemination of ARH information and dissemination of ARH information through school curricula
- Create positive changes in the behaviour and attitude of adolescents' gatekeepers through advocacy at community level and mass media campaigns.
- Reduce incidence of early marriage and pregnancy through community mobilization against early marriage and pregnancy, strengthening implementation of existing laws and increasing access of married adolescents to family planning services.
- Reduce incidence and prevalence of STIs through scaling up of and improving coordination between existing interventions, dissemination of STI prevention messages through all the relevant channels and promotion of adolescent friendly services.
- Provision of easy access of adolescents to ARH and other related services by ensuring good quality of care in adolescent friendly outlets.
- Reproductive and sexual rights will be ensured by attaining the highest standards of reproductive and sexual health services.

2.4 Kay areas to focus

- **24/7 quality EMONC services:** The primary intervention for the reduction of maternal and newborn deaths is to establish24/7 quality comprehensive emergency obstetric and newborn care (EmONC) services, which is also a priority area of the current health sector program. Establishment of quality 24/7 EmONC services requires skilled and competent service providers, necessary drugs, logistics, equipment and supplies, supportive infrastructure and effective coordination.

- **Evidence-based neonatal care services:** Emphasis will be given to scale up the recent evidence-based interventions, such immediate and essential newborn care, use of 7.1% chlorhexidine on umbilical cord stump, skin-to-skin contact, early and exclusive breastfeeding, Kangaroo Mother Care (KMC), neonatal resuscitation with bag and mask, sepsis management and use of corticosteroid for management of preterm labour etc.
- **Vaccination:** Extended Program of Immunization (EPI) is a priority program in Bangladesh following the international guideline by WHO. According to BDHS 2014, 84 percent of children are fully immunized. There have been slight decline in proportion of children who had received all basic vaccinations by age 12 months.
- **Acute respiratory infection (ARI):** ARI is a leading cause of childhood illness and death. Deaths from conditions such as pneumonia can be easily prevented through early diagnosis and treatment. BDHS 2014 data suggest that 34% children (0-59 months) are given antibiotic which is much lower than the national target of 50 percent.
- **Childhood diarrhoea:** Dehydration from diarrhoea is an important cause of mortality in children. ORS packets are available in health facilities, shops and pharmacies. Currently, only 36% of under-five children with diarrhoea go to a heath facility or provider for treatment of diarrhoea.
- **Child injuries:** Over the last one decade child injury has been surfaced as a major public health problem, and drawing is an important and frequent cause of fatal child injury in Bangladesh.
- **Under nutrition:** It is an important key area posing serious challenges to the continuing progress of child survival goal. A great majority of children under 5 years of age are underweight and thus prone to infection and vitamin deficiencies.
- **Breastfeeding practices:** As per current data of BDHS 2014, 55% of infants below 6 months of age are exclusively breastfed. Breast milk contains all the nutrients needed by children in the first 6 months of life. At about seventh month, breastfeeding should be complemented by solid food to provide adequate nutrition.
- **Infant and young child feeding practices:** Children should be fed with a variety of food to ensure nutrition requirements. A breastfed child of age 6-8 months should receive 2 or 3 meals a day whereas those of 9-23 months should receive 3 or 4 meals a day.

In Bangladesh, only 23% (overall) of children aged 6-23 months are fed appropriately as per recommended IYCF practices. Infant and child feeding practices have changed very little between 2011 and 2014 (increased by 2% points) [BDHS].

- Child rights:All children and adolescents should have the means and opportunity to develop to their full potential, survival, maximum development, and access to health services which are not just basic needs of children, but fundamental human rights.
- Adolescent friendly health services: Adolescent friendly health services will be established at district, upazila and community levels with skilled heath care providers and necessary logistics for effective counselling and management of adolescent health problems.
- Strengthen supply of contraceptive commodities and counselling services: Increasing the contraceptive prevalence rate and subsequent reduction of TFR is an important government agenda to achieve NRR 1. To achieve this target, it is important to prevent stock-out of contraceptive commodities, improve quality of FP services, reduce discontinuation rate and increase the unmet needs.

Part-3

RMNCAH Quality Standards and Indicators

3.1 Maternal and Neonatal health (MNH) Quality Improvement Indicators

3.1.1 Core QI indicators for maternal and neonatal health

Domain	Indicator (all Facility-based)	Definition	MOV
Outcome	1. **Number of Maternal deaths** (impact indicator to be measured annually)	Number of maternal deaths among 100,000 live births in all RMNCAH health facilities	DHIS-2; EOC report of facilities
	2. **Facility Stillbirth rate** (disaggregated by fresh and macerated) [impact measure]	Proportion of babies delivered in a facility with no signs of life and born weighing at least 1,000 grams or after 28 weeks of gestation	Facility delivery register; EOC report; DHIS-2
	3. **Pre-discharge Neonatal Mortality Rate** (impact indicator)	Proportion of babies born live in a facility dying prior to discharge from facility	Facility pediatric ward register and delivery register
	4. **PPH Case fatality rate** (impact indicator)	Proportion of women who develop PPH in facility who die due to PPH	Facility EOC/OG ward register
	5. **Proportion of newborns with specific complications** (prematurity, possible serious bacterial infection (PSBI), asphyxia) [outcome indicator]	Proportion of newborns admitted with complications (prematurity, possible serious bacterial infection (PSBI), asphyxia) of all neonatal admissions	Pediatrics ward register and SCANU register
	6. **Neonatal cause-specific** case fatality rate [outcome indicator]	Proportion of newborns who died from a specific disease/ condition (e.g., LBW/ prematurity) among all neonates admitted with the diagnosis of the condition (LBW/ prematurity)	Pediatrics ward register and SCANU register
Output/ process	7. **Pre-discharge counselling for mother and baby** (experience of care, health information)	Proportion of women who received pre-discharge counseling for mother and baby	Exit interview; Facility EOC/OG ward register
	8. **Companion of choice** (experience of care, emotional support)	The proportion of women who wanted and had a companion supporting them during labor and childbirth in the health facility	Exit interview

Domain	Indicator (all Facility-based)	Definition	MOV
	9. Verbal or physical abuse (experience of care, respect and dignity)	Proportion of women who experienced physical or verbal abuse during labor or childbirth in the heath facility	Exit interview
	10. Breastfed within one hour of birth (newborn experience of care)	Proportion of babies born live in a facility breastfed within one hour of birth	Facility delivery register; exit interview
	11. Immediate postpartum uterotonic (AMTSL)	Proportion of women and girls who gave birth in a facility receiving prophylactic uteronic immediately (within 1 minute) after birth for prevention of PPH	Facility delivery register
	12. Newborns weighed	Proportion of newborns with documented birth weight	Facility delivery register
Input	**13. Basic Hygiene Provision**	The proportion of facilities in which delivery room shave at least one functional hand washing station with water and soap available	Facility observation with checklist
	14. Basic sanitation available to women and families	The proportion of facilities with basic sanitation available for women during and after labor and childbirth (private toilet/latrine, bathing.)	Facility observation with checklist

3.1.2 Other MNH QI indicators

Sl	Indicator	MOV	Assumptions
1.	**Standard: Evidence-based practices for routine maternal and newborn care and management of complications.**		
1.1a	**Statement:** Women are assessed routinely and are given timely, appropriate care during ANC		
	Proportion of women attending for ANC in health facility were taken history, physical examination (BP, pulse, temperature) and minimum basic investigations (Hb%, urine, blood group) done with supplements according to SOP	Facility ANC register, monitoring report	Trained service providers available for ANC in health facility
1.1b	**Statement:** Women are assessed routinely on admission, during labor and childbirth and are given appropriate care		
	Proportion of women attending for labor in health facility was assessed (including measurements of pulse, temperature and BP) without delay for full assessment according to SOP by a skilled provider	Facility delivery register; patients' clinical records; monitoring report	Trained and adequate service providers present in health facility

Sl	Indicator	MOV	Assumptions
	Proportion of all women who gave birth in the health facility who received counseling on options for pain relief during labor and child birth	Facility delivery register; monitoring report	Trained staff and analgesics available in the facility
	Proportion of all women who gave birth in health facility received oxytocin within 1 min of birth of the baby	Facility delivery register; monitoring report	Trained staff and oxytocin available in the facility
	Percentage of facilities with basic essential equipment and supplies available	Facility readiness survey	Ensure Maintenance support for the logistics
	Percentage of facilities with written, up-to-date clinical protocols	Facility readiness survey	Orientation and follow up for protocol utilization
	Percentage of staff with recent in-service training	Training database	Ensure training plan
	Percentage of facilities with recent supportive supervision	Visitors' comment book/ register	Monitoring check list in place
1.1c	**Statement:** Newborns receive essential newborn care immediately after birth according to the national guideline		
	Percentage of newborns delivered in health facility are assessed and provided immediate and essential care (drying, skin to skin, delayed cord clamping, breastfeeding) according to national guideline	Delivery/EOC register; routine MIS report; monitoring report	Trained and adequate no. of staff present in the facility
	Proportion of all newborns who did not breath spontaneously or after additional stimulation at birth were given resuscitation with a bag and mask	Delivery/EOC register; routine MIS report; monitoring report	Trained staff and equipment present in the facility
	Percentage of facilities with suction device, mask and bag (size 0 t0 1)	Facility readiness survey; monitoring report	Ensure availability and support for proper maintenance service
	Proportion of facilities with essential supplies available	Facility readiness survey; monitoring report	Ensure availability and support for proper maintenance service
	Proportion of facilities with written, up-to-date clinical protocols	Facility readiness survey; monitoring report	Availability & follow up for following protocol
	Proportion of staff with recent in-service training	Training database; monitoring report	Training database regularly updated
	Proportion of facilities with supportive supervision	Monitoring report; visitors' book	Visitors' book is maintained at facilities

Sl	Indicator	MOV	Assumptions
	Proportion of newborns breastfed within one hour of birth	Delivery/EOC register, MIS report, monitoring report	Adequate trained staff is available
	Proportion of newborns with documented birthweight	Delivery/EOC register, MIS report, monitoring report	Adequate trained staff is available
	Pre-discharge neonatal mortality rate	DHIS-2; Pediatric ward and SCANU register; MIS report	DHIS-2 and registers are regularly updated
	Facility Stillbirth rate (disaggregated by fresh and macerated)	DHIS-2; Delivery/EOC register; MIS report	DHIS-2 and registers are regularly updated
	Facility intrapartum stillbirth rate	Delivery/EOC register; MIS report	Registers are regularly updated
	Proportion of newborns with specific complications (prematurity, possible serious bacterial infection (PSBI), asphyxia)	Delivery/EOC register; SCANU/pediatric ward register; MIS report	Registers are updated regularly
	Neonatal cause-specific case fatality rate	SCANU/Pediatric ward register; MIS report	Registers are updated regularly
1.1d	**Statement:** Mothers and newborns receive routine postnatal care according to SOP		
	Proportion of all women in PNC ward in the health facility who were assessed according to SOP during 1st PNC checkup	EOC register; routine MIS report; exit interview	Trained staff available at the health facility
	Proportion of all healthy newborns born in the health facility received 1st PNC checkup within 24 hours	EOC register; routine MIS report; exit interview	Trained staff present in the health facility
	Percentage of newborns received vitamin K and full vaccination	EOC register, routine MIS report, exit interview	Trained staff, vitamin K and vaccines available in the health facility
	Percentage of newborns breastfed exclusively at the time of discharge	EOC register, routine MIS report, exit interview	Trained staff with BCC and counseling materials available in the facility
	Proportion of postnatal mothers/babies monitored for danger signs (vital signs/clinical signs)	EOC register; monitoring report	Trained staff available in the facility
	Proportion of postpartum women counseled on birth spacing and postpartum contraception options	EOC register, exit interview	Trained staff with FP counseling materials available in the facility

Sl	Indicator	MOV	Assumptions
	Proportion of women discharged with postpartum contraceptive method of choice	Facility/EOC register, exit interview	Trained staff available in the facility
1.2	**Statement:** Women with Pre-Eclampsia or Eclampsia promptly receive appropriate interventions, according to national standard operating procedure		
	Proportion of all women with severe pre-eclampsia or eclampsia in the health facility who received full dose of magnesium sulfate	EOC register, routine MIS report, monitoring report	Trained staff and Magnesium Sulfate available in the health facility
	Percentage of facilities with magnesium sulfate and antihypertensive available	Facility readiness survey; LMIS register; monitoring report	Facility readiness survey conducted; LMIS is updated regularly
	Percentage of women with pre-eclampsia who progressed to eclampsia	Facility/EOC register; patients' clinical records; routine MIS report	EOC register updated regularly
1.3	**Statement:** Women with postpartum hemorrhage promptly receive appropriate interventions, according to national guideline		
	Percentage of women with PPH in health facility managed according to national guideline	Patients' clinical records; monitoring report	Trained staff, necessary drugs and facility for blood transfusion available at the facility
	Percentage of facilities with uterotonic drugs available	LMIS register; facility readiness survey; monitoring report	LMIS updated regularly, facility readiness survey conducted
	Percentage of CEmONC facilities with functional blood transfusion services	Facility readiness survey; monitoring report	Facility readiness survey conducted
	Percentage of women administered immediate postpartum uterotonic (for PPH prevention)	Delivery/EOC register; routine MIS report; monitoring report	Trained staff and uterotonic available in the facility
	Case Fatality Rate (CFR) for PPH	EOC register; routine MIS report	Updated EOC register available at the facility
	Maternal cause specific CFR	EOC register; routine MIS report	Updated EOC register available at the facility
1.4	**Statement:** Women with prolonged/ obstructed labor receive appropriate interventions, according to national guideline		
	Proportion of all women in health facility with prolonged/obstructed labor delivered by C-section	EOC register; routine MIS report	Trained staff and facilities (OT, equipment etc.) for C-section available

Sl	Indicator	MOV	Assumptions
	Percentage of facilities with supplies / equipment (vacuum or forceps) for assisted delivery	Facility readiness survey; monitoring report	Ensure supply and maintenance
	Percentage of all women who gave birth in the facility whose active first stage of labor was >12 hours	EOC register; routine MIS report; monitoring report	Updated EOC register available
1.5a	**Statement:** Women in preterm labor receive appropriate interventions according to national guidelines		
	Percentage of mothers received at least one dose of antenatal corticosteroid for preterm labor (between 24 and 34 weeks of gestation) in the health facility	EOC register; routine MIS report; monitoring report	Trained staff and corticosteroid available at the facility
	Percentage of facilities with antenatal corticosteroids available	Facility readiness survey; monitoring report	Ensure the availability of corticosteroids
	Percentage of women with preterm pre-labor rupture of membranes (pPROM) who received prophylactic antibiotics	EOC register; routine MIS report; monitoring report	Trained staff and necessary antibiotics available in the facility
1.5b	**Statement:** Preterm and small/low birth weight babies receive appropriate care according to national guideline		
	Proportion of eligible babies born in the health facility with a birth weight **≤2000 g** who received KMC according to national guideline	Facility (KMC, EOC) register; routine MIS report; monitoring report	KMC available with trained staff in the facility
	Percentage of all newborn stabilization units and SCANUs functioning for managing the sick newborns according to national guideline	Facility readiness survey; routine MIS report; monitoring report	Govt. policy supports establishment of newborn stabilization unit and SCANU
	Percentage of facilities with supplies / equipment for thermal care and feeding of small babies	Facility readiness survey; routine MIS report; monitoring report	Facility readiness survey conducted
1.6	**Statement:** All women and newborns receive care according to standard precautions for preventing hospital-acquired infections.		
	Percentage of facilities following standard hand washing practices and waste disposal mechanism during service delivery	Monitoring report; staff interview and observation	Hand washing and waste disposal facilities available at the facilities
	Percentage of women with C-section who received prophylactic antibiotics before C-section	OT register; routine MIS report, monitoring report	Recommended antibiotic available at the facility
	Percentage women with pre-labor rupture of membrane (PROM) who received antibiotics	EOC register; routine MIS report; monitoring report	Recommended antibiotic available at the facility

Sl	Indicator	MOV	Assumptions
	Percentage of women who gave birth in the facility with signs of infection treated with appropriate antibiotics	EOC register; routine MIS report; monitoring report	Recommended antibiotic available at the facility
	Percentage of facilities with 1st and 2nd line antibiotics available	Facility readiness survey; routine MIS report; monitoring report	Facility readiness survey conducted
	Percentage of newborns of mothers with signs of infection who are evaluated for infection and treated as appropriate	Pediatric ward register; routine MIS report; monitoring report	Trained staff available at the facility
	Percentage of newborns with signs of infection who received antibiotics	Pediatric ward register; routine MIS report; monitoring report	Recommended antibiotic available at the facility
1.8	**Statement:** Women and newborns: harmful practices		
	Percentage of facilities with no displays of infant formula, bottles, teats	Facility readiness survey; monitoring report	No shift in policy from baby friendly hospital
	Proportion of facilities with written, up-to-date protocol on minimizing unnecessary interventions	Facility readiness survey; monitoring report	Protocols are developed and supplied
	Proportion of women who received augmentation of labor (uterotonics) with no indication of delay in labor progress	Facility EOC register; monitoring report	Trained staff available at the facility
	Proportion of women with uncomplicated, spontaneous vaginal birth in whom episiotomy performed	Facility EOC register	Trained staff available at the facility
2.	**Standard: The health information system enables use of data to ensure early, appropriate action to improve the care of every woman and newborn**		
2.1	**Statement:** Complete, accurate, standardized routine medical records during ANC, labor, childbirth and postnatal period are available for every woman and newborn		
	Percentage of newborns for whom accurate standard medical records are available	Medical records of newborns; monitoring report	Trained staff available at the facility
	Proportion of facilities with standardized registers, patient charts and data collection forms	Facility readiness survey; monitoring report	Standard registers, charts etc. are developed by the govt.
	Percentage of facilities providing report on MNH activities on regular basis according to national guideline	MIS report; monitoring report	Trained staff available at the facility
	Proportion of facilities with system for classifying diseases and health outcomes including death, aligned with ICD (e.g. ICD-MM/PM)	Monitoring report, MIS report	Trained staff available at the facility

Sl	Indicator	MOV	Assumptions
	Percentage of facilities with birth and death registration linked to national vital registration system	Monitoring report	Internet connection and trained staff available at the facility
	Percentage of newborns with patient identifier and individual clinical medical record	Monitoring report	Trained staff available
	Percentage of postpartum women discharged with accurately completed record	Exit interview, monitoring report	Trained staff and discharge form available
2.2	**Statement:** There is mechanism of regular data collection, analysis and feedback at all the facilities		
	Percentage of facilities in which QI committee regularly extracts data, calculates and visualizes prioritized quality indicators	Meeting minutes; monitoring report	Regular QIC meeting and trained staff for data compilation available
	Percentage of facilities where data regularly reviewed and used to make decisions for quality improvement	Meeting minutes; monitoring report	Meeting minutes are recorded
	Percentage of facilities with SOPs for checking, validating and reporting data	Monitoring report	Trained staff available
2.3	**Statement:** Every health facility has a system for addressing MPDSR		
	Percentage of facilities implementing MPDSR according to national guidelines	MPDSR reports; monitoring report	MPDSR sub-committee formed and trained
	Percentage of maternal deaths reviewed with standard audit tools	DHIS-2; MIS report	Staff trained on MPDSR
	Percentage of perinatal deaths reviewed with standard audit tools	DHIS-2; MIS report	Staff trained on MPDSR
3	**Standard: Every woman and newborn with condition(s) that cannot be dealt with effectively with the available resources is appropriately referred, and services are available to ensure continuity of care.**		
3.1	**Statement:** Every woman and newborn is appropriately assessed on admission, during labor and in the postnatal period for proper care without delay.		
	Percentage of pregnant and postnatal mothers referred to higher level facility without delay, and following completed standard referral note according to national guideline	Referral register; monitoring report	Referral guideline is in place
	Percentage of sick, preterm or small newborns who could not be managed at the health facility transferred to an appropriate facility without delay, and following completed standard referral note according to national guideline	Referral register; monitoring report	Referral guideline is in place

Sl	Indicator	MOV	Assumptions
	Percentage of facilities with standardized referral protocol for identification, management and referral of women/newborns with complications	Monitoring report	Referral guideline/ protocol is developed
	Percentage of facilities with supplies for stabilization and pre-referral treatment	Monitoring report	Necessary supplies are provided from the system
	Percentage of women presenting to labor ward who report receiving immediate attention upon arrival	Exit interview	Trained staff available for services
	Percentage of facilities with ready access to functioning ambulance or emergency transport	Monitoring report	Functioning ambulance available at facilities
	Percentage of facilities with up-to-date list of network facilities providing referral services	Monitoring report	Referral guideline/ protocol is developed
	Percentage of newborns who died before or during transfer to higher-level facility	MIS report, facility referral register	Functioning referral system established
	Percentage of newborns referred from facility who completed referral	MIS report, facility referral register	Functioning referral system established
	Percentage of pregnant or postpartum women who died before or during transfer to higher-level facility	MIS report, facility referral register	Functioning referral system established
	Percentage of women referred from facility who completed referral	MIS report, facility referral register	Functioning referral system established
3.2	Statement: For every woman and newborn referred within or between health facilities, there is appropriate information exchange and feedback to relevant health care staff.		
	Percentage of facilities maintaining effective communication and consultations to the referred facilities on referred clients	Referral register	Facility referral system is in place and staff are trained
	Percentage of facilities with standardized referral form	Monitoring report	Availability of Referral form
	Percentage of referred newborns with counter-referral feedback information	Monitoring report	Referral guideline in place developed and staff are trained
	Percentage of referred women with counter-referral feedback information	Monitoring report	Referral guideline developed and staff are trained
4.	**Standard: Communication with women and their families is effective and responds to their needs and preferences.**		
4.1	**Statement:** All women and their families receive information about the care and complication have effective interactions with staff.		
	Proportion of all women discharged from the labor and child birth area of the facility who received written and verbal information (facility wise)	Exit interview; facility register	Trained staff available at the facilities

Sl	Indicator	MOV	Assumptions
	Percentage of facilities with accessible health education materials	Monitoring report	Health education materials developed and available at national level
	Percentage of facilities with written policy to promote interpersonal communication and counseling	Monitoring report	Written policy is developed
	Percentage of staff with recent training on interpersonal communication	Training MIS; monitoring report	Policy for regular staff training is in place
	Percentage of facilities receiving supportive supervision that addresses counseling	Visitors' book; monitoring report	Trained supervisors available
	Percentage of women receiving postnatal information and counseling before discharge	Exit interview, facility register	Trained staff is available at the facility
	Percentage of women who felt they were adequately informed by the health workers about their care, including examinations	Exit interview	Trained staff is available at the facility
	Percentage of women who reported they were given an opportunity to discuss their concerns and preferences	Exit interview	Trained staff is available at the facility
4.2	**Statement:** coordinated care, with clear, accurate information exchange		
	Percentage of facilities with standard form for documenting clinical progress and care	Monitoring report	Standard forms are developed
	Percentage of facilities with written protocols for verbal and written hand-overs (shift change, intra-facility transfer, referral, & discharge)	Monitoring report	Handover protocols is developed
	Percentage of women whom a partograph has been completed	Patient's clinical record, facility register, monitoring report	Trained staff available at the facility
4.3	**Statement:**Relevant job aids, standard IEC materials displayed and used on maternal and newborn care for relevant, needful information for the patient as well as their companion		
	Number of health education sessions conducted at ANC/PNC corner using standard IEC materials and job aids	Health education register; exit interview	IEC materials and trained staff available
	Percentage of postpartum women counseled on birth spacing and postpartum contraception options	Exit interview	Trained staff is available
	Percentage of women discharged with postpartum contraceptive method of choice	Exit interview, facility register	Contraceptive and trained staff are available

Sl	Indicator	MOV	Assumptions
5.	**Standard: Women and newborns receive care with respect and can maintain their dignity.**		
5.1	**Statement:** All women have privacy around the time of ANC, labor and childbirth, and their confidentiality is maintained		
	Percentage of facilities providing privacy and confidentiality during ANC, labor and childbirth	Exit interview; observation; monitoring report	Necessary logistics are provided
	Percentage of facilities where physical environment allows privacy	Observation, monitoring report	Supportive infrastructure is in place
	Percentage of facilities with written, up-to-date protocols to ensure privacy and confidentiality	Monitoring report	Protocol on privacy and confidentiality is developed
	Percentage of women reported receiving dignified and respectful care during maternity visit	Exit interview	Trained staff available at the facility
5.2	**Statement:** Women are not subjected to mistreatment		
	Percentage of facilities with written accountability mechanism in the event of mistreatment	Monitoring report	Accountability framework is developed
	Percentage of facilities with written, up-to-date zero-tolerance non-discriminatory policies on mistreatment	Monitoring report	Written policy is developed
	Percentage of staff with recent training on respectful care	Training database; monitoring report	Training plan is there in the OP
	Percentage of women who gave birth in facility who reported physical, verbal or sexual abuse to themselves [or their newborns]	Exit interview	Patients are open to such questions
5.3	**Statement:** All women can make informed choices about the services they receive, and the reasons for interventions or outcomes are clearly explained		
	Percentage of facilities providing information regarding informed choices about the services	Exit interview; monitoring report	Trained staff present at the facility
	Percentage of facilities with written, up-to-date policies on obtaining informed consent	Monitoring report	Policy on informed consent developed
	Percentage of facilities with standard informed consent form	Monitoring report	Standard consent form is developed
	Percentage of women who felt adequately informed by health workers about their health and care	Exit interview	Trained staff available at the facility

Sl	Indicator	MOV	Assumptions
6.	**Standard: Every woman and her family are provided with emotional support that is sensitive to their needs and strengthens the woman's capability.**		
6.1	**Statement:** Every woman is offered the option to experience labor and childbirth with the companion of her choice.		
	Percentage of facilities providing the option of allowing a companion during labor	Exit interview	Trained staff is available at the facility
	Percentage of facilities with written, up-to-date policies to allow one person of woman's choice	Exit interview; monitoring report	Written policy developed by govt.
	Percentage of facilities with labor and childbirth areas organized to allow for private space	Monitoring report, exit interview	Suitable space available at the facility
	Percentage of women who had a companion of their choice during labor [childbirth]	Exit interview	Written policy available to support this.
	Percentage of women reported receiving supportive care during maternity visit	Exit interview	Trained staff available at the facility
6.2	**Statement:** Every woman receives support to strengthen her capability during childbirth.		
	Percentage of facilities providing emotional support and appropriate counseling to patients during adverse event of labor	Exit interview	Trained staff available at the facility
	Percentage of women undergoing bereavement or adverse outcome who report additional emotional support from facility staff	Exit interview	Trained staff available at the facility
	Percentage of staff with recent training on providing emotional support	Monitoring report	Training is planned in the OP
7.	**Standard: For every woman and newborn, competent, motivated staff are consistently available to provide routine care and manage complications.**		
7.1	**Statement:** Every woman and newborn has access at all times (24/7) to at least one skilled healthcare provider and support staff for routine care and management of complications		
	Percentage of facilities ensuring access of every women and newborn by skilled healthcare provider at all times (24/7)	Facility readiness survey; monitoring report	Adequate skilled birth attendants posted for 24/7 services
	Percentage of facilities displaying roster of staff on duty&shift times	Monitoring report	Facility manager is active
	Percentage of available posts that are filled by staff with necessary competence	Admin report; monitoring report	Adequate staff available for filling up the vacant posts
	Percentage of births attended by a skilled birth attendant	MIS report; monitoring report	Adequate trained staff available at the facility

Sl	Indicator	MOV	Assumptions
	Percentage of women reporting sufficient staff at health facility	Exit interview	Adequate trained staff posted at the facility
7.2	**Statement:** The skilled birth attendants and support staff have appropriate competence and skills-mix to meet the requirements of labor, childbirth and early postnatal period		
	Percentage of facilities providing services to meet the requirements of women and newborn during labor, child birth and early postnatal period on the basis of skill-mix	Exit interview, in-depth discussion with service providers, monitoring report	Adequate trained staff available
	Percentage of facilities with program for continuing professional and skills development	Monitoring report	Facility manage skilled in planning
	Percentage of SBA (skilled birth attendant) with recent in-service training	Monitoring report	Continuous training is planned in OP
	Percentage of staff who is supervised/mentored to support clinical competence and QI in last quarter	Monitoring report	Trained supervisors/ monitors available
	Percentage of staff who can identify and report at least one clinical activity in which they are personally involved	Monitoring report	Staff participation plan is available
7.3	**Statement:** Every health facility has managerial and clinical leadership that collectively supports developing and implementing appropriate policies		
	Percentage of facilities conducting regular QIC meeting and implementing action plan according to the decisions of meeting	Meeting minutes	Facility manager is motivated and monitoring system is in place
	Percentage of facilities with written up to date plan for improving QoC and patient safety	Monitoring report	Facility manager motivated
	Percentage of facilities with QI committee	Monitoring report	Facility manager motivated
	Percentage of facilities with QI review meeting within last three months	Monitoring report	Facility manager motivated
	Percentage of leaders at facility trained in QI and leading change	Monitoring report	Training is planned in the OP
	Percentage of facilities with mechanism for regular collection of information on patient and provider experiences	Monitoring report	Facility manager motivated
	Percentage of facilities with an established liaison mechanism to district (and/or national level) on quality issues	Monitoring report	Facility manager motivated
	Percentage of facilities that participated in data sharing with district and community to inform user decision-making, prioritization and planning	Monitoring report	Facility manager motivated

Sl	Indicator	MOV	Assumptions
	Percentage of leaders communicated performance through established mechanisms (e.g. dashboards)	Monitoring report	Facility manager motivated
8.	**Standard: Essential drugs, supplies, functional equipment and diagnostic services are consistently available to provide mother and newborn care**		
8.1	**Statement: E**ssential drugs and commodities for proving MNH services are available according to WHO standards		
	Percentage of facilities that have essential medicines and commodities for MNH services	Monitoring report	Essential medicines and commodities are in the procurement plan of the govt.
	Percentage facilities with written, up-to-date clinical protocols	Monitoring report	All the clinical protocols are developed
9.	**Standard: Physical environment**		
9.1	**Statement:** WASH are functioning, reliable, safe and sufficient		
	Percentage of facilities with basic water supply in maternity care areas (labor, birth, postnatal)	Monitoring report	Supportive infrastructure available
	Percentage of facilities with basic environmental cleaning practices in maternity areas (labor, birth, postnatal); written cleaning protocols, trained cleaning staff and providers)	Monitoring report	Adequate cleaning staff available
	Percentage of facilities with basic healthcare waste management in maternity care areas	Monitoring report	Adequate cleaning staff available
	Percentage of facilities with basic hygiene provisions in maternity care areas (functional hand washing station, access to bathing/shower area, basic sterile equipment)	Monitoring report	Necessary infrastructure is available
	Percentage of facilities with basic sanitation available for women during and after labor and childbirth (toilet, latrine)	Monitoring report	Necessary infrastructure is available
	Percentage of facilities with written protocol and awareness materials (posters) on WASH and waste management	Monitoring report	Necessary materials available at national level
	Percentage of women reporting satisfactory access to water	Monitoring report	Facility has safe water supply system
9.2	**Statement:** Labor, childbirth and postnatal care appropriately organized		
	Percentage of facilities with adequate labor and childbirth areas/rooms for estimated number of births	Monitoring report	Supportive infrastructure available

Sl	Indicator	MOV	Assumptions
	Percentage of facilities with dedicated area in labor / childbirth area for resuscitation of newborns, which is adequately equipped	Monitoring report	Supportive infrastructure and equipment available
	Percentage of facilities with policy and space for rooming-in of mothers and babies 24 hours a day	Monitoring report	Policy is developed by the govt.
	Percentage of women reporting clean physical environment	Exit interview	Women are willing provide information
9.3	**Statement:** Facilities have adequate stocks of medicine, supplies and equipment		
	Percentage of facilities with regular source of electricity	Monitoring report	Facility is accessible to national electricity gridline
	Percentage of facilities with essential laboratory supplies and tests	Monitoring report	Govt. procures essential supplies and reagents

3.2 Child, Reproductive and Adolescent Health (CRAH) Quality Improvement indicators

3.2.1 Core QI indicators for Child, Reproductive and Adolescent health

Domain	Indicator (all Facility-based)	Definition	MOV/ Data source
Outcome/ Impact	1. **Number of child deaths** (impact indicator to be measured annually)	No. of children died (due to any cause) per 1,000 child admissions at the facility (disaggregated by cause of death)	DHIS-2; Hospital MIS report
	2. **Facility severe acute malnutrition (SAM) rate** [impact measure]	Proportion of children admitted in the facility with SAM	Pediatric ward register; DHIS-2
	3. **CFR (case fatality rate) for severe acute malnutrition** [impact measure]	Proportion of children treated in the facility for SAM who died due to SAM	Pediatric ward register; DHIS-2
	4. **Immunization status of children**	Proportion of children discharged from pediatric ward are completely immunized for age according to national standard	Pediatric ward register; exit interview

Domain	Indicator (all Facility-based)	Definition	MOV/ Data source
Output/ process	**5. Functioning IMCI corner at facilities**	Percentage of facilities have functioning IMCI corner according to WHO/national standards	Monitoring report; facility survey report
	6. Functioning SAM corner at facilities	Percentage of facilities have functioning SAM corner	Monitoring report; facility survey report
	7. Contraceptive service provision	Percentage of facilities provide full range of contraceptive methods	Monitoring report; facility survey report
	8. Counselling at IMCI/ SAM/ SRH/ adolescent corner	Proportion of mothers/ adolescents who received counseling after taking services at the IMCI/ SAM/ SRH/ adolescent corner according to national protocol & guideline	Exit interview
	9. Verbal or physical abuse (experience of care, respect and dignity)	Proportion of women who experienced physical or verbal abuse while taking IMCI/ EPI/ SRH/ adolescent services in the heath facility	Exit interview
	10. Children screened for nutritional status	Percentage of infant and children screened for nutritional status at facility IMCI according to national guideline	Exit interview
	11. Provision of immunization services	Percentage of health facilities provide immunization services with all antigens according to national guideline	Monitoring report; facility survey report
	12. EPI vaccine storage at facilities	Percentage of facilities maintain cold chain at EPI vaccine stores according to national guideline.	Monitoring report; facility survey report
Input	**13. Basic hygiene provision**	Proportion of facilities in which IMCI/ Sam/ adolescent corner have at least one functional hand washing station with soap and water available	Facility observation with checklist

3.2.2 Other Child, Reproductive and Adolescent health Quality Indicators

3.2.2.1 Other QI indicators for Child health:

Sl	Indicator	MOV	Assumptions
1.	**Standard: Case management of common childhood illnesses through IMCI strategy implemented**		
1.1	**Statement:** Effective training and refreshers to the health care providers are provided on case management of common childhood illnesses using IMCI guidelines		
	No of service providers received basic & refreshers training according to IMCI guideline	Training report; training database	Skill-based IMCI training manual available
	Percentage of IMCI facilities have trained staff	Monitoring report, MIS database	Provision of IMCI training is there in OP
1.2	**Statement:** Health facilities have an effective functional monitoring mechanism to oversee IMCI implementation involving the managers and health care providers		
	Percentage of IMCI facilities whose performance are monitored (web-based) disaggregated by level of health facilities	Web monitoring report	Web-based reporting system established
1.3	**Statement:** IMCI corners are well equipped with required logistics, and services are provided by the skilled heath care providers		
	Percentage of facilities with functioning IMCI corner according to WHO standards	Facility assessment survey; monitoring report	Monitoring system in place for overseeing IMCI corner
1.4	**Statement:** Service providers in IMCI corner manage childhood illness as per the IMCI guidelines and protocols.		
	Percentage of children received treatment according to IMCI protocols and guideline	IMCI register; monitoring report	Trained staff available for IMCI services
1.5	**Statement:** All the women taking services for their children from IMCI corner will be counseled as per protocol with special emphasis on when to return, danger signs and compliance with treatment		
	Percentage of women received counseling according to national IMCI protocol & guideline	Exit interview; monitoring report	Mothers are willing to receive counseling
1.6	**Statement:** All the mothers taking services for their children from IMCI corner will be dealt with proper privacy, respect and dignity		
	Percentage of mothers received services in the IMCI corner with respect and dignity	Monitoring report, exit interview	Necessary arrangements and facilities available at the facility
1.7	**Statement:** IMCI services are provided following standard infection prevention practices according to the protocol		
	Percentage of service providers practicing infection prevention according to national standards and guideline by type of facility	Monitoring report	Staff are trained and national protocol is available

Sl	Indicator	MOV	Assumptions
1.8	**Statement:** Signpost indicating the IMCI corner is visible in the health facility		
	Percentage of health facilities have visible signpost for IMCI corner	Monitoring report; facility assessment survey	Resources available to make the signpost
1.9	**Statement:** Community IMCI services are followed up and monitored including arrangement of trainings and refreshers.		
	Percentage of community IMCI center monitored	Monitoring report	Adequate trained monitors are in place
	Percentage of community service providers trained on C-IMCI	Training report; training database	Training is planned in the OP
	Percentage of community IMCI centers have trained staff	Monitoring report; MIS database	Training is provided by the IMCI program
1.10	**Statement:** Community based management of childhood illnesses are in accordance with community IMCI protocols		
	Percentage of under 5 children in C-IMCI centers are managed according to C- IMCI protocol	IMCI register; monitoring report	National IMCI protocol available for management of U5 children; trained staff are available
	Percentage of sick children referred to higher level facility according to national guideline	IMCI register	Referral guideline is developed
2.	**Standard: Children are assessed for nutritional status and required interventions are taken**		
2.1	**Statement:** Screening for nutritional status, counseling and referral are done as per guideline/protocol in the community and facility		
	Percentage of infant and children screened for nutritional status at facility level IMCI according to national guideline	Monitoring report; IMCI register	National guideline and trained staff available
	Percentage of infant and children screened for nutritional status at community level IMCI according to national guideline	Monitoring report, IMCI register	Trained staff available for screening; infants and children are coming to IMCI center for screening
	Percentage of child and infant received services from community and facility IMCI referred to higher levels for management	Monitoring report, IMCI register	Referral guideline available
2.2	**Statement:** SAM (severe acute malnutrition) corner established in the district hospital and UHC		
	Percentage of DHs have functioning SAM corner according to national guideline	Facility assessment survey; monitoring report	Necessary infrastructure and trained staff available
	Percentage of UHCs have functioning SAM corner according to national guideline	Facility survey, monitoring report	Necessary infrastructure and trained staff available

Sl	Indicator	MOV	Assumptions
2.3	**Statement:** Effective training and refreshers to the health care providers is provided for nutritional services management		
	Number of service providers received basic and refresher training	Training database, training report	Availability of training manual and resource envelope
	Percentage of IMCI/SAM corner have staff trained on nutritional management	Facility survey, monitoring report	Training is provided by the IMCI program
3.	**Standard:All eligible children and mothers are immunized according to national immunization schedule and guideline**		
3.1	**Statement:** Immunization services are readily available at different levels, both at facility and community		
	Percentage of outreach centers providing immunization services	Monitoring report; administrative report	Adequate staff available for outreach immunization services
	Percentage of health facilities providing immunization services	Monitoring report; facility assessment survey	Trained staff available at the facility
3.2	**Statement:** Providers educate parents and guardians about immunization in general including contraindications, risks and benefits, and other relevant issues		
	Percentage of parents and guardians know the national immunization schedule	Survey report; exit interview	Guideline on providing information and counseling available
3.3	**Statement:** Providers maintain accurate and complete recording and reporting of routine immunizations using specific forms and formats		
	Percentage of vaccinated children and women have complete and accurate records	Monitoring report, EPI web-based report, EPI register	Staff are trained on EPI; availability of database
	Percentage of EPI reports which are complete and accurate	Monitoring report	Staff are trained on EPI
3.4	**Statement:** Providers report adverse events following immunization in time, accurately, and completely.		
	Percentage of children developed adverse events following immunization	Monthly report; surveillance report	Trained manpower available for screening and reporting on adverse event following immunization
3.5	**Statement:** Providers report routine diseases for surveillance and outbreak response according to national protocols		
	Percentage of disease surveillance reports followed national protocol	Monitoring report; administrative report	National protocol available; EPI disease surveillance reporting system in place
3.6	**Statement**: Facilities are prepared and respondto disease surveillance findings and outbreaks according to WHO protocol		
	Percentage of outbreaks responded according to WHO protocol	Monitoring report, routine surveillance report	Structured outbreak response system is developed

Sl	Indicator	MOV	Assumptions
3.7	**Statement:** Providers operate with community engagement and community-based approaches (micro planning, volunteer's recruitment, social awareness, use of IEC materials and so on).		
	Percentage of micro plans implemented against total micro plans (volunteers recruited for immunization program, IPC, community advocacy).	Monitoring report; administrative report	Govt. policy on development of micro plan is in place
	Percentage of EPI centers use IEC materials for community awareness	Monitoring report	Govt. provides IEC materials
3.8	**Statement:** Effective vaccine management through maintenance of cold chain from the source up to the point of service delivery established		
	Percentages of EPI vaccine stores at different levels maintain cold chain according to national guideline.	Survey report, supervision and monitoring report	Facilities (infrastructure, equipment etc.) for cold chain management and trained staff is in place
	Percentage of EPI centers maintain cold chain according to national guideline	Monitoring report	National guideline is available
3.9	**Statement:** Service providers comply with IP practices including the disposal of the used syringes		
	Percentage of EPI centers (outreach and facility) practice infection prevention including disposal of used syringes as per national standards	Supervision and monitoring report	Staff are trained on IP
3.10	**Statement:** Reported data are routinely analyzed for ensuring effective coverage		
	Percentage of planned data validation meetings conducted at upazilla/District levels	Meeting minutes, monitoring report	Manager is motivated
3.11	**Statement:** Basic and refresher training are provided to the health care providers on basic and introduction of new vaccines according to WHO guidelines		
	Percentage of EPI service providers received basic and new vaccine training according to WHO guideline	Training report, training database	Availability of training program and resources

3.2.2.2 Other QI indicators for Reproductive & Sexual health:

Sl	Indicator	MOV	Assumptions
1.	**Standard: Reproductive health service has the provision of a range of sexual and reproductive health services.**		
1.1	**Contraception** **Statement:** Full range of contraceptive methods are available and includes choice within the products to maximize client acceptability at DH, MCWC & UHC		
	Percentage of facilities provide full range of contraceptive methods	Monitoring / MIS report	Govt. procures all the contraceptives on time
1.2. 1.2.a	**Pregnancy, MR and Post-abortion care** **Statement:** Basic counseling/information services available for pregnancy planning and preconception care		
	Percentage of facilities providing counseling on pregnancy planning and pregnancy related information	Monitoring report/ MIS report	Trained staff counselling tools available at the facilities
1.2.b	**Statement:** Referral for MR services is available without delay		
	Percentage of facilities providing MR services according to SOP	Monitoring report/ MIS report	No shift in govt. policy to provide M|R services
1.2.c	**Statement:** Services available for post-abortion care (PAC) as per national standards		
	Percentage of facilities providing PAC according to SOP	Monitoring report/ MIS report	SOP for PAC is developed and available for use
1.3. 1.3.a	**Screening for cervical cancer, breast cancer** **Statement:** Cervical cancer screening (VIA and PAP) is available in line with national and local guidelines and protocol.		
	Percentage of facilities provide services for cervical cancer screening according to SOP.	Monitoring report/ MIS report	Trained staff available at the facilities
1.3.b	**Statement:** Clinical breast examination (CBE) for breast cancer screening is available as per national and local guideline and protocol		
	Percentage of facilities provide CBE (clinical breast examination) services for breast cancer screening according to SOP	Monitoring report/ MIS report	Trained staff available at the facilities
1.4. 1.4.a	**Sexually transmitted infections (STIs) and HIV** **Statement:** Information on STIs, including HIV, with supporting leaflets are available and provided		
	Percentage of facilities provide information related to STI and HIV/AIDS	Monitoring report	Trained staff and appropriate education materials available at the facilities

Sl	Indicator	MOV	Assumptions
1.4.b	**Statement:** Facilities have provision of clinical management of STI services according to national guideline.		
	Percentage of facilities provide STI and HIVscreening, management, referral and counselling services	Monitoring report	Trained staff available at the facilities
1.5. 1.5.a	**Psychosexual services** **Statement:** Facilities have the provision of and access to psychosexual counseling and appropriate onward referral		
	Percentage of facilities providing psychosexual counseling.	Monitoring report	Trained service provider available at the facilities
1.5.b	**Statement:** Facilities have the provision of and access to organic sexual dysfunction treatment and appropriate onward referral services.		
	Percentage of facilities providing premenstrual, menopause and menstrual dysfunction services	Monitoring report	Trained staff available at the facilities
2.	**Standard: Services are patient-centered ensuring ~~good,~~ effective and efficient communication and counseling, informed consent, privacy and confidentiality**		
2.1	**Statement:** Information and counseling regarding available full range of sexual and reproductive health (SRH) services provided to clients		
	Percentage of facilities provide information and counseling on full range of SRH services.	Monitoring report	Trained staff available at the facilities
2.2	**Statement:** Consultations are conducted with privacy of patients regardless of age, gender and sexual orientation.		
	Percentage of facilities maintain privacy and provide adequate information to service recipients	Monitoring report	Adequate infrastructure and trained staff are available at the facilities
2.3	**Statement:** The service providers are responsive to patients' suggestions and complaints.		
	Percentage of complain /suggestions responded by the service providers by type of facility	Monitoring report/ MIS report	Regular QIC meeting is conducted
3.	**Standard: There is easy and quick non-discriminatory access to sexual and reproductive health services for all.**		
3.1	**Statement:** Facility is accessible without any kind of discrimination for getting SRH services		
	Percentage of facilities accessible without any discrimination for SRH services	Monitoring report/ MIS report	Service providers are sensitized on gender and SRH issues

Sl	Indicator	MOV	Assumptions
4.	**Standard: All staff working in sexual and reproductive health (SRH) services receive appropriate training and maintain their skills.**		
4.1.	**Statement:** All SRH service providers working at all levels of facilities are trained according to the required level of competency as per national guideline and SOP		
	Percentage of SRH service providers received training on SRH services according national guideline & SOP	Training report	National guideline and SOP on SRH is developed and staff training is planned in the OP
4.2.	Percentage of facilities providing SRH services have trained staff on SRH by levels of facility	Monitoring report	Staff training on SRH is planned in the OP
5.	**Standard: Sexual and reproductive health (SRH) service provisions are evidence-based, and follow the national and local guidelines and policies.**		
5.1	**Statement:** Facilities provide evidence-based STI management in accordance with national guideline		
	Percentage of facilities providing STI management according to national guideline	Monitoring report	National guideline on STI developed and staff are trained on it
6.	**Confidentiality** **Standard: Clients seeking services for sexual and reproductive health are informed about their right to confidentiality, and facilities maintain confidentiality in line with the regulatory framework, ethics and professional bodies' guideline.**		
6.1	**Statement:** Patients are assured of confidentiality during consultations regardless of age, gender, sexual orientation, religion or ethnicity unless the clinician has concerns about wellbeing and/or safety of the patient or others.		
	Percentage of facilities provide services addressing the patient's right to confidentiality.	Exit interview; monitoring report	Trained staff are available at the facilities

3.2.2.3 Other QI indicators for Adolescent health:

Sl	Indicator	MOV	Assumptions
1.	**Standard: The health facility implements systems to ensure that adolescents are knowledgeable about their own health, and know where and when to obtain health services.**		
1.1.	**Statement:** Health facilities (including community level facilities) provide information, education and communication materials, specifically developed for adolescents that mention operating hours for adolescent healthcare services		
	Percentage of facilities provide counseling, information and education on adolescent health	Monitoring and survey report	Trained staff are available at the facilities

Sl	Indicator	MOV	Assumptions
2.	**Standard: The health facility implements systems to ensure that parents, guardians and other community members and community organizations recognize the value of providing health services to adolescents and support such provision and utilization of services by adolescents**		
2.1.	**Statement:** Develop community participation for providing adolescent health care through facilities (e.g., community awareness program, advocacy meeting at union level involving the UH&FWC management committee) and school-based services (e.g., parent–teacher-provider meeting)		
	Percentage of facilities providing information on adolescent health care to targeted population, especially the gate keepers (parents/guardian, teachers and other community members)	Monitoring and survey report	Trained staff are available at the facilities; there is no resistance from the community
2.2	**Statement:** Facility has an updated list of partner agencies and organizations to increase community support for adolescents' use of services as well as plan for outreach activities and/or involvement of outreach workers.		
	Percentage of facilities use updated list of partner organizations working on adolescent health to increase community engagement	Monitoring report	List of partner organization is regularly updated and available at the facilities
3.	**Standard: The health facility provides a package of information, counseling, diagnostic, treatment and care services that fulfils the needs of all adolescents. Services are provided in the facility and through referral linkages and outreach.**		
31.	**Statement:** The required packages of health information, counseling, diagnostic, treatment and care services are available at the facility		
	Percentage of facilities provide appropriate packages of services for adolescent health against target according to national protocols	Monitoring and survey report; HMIS,	Trained staff available at the facilities
3.2	**Statement:** Standard operating procedures on adolescent healthcare are developed and practiced by the health care provider at different setting (health facilities, community and school)		
	Percentage of facilities /institutions practice standard operating procedure	HMIS; monitoring and survey report	SOP developed and available at the facilities
3.3	**Statement:** Drugs and logistics are available at the facilities according to SOP		
	Percentage of facilities have essential drugs and logistics as per SOP	HMIS, monitoring report and medicine/drug stock register and inventory	Govt. procures the essential drugs and logistics

Sl	Indicator	MOV	Assumptions
4.	**Standard: Health-care providers demonstrate the technical competence required to provide adolescent health services. Both health-care providers and support staff respect, protect and fulfil adolescents' rights to information, privacy, confidentiality, non-discrimination, non-judgmental attitude and respect.**		
4.1	**Statement:** Guidelines, protocols, algorithm of clinical care on adolescent health are available and adolescent rights displayed in the facilities		
	Percentage of facilities have guideline and protocols on adolescent health, and displayed adolescent rights	Monitoring report and survey report	Guidelines and protocols on adolescent health developed and distributed at the facilities
4.2	**Statement:** Capacity building of service providers on Adolescent Friendly Health Service (AFHS) is in place		
	Percentage of service providers are competent or trained on Adolescent Friendly Health Service (AFHS)	HMIS, monitoring report, survey report, training report	Training on AFHS is planned in the OP
4.3	**Statement:** A system of supportive supervision is in place to improve health service providers' performance.		
	Percentage of health facilities received specific AFHS related supportive supervision visit (during last 3 months) by the authority	Monitoring report, survey report	Supervisors are trained on AFHS for supportive supervision
5.	**Standard: The health facility has convenient operating hours, a welcoming and clean environment, and maintains privacy and confidentiality. It has the equipment, medicines, supplies and technology needed to ensure effective services ~~provision~~ to adolescents.**		
5.1	**Statement:** The facility has minimum waiting time and ensure convenient operating hours including basic amenities.		
	Percentage of health facilities have conductive operating hours for adolescent health services	Monitoring and survey report	Adequate trained service providers available and leader is motivated
5.2	**Statement:** The facility has clean and safe environment for adolescent friendly health services		
	Percentage of health facilities have clean and safe environment for adolescent health services	Monitoring report	Adequate support staff and cleaning materials available
5.3	**Statement:** Policies and procedures are in place to protect the privacy and confidentiality of adolescents seeking health services and maintain records and personal files		
	Percentage of facilities provide adolescent health care with privacy and confidentiality.	Monitoring report	Trained staff and supportive infrastructure available

Sl	Indicator	MOV	Assumptions
5.4	**Statement:** Legal policy and requirements are in place to report incidents, such as sexual assaults, road traffic accidents (RTA) or gunshot wounds, to the relevant authorities. Both health service providers and support staff know the policies as well as their own roles and responsibilities.		
	Percentage of facilities provide report on sexual assault, RTA and any other assault to respective legal authorities	Monitoring report	There is no social barrier for reporting of sexual and other assaults
6.	**Standard: The health facility provides quality services to all adolescents irrespective of their ability to pay, age, sex, marital status, education level, ethnic origin, sexual orientation or other characteristics.**		
6.1	**Statement:** Policies and procedures are in place for services that are free or affordable to adolescents		
	Percentage of health facilities provide services to adolescents for free or at affordable price	Monitoring report, exit interview	Supportive policy to provide free services is in place
6.2	**Statement:** Policies and procedures are in place to maintain equity and equality at health facility		
	Percentage of health facilities have policy to maintain same quality services irrespective of age, sex, marital status, education level, ethnic origin, sexual orientation or other characteristics.	Monitoring report, exit interview	National policy on equity for quality of services is developed
7.	**Standard: The health facility collects analyses and uses data on service utilization and quality of care, disaggregated by age and sex, to support quality improvement. Health facility staff is supported to participate in continuous quality improvement.**		
7.1	**Statement:** Standard reporting system is in place to maintain data for adolescent health services, disaggregated by age and sex		
	Percentage of health facilities have adolescent health specific data; disaggregated by age and sex	HMIS, monitoring report	Statistician and other staff are trained on data quality and analysis
8.	**Standard: Adolescents are involved in planning, monitoring and evaluation of health services and in decision making regarding their own care, as well as in appropriate aspects of service provision.**		
8.1	**Statement:** Adolescents are involved in planning of adolescent healthcare services, monitoring and evaluation		
	Percentage of health facilities engage adolescents in planning, monitoring and evaluation of adolescent healthcare services by district, Upazila and community level	Meeting resolution, exit interview, monitoring report	Adolescents are willing to participate in the process

Part-4

Implementation of QI Framework

Implementation strategy of WHO will be followed to implement the RMNCAH QI framework in Bangladesh. The implementation strategies are set to ensure that the health-care interventions are delivered with adequate quality avoiding the harmful practices. The systematic process of implementation will entail the following seven key components led by the QIS. The main areas of ongoing action to implement the process to guarantee adequate quality of care are summarized in Fig 4.1 and 4.2.

Figure 4.1: Main areas of QI interventions

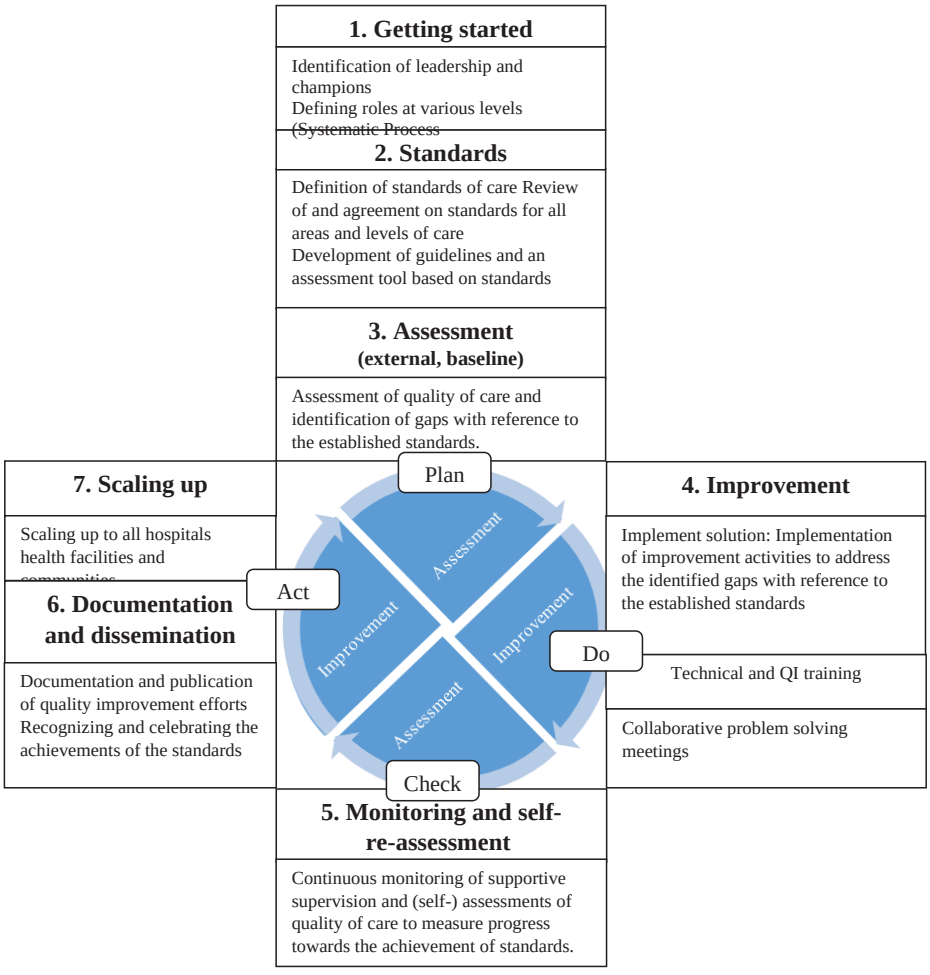
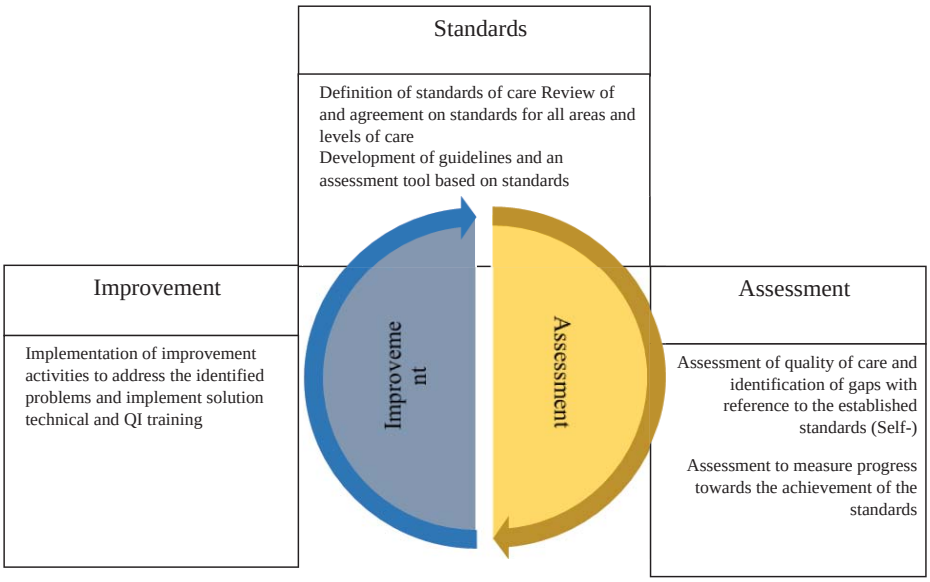


Figure 4.2: Core components of quality health care interventions



4.1 Key components of implementation

4.1.1 Getting started:

4.1.1.1 Identification of leadership and champions at national, divisional, and district levels:

Leadership at different organizational levels (national to community) is essential to get started, take the improvement process forward and ensure sustainability. QIS of MOHFW will take the leadership. The national-team (steering committee) has already been set up at the ministry level. Decision-makers, at all levels, may require orientation on importance of improving quality of care. Decision makers at all levels, such as national, divisional, district and Upazila levels of both health and family planning wings, will be oriented on quality of care and leadership to implement the national QI plan of the government. Furthermore, it is essential to ensure leadership at the hospital and facility levels where the improvement activities will be implemented. Champions or key health-care professionals with clinical, managerial, interpersonal and motivation skills that can lead the improvement of care will be identified.

4.1.1.2 Defining roles at various levels:

The roles and responsibilities at different levels (national and sub national; health professional bodies; and the national steering committee) will vary. The QIS has the supporting, coordinating and regulatory role by committing sufficient

resources, by setting standards for the different levels of care and by including the improvement process for care in national plans of action. At the local level, strong leadership is required by senior management in the health facilities to implement improvements and facilitate collaboration with the relevant stakeholders. Health professional bodies and academic institutions will contribute to the improvement process by providing expertise at the national and local level, by including improvement processes in curricula, and by promoting hospitals and health facilities that meet the required standards of care.

4.1.1.2.1 National level:

The QIS will ensure that improvement of quality of care is included in national policies, plans of action and other strategic documents. Improvement of care will be an integral part of all relevant health programs at the national level. Comprehensive plans would outline and make available the necessary human, financial and organizational resources to ensure a continuum of care, from the family-community to the health center, to first level hospitals and thereon to tertiary facilities. Collaboration with other groups working on health-related activities will be ensured. Setting of national standards for care will be a core function at central level.

National Coordination committee: The National Coordination Committee for improving care has been established to assist the improvement process. This committee brings together the policy makers, service providers and those with technical expertise to lead the improvement process. The role of the National Coordination Committee is to:

- Address improvement issues that require policy decisions
- Establish national standards for care
- Oversee national or sub-national planning and coordination of the improvement process
- Develop focus areas for quality improvement at national level
- Provide ongoing technical expertise and support to the health facility and hospital improvement teams
- Coordinate national monitoring of the process.

Health professional bodies: Health professional bodies, including medical faculties, public health organizations, public and private training institutions, and medical and nursing professional associations have senior clinicians and academics with technical expertise to guide the improvement process. Health professional bodies will be assigned specific roles. For example, medical and nursing associations can play an important role in setting standards and monitoring of hospitals and facilities. Similarly, they can play a significant role in introducing quality care in pre-service education of doctors, nurses and midwives.

Other parties: Other parties, like international organizations, donors, and health-care financing bodies will have leadership role by supporting standards of care for services they are funding or supporting. Local committees for public services and civil society can also contribute to quality improvement by supporting the facilities and creating enabling environment.

4.1.1.2.2 District level:

Depending on the degree of decentralization, many of the above functions will be under the mandate of the sub-national or district level.

4.1.1.2.3 Health facility level:

Quality Improvement Committees (QIC) have been formed at district level – both for the district and district hospital. Health facilities/hospitals at district level may receive government support and/or financial and technical support from other sources, like nongovernment organizations. Since improvement of care primarily takes place at hospital level, strong leadership from the health facility or hospital director/administrator and senior clinicians is essential. The role of the quality improvement Committee (QIC) at the health facility includes:

- Set target and initiate action for improvement
- Facilitate the improvement process
- Collaborate and coordinate with other improvement teams, such as Work Improvement Teams (WITs)
- Coordinate with higher levels on the improvement process
- Monitor the progress at regular intervals and take appropriate actions based on information
- Communicate with the community.

4.1.1.3 Setting standards of care:

The standards of care will be based on evidences, such as official guidelines and international assessment tools. Standards will be established in order to agree on what is expected and against which benchmark performance will be measured. The main activities at this stage will be to: a) Develop guidelines based on evidence-based practices and standards; and b) Develop assessment tools based on standards and guidelines

During this process, standards of care for different levels of health facilities will need to be agreed upon, in line with recommendations and relevance to the needs of the country, i.e. taking the preferences and expectations of the population into account. The standards would include all the dimensions of quality like effectiveness, appropriateness, accessibility, acceptability, equity and

safety as described earlier. The outcome of the process will be the availability of established standards for RMNCAH care at all levels (hospital, health center/midwifery clinic, as well as community-based services). It is critical to widely communicate the defined standards of care to health-care providers, across the country. Links to health systems approaches, such as human resource planning and training, supply of drugs and equipment, and financing would be ensured, and specific approaches in these areas would be defined.

An assessment of the current quality of care would be done in order to gain a perspective on how far the current practices differ from internationally accepted standards. Such an assessment would ensure that improvement targets are realistic rather than inspirational.

4.1.1.4 Assessing current quality of care:

The activities to be done at this stage are: a) Assess current quality of care to identify the gaps in quality with reference to the established standards; b) Develop national, divisional and district resource pools involving the professional bodies; and c) Capacity building of the resource pools to access quality of care at all levels of facilities by using the tools developed

Assessment of current quality of care will be carried out to portray the current situation, identify deviations from agreed standards and, at a later stage, measure progress towards the achievement of the standards. The assessment will be done by the assessment teams, developed at national, divisional and district levels. An assessment tools based on the established national standards and guidelines will be developed. Once the assessment tool is developed, a sample of health facilities will be assessed. The assessment teams (assessors) will be trained on assessment tool and process to carry out the facility assessment.

Findings of the baseline assessment would be shared with all the stakeholders, and be used to refine the standards (where needed), and define the needed improvement actions through collaborative improvement process. Identified shortcomings concerning the health systems (supply of essential drugs, staffing, etc.) will be brought to the attention of the responsible administrative units. Plans will be developed to address these deficiencies in collaboration with them. Clients' perspectives will be an integral part of the assessment process. Clients' exit interviews during the assessment process, and feedback through suggestion boxes would be considered on regular basis for further improvement.

Selection of assessment teams: The facility assessment teams will be formed at various levels (national, divisional and district). The assessors to develop the teams will be selected from staff of all facilities and hospitals involved in the process. The initial assessment (baseline) of the facilities will be done by the external team without involving the facility staff. The subsequent assessments

(internal assessment) will be done by the facility team with the assistance of external team, if necessary. The QIS has already developed resource pools at national, divisional and district levels. Assessment team will consist of hospital staff (clinicians, nurses and midwives) from national, divisional and/or district levels. The assessment teams will also include some of the potential members from the resource pools. The size of the teams may vary depending on the size of the facility to be assessed and on how many clinical areas are included. For example, two to four assessors are usually required to assess the quality of pediatric care of a middle-sized district hospital.

Training assessors: Assessors would be trained by someone experienced in the assessment process. Ideally, the training team should include external facilitators. The assessors would be made aware of standard treatment guidelines as per national standards. They will be oriented on all sections of the assessment tool, method of data collection and assessment process including interpretation and summarization of findings, and preparation of recommendations for improvement.

4.1.1.5 Improvement of care:

The quality of care will be improved through a)Creating improvement teams at the facilities to identify problems and implement solutions; b) Implement a collaborative approach to ensure adherence to guidelines based on standards of care; and c) Train health providers (in technical and QI approaches) to implement the quality improvement plan

The health facilities and hospitals that would participate in the baseline assessment would be targeted first for intervention. However, since it is a cyclical process it is also possible to select other health facilities in the improvement process, based on specific geographical location. The health facilities that would not be included in the initial assessment have to undergo, at some stage, an assessment process to understand the quality of care for identification of week areas.

Based on the results of assessment, a gap analysis would be done with development of improvement plan. A collaborative approach, which is a powerful tool to bring about change and achievement of standards, will be adopted to improve the quality of services. Such a process is also helpful in creating capacity, motivation, team spirit and competition. Ideally, staff from 10–20 health facilities in a defined geographic area should be brought together to discuss common problems and identify areas where they can learn from each other. For health centers and clinics, the process might be facilitated by their respective referral hospitals. Gradually private hospitals and clinics would be included in the process since large part of care is provided by the private sector.

After the identification of areas that need improvement in order to meet the standards, improvement actions will be implemented. Staff at all levels need to be motivated and empowered to take actions to improve performance and quality of care. The staff would be empowered to set up improvement teams and priorities. The developed improvement plans will be implemented at the participating health facilities, and agreed upon indicators will be assessed to measure the progress. Health facility staff will learn from each other´s experiences, embark on joint problem, as well as receive specific technical and QI training. Going through the several improvement cycles of PDCA [planning (plan), implementing (do), monitoring (check), acting (act)] over a period of 2–3 years, defined standards would be achieved. Upon reaching this stage, the collaborative process would be linked up with external accreditation or certification.

Table 4.1: Implementing a systematic approach

National level	District level	Hospital/Health facility level	Community level
Situation analysis & assessment of quality of care	Orientation of district leaders	Orientation of staff	Orientation of the community
Development of national standards of care	Orientation of district health management team, hospital directors and resource pool members	Establishment of QI teams (QIC and WIT)	Establishment of a demand side mechanism
Dissemination of approved national quality standards	District level mapping exercise	(Self-) Assessment of quality to identify areas where quality is low	Identification of health services that can be supported by the community
Development/adaptation of generic materials	Development of a distinct scale-up plan	Development of a plan to improve quality	Implementation of community health services
Development of a national scale-up plan	Orientation of health facility management team	Implementation of the plan	Monitoring of community health services

4.1.1.6 Monitoring and reassessment:

Continuous monitoring of performance, provision of supportive supervision, on-site mentoring and self-assessments of quality of care to measure progress towards the achievement of standards are the key components of improvement process. Unfortunately, evidence suggests that monitoring and supervision, while almost always acknowledged as being crucially important, are virtually never backed with the resources (financial or human) needed to be effective. The implementation of this framework would empower staff at all levels to use guidelines and tools to self-assess their adherence to nationally accepted standards. Ideally self-assessment should happen on a continuous basis by every health worker, and on an institutional basis at the health facilities

at six-month intervals in selected areas. External assessment would be carried out every 1–2 years to validate findings of self-assessment. Monitoring is only meaningful if it leads to concrete improvement actions. Therefore, feedbacks on findings would be provided to the people who are powered to bring about the changes. Client satisfaction and concerns would be included in the monitoring process to address improvement activities.

4.1.1.7 Documentation and dissemination:

Changes in care and results of improvement processes would be documented, published and disseminated. The achievements of standards would be celebrated with staff, public and relevant scientific communities. Experiences will be shared in collaborative meetings either verbally or in pictorial form (posters, graphs, scorecards, newsletters and stories). The achievements and lessons learnt would be published in national medical journals, local or national newspapers or presented on radio or other media in the country. Country experiences may also be submitted to peer-reviewed journals for publication.

4.1.1.8 Scaling up:

At this stage the positive learning and achievements will be scaled up at all the hospitals, health facilities and communities. Quality improvement is a dynamic process that can start at many different places at the same or different times. It does not have to be a strictly coordinated top-down venture but can grow from both bottom and top. The main coordination is required for establishment of standards and accompanying guidelines that may need updating as new evidence becomes available.

If the country embarks on a national process, assessments, planning and improvement processes may initially be conducted in defined geographical areas. Lessons learnt from the first cycle can be reviewed to evaluate the overall progress. If progress is perceived to be satisfactory, the process would be scaled up to ensure universal quality of care. If progress is perceived to be patchy, a detailed assessment of the poor improvement areas will give insight into obstacles that can be directly addressed and efforts can be redirected towards overcoming these obstacles. During the scaling-up process, links would be established with existing professional regulation, accreditation and prequalification mechanisms, or if these do not yet exist the process will be used to institute them.

4.1.1.9 Integration into pre-service training:

Quality improvement should be the part of pre-service training to ensure that all health workers have the knowledge and necessary skills to provide quality care. The concept of quality, standards of care, and evidence-based medicine would be integrated into the pre-service training of future generations of health care providers for sustainability of quality improvement efforts. QIS will take initiative to incorporate all the QI issues in the curricula of medical, nursing and midwifery training schools.

Part-5

Steps of Implementation at Health Facilities

In a quality improvement organization, each health-care provider and staff member should believe that change and improvements are an intrinsic part of everyone's work, every day and in all parts of the system. Shifting to this new focus involves substantial reframing of the mindset of the care givers as well as use of varieties of tools and methods. Quality Improvement Secretariat has developed the PDCA module for implementing QI activities at the facilities. This PDCA module will be used to implement the RMNCAH QI framework countrywide.

5.1 Steps of QI framework implementation at health facilities

Step 1: Setting up Quality Improvement Committee (QIC) and Work Improvement Teams (WITs)

Step 2: Defining the problem

Step 3: Implementing change

Step 4: Measuring results

Step 5: Sharing results and spreading change

5.1.1 Step 1: Setting up QI teams

To improve quality of care, all staff must accept quality improvement as their responsibility and feel empowered to actually make a difference. Since QI is most effective when internally driven, responsibility for its implementation should be taken up by a group of motivated staff. They will form the quality improvement committee (QIC) and work improvement teams (WITs) at facility level. WITs will be formed with the frontline health care providers at different sections of the hospitals, while QIC will be formed taking representatives from the WITs, and the facility manager/QI focal person as the leader. The QIC may decide to have a rotational membership system, giving other staff members (e.g., members from WITs) an opportunity to participate as team members. The WIT and non-QIC members can participate in monitoring and analyzing results, and promoting change.

5.1.2 Step 2: Defining the problem

Standards and guidelines are extremely important part of quality improvement. They define the required quality of care and serve as a basis to identify the inputs and processes needed to ensure quality of care in order to improve health outcomes. These standards can be translated into guidelines and assessment tools. During this phase, improvement teams will assess the systems and

processes in place and determine the underlying problems that contribute to less desirable results. Once problems are identified, they would be prioritized, defined and quantified through data collection. The team will also analyze the root causes of the problems and develop action plans for implementation.

5.1.3 Step 3: Implementing change

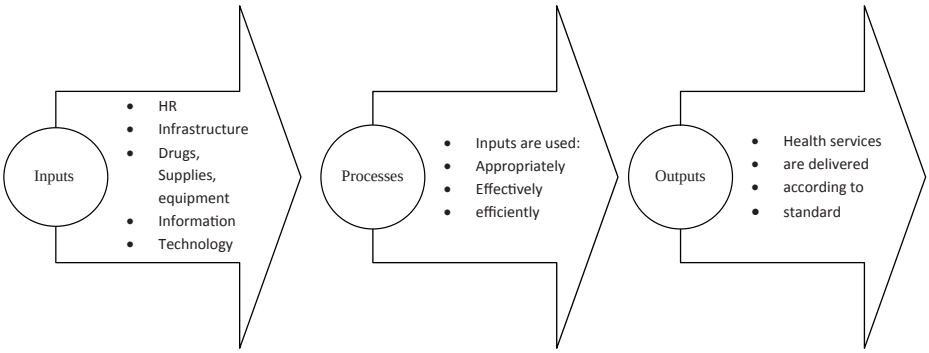
Once there is a clear understanding of the opportunities for improvement, teams can begin brainstorming and testing ideas using the Plan-Do-Check-Act (PDCA) approach. This is an exciting phase that provides teams the opportunity to exercise creativity and challenge the status quo by trying different improvement ideas. The PDCA approach allows the teams to try ideas on a small scale, which can smooth out any concerns in the process before sharing the success or failure of the tried change more widely. It builds confidence in the change process and creates buy-in by involving individuals that are truly affected by the proposed changes. Once the teams have trailed their improvement ideas through small sets of change and have demonstrated improvement, it would make the staff confident and encourage them to implement changes into everyday practice in the unit where the work is done. This would be done through: a) Documentation of the testing so that the team can test multiple ideas simultaneously and clearly see what works well and what processes require some tweaking; b) Standardizing and formalizing the changes and documenting the new process; and c) Creating an ongoing measurement plan to ensure that staff members adopt the changes, and have a plan to monitor the improvement. QI teams would also detect problems and alert staff if processes are not functioning as intended.

5.1.4 Step 4: Measuring results

Indicators are necessary to monitor progress. Indicators will be selected based on nationally adopted standards. Indicators would be of several types, such as input, process and output indicators. Improvement teams will be encouraged to choose their own performance indicators to measure progress towards the standards they chose to achieve at each point in time. At the beginning these may be largely input indicators, such as commodities (drugs, logistics, equipment etc.) need to be put in place of service delivery point. Once these inputs are made available, the teams may choose to focus on process indicators, such as percentage of children with cough and difficult breathing treated correctly. Progress towards the achievement of standards will lead to better quality of care and ultimately contribute to improved outcome indicators such as decline in case fatality rate. It is important to know that outcome indicators often first deteriorate with improving quality as the caseload may increase and more serious cases are taken on. It is therefore essential to collect data to be able to show that the denominator has changed and the overall situation is improving

even if the indicators suggest otherwise. This step would be accomplished through: a) Creating a measurement plan; and b) Measuring whether a change has the desired impact and outcome

Figure 5.1: Inputs, processes and outputs needed to be in place to achieve the standards



Source: Adapted from Quality Improvement Handbook for TB and MDR-TB Programs, University Research Co., LLC: 2013.

5.1.5 Step 5: Sharing results and spreading change

For sustainable change, the QIC needs to continue sharing the improvement stories including how the changes created positive impact on patients' outcomes. It is important to clarify the lessons learned in order to help staff understand how they benefit from ongoing improvement. As appropriate, the QIS will select strategies about how to spread the change beyond the current unit or department to the entire facility. This step will be accomplished through: a) Documenting and sharing the stories of improvement, success and failure from the PDCA cycles including the challenges; b) Creating and implementing a dissemination plan; c) Communicating changes including what are the impacts of these changes on patients and staff; and d) Creating a measurement plan for spread

Following table summarizes the major activities for strengthening QI monitoring system and data use at national, district and facility levels.

Table 5.1: Key activities to implement the QI monitoring system and data use

National level	District level	Facility level
• Establish (or strengthen) a minimum set of indicators for quality-of-care monitoring at national, district and health-care facility levels for RMNCAH. • Based on needs, adapt or develop district and facility data-collection tools (registers and primary patient records) to capture essential data • Develop a reliable and transparent reporting system for facility, district and national levels • Develop indicator dashboards to make indicators widely accessible, and use the benchmark to illustrate excellence and variation • Identify and train national and districts facilitators in analysing and communicating data and indicators	1. Integrate indicators for quality of care in district management systems, and build a system for monthly tracking and review in the QIC meetings 2. Strengthen the capacity of District QIC to review and ensure data quality and act upon the information 3. Address structural, system and human resource barriers by providing financial, technical and material resources and skills-building 4. Establish mechanism for periodic review and share progress with stakeholders using data from the dashboards	• Identify the standards and indicators (both process and outcome) that the facility will use for quality improvement • Establish the baseline and track monthly performance on the quality of care indicators • Establish a mechanism to continually disseminate performance indicators to facility QIC and staff, patients, families and community • Strengthen the capacity of the quality improvement teams to generate and use data for improving quality of care • Document best practices and update facility information systems to reflect the improvements • Participate in district level events where the facility can compare and discuss its indicators and quality improvement activities with other facilities

Part-6

Monitoring of QI Framework

6.1 Purpose of monitoring

For monitoring and supervision, QIS has developed the RMNCAH QI M&E framework linking with the WHO Monitoring and Evaluation framework. This monitoring framework provides basic guidance on the monitoring and evaluation needs for the QIS to improve quality of care for RMNCAH. The Monitoring Framework aligns with the guideline, standards and tools of RMNCAH framework of WHO.

6.2 Components of monitoring

The monitoring framework outlines four key components earlier, which will be adapted and integrated into the health information and monitoring systems:

- Quality improvement measures for health facilities: To support rapid improvements in quality of care led by facility QIC and supported by district/ UHC managers for RMNCAH
- District performance measures: To support district managerial and leadership functions to improve and sustain the quality of care at the facilities for RMNCAH
- Implementation milestones: To track implementation steps and progress against strategic objectives (Leadership, Action, Learning, and Accountability).
- Common measures: To provide a common set of standardized indicators for monitoring all the facilities.

6.3 Measurement methods and data sources

With the exception of the common measures, the indicators, measurements and data sources will vary according to monitoring framework. Indicators will be calculated and used by the facility and district QIC as part of regular monitoring to improve care. Most of the indicators will be calculated using routine measurement methods and data sources. Additional data collection (e.g. periodic facility assessment/baseline assessment) would complement routine monitoring to understand the critical quality gaps.

6.3.1 Continuous (routine) data collection and sources:

- Patients' records/facility registers: The facility registers and patients' records would provide detailed information on interventions provided and adherence to standards of care for more complex processes that are not typically aggregated in HMIS at sub national or national level.

- Data aggregated within health management information systems (DHIS2): Selected data from facility registers are typically aggregated in HMIS (e.g. DHIS2). To varying degrees, HMIS can provide routine (e.g. monthly) information on service utilization, provision of high-impact interventions, and institutional incidence of complications, case fatality and mortality rates.
- Maternal and perinatal death surveillance and response (MPDSR):MPDSR would provide detailed case-by-case information about cause of deaths and underlying contributing factors, including quality of care provided.
- Civil registration and vital statistics: This would provide information on mortality and population-based denominators (e.g. estimated births).
- Human resources and staff training: The placement, availability and training of health staff will be tracked at facility, district and/or national levels through distinct human resources information systems (HRIS).

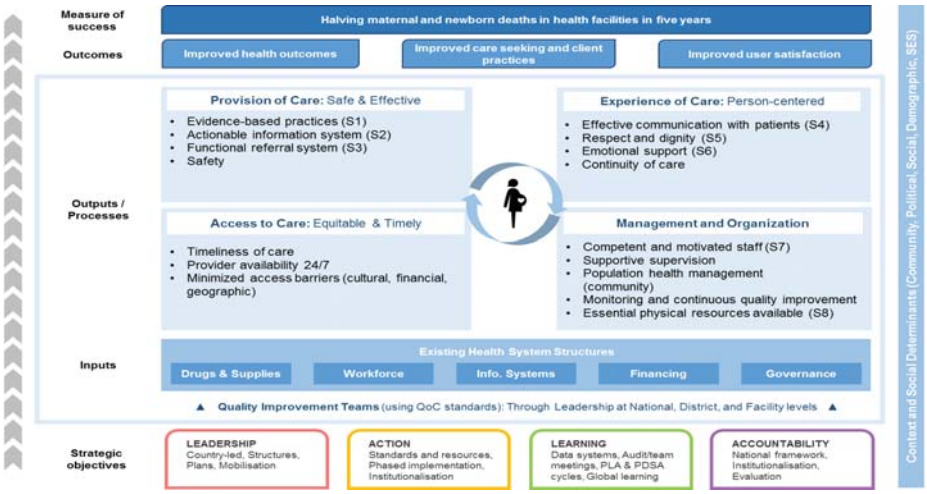
6.3.2 Periodic data collection and sources:

- Client Surveys: Structured questionnaires (e.g. brief client exit survey) would provide information on clients' priorities of care and experience of care.
- Staff/Provider interview (and vignettes): Would be done for assessing providers' knowledge, self-reported practice and training needs.
- Simulations of care: Simulation would be done for assessing provider competencies and skills for discrete tasks (e.g. resuscitation of newborn using mannequin; postpartum counselling etc.)
- Observation: Information will be collected through observation for assessing provider performance and adherence to standards during real-time clinical care (e.g. as part of baseline assessment or periodic peer to peer observation). Service readiness (e.g. stock available or condition of water and sanitation facilities etc.) or other operations will also be assessed using observation.

6.4 The monitoring logic model

The monitoring logic model (Fig 6.1) is built on several important conceptual models including the WHO Vision paper and framework of standards. The QIS would capture some of the indicators from each of the logic model's four central elements: 1) Management and organization; 2) Access to care; 3) Provision of care; and 4) Experience of care.

Figure 6.1: Monitoring logic model



6.5 Using data to improve quality: Plan-Do-Study-Act (PDSA) Cycles

The "Model for Improvement (Figure XX)" is one of the implementation model that provides a structured way to improve the delivery of care. This model uses three questions to structure an improvement plan for better care. They are:

1) What are we trying to accomplish (a specific numeric and time bound aim)?
2) What change can we make that will result in improvement (the ideas for change can we test?)?
3) How will we know that a change is an improvement (the measures we will use to track progress for improving care)?

The quality statements are a good starting point for developing the first question as part of local improvement efforts. The concept of "trying out" ideas and learning what works and what does not is an essential part of implementation designs that will be adapted to local context. One method for testing new ideas for improvement is the Plan-Do-Study (or, Check)-Act (PDSA or PDCA) cycle. The PDSA/PDCS cycle is designed to help QI teams to methodically test and iteratively refine ideas on a small scale before committing for larger scale implementation. QI teams need to collect real time data to undertake these tests and track performance of the maternal newborn care system.

Part-7

Steps of Implementation at Health Facilities

7.1 Milestone for implementation

Following table depicts the implementation milestones to track progress against the strategic objectives (Leadership, Action, Learning, and Accountability). Note that this list is preliminary and more detailed definitions and data sources may require

Milestones for implementation by Strategic Objective	Source
7.1. LEADERSHIP	
7.1.1. National and district governance structures for QoC are strengthened (or established) and functioning	
1. Ministerial multi-stakeholder steering committee for quality improvement on RMNCAH services is strengthened (or established)	Desk Review
2. Quality Improvement Committees (QIC) in the divisions, districts and upozilla are established (with representatives from community and women's associations) and functioning	Desk Review
3. Facility level QICs and WITs are established and functioning	Desk Review * (a,b)
4. Liaison between committees at the three levels (national, district and health facility) on quality issues is established and functioning	Desk Review * (a,b)
7.1.2. National vision, strategy and operational plan for improving quality of care on RMNCAH services is developed, funded, monitored and regularly reviewed	
1. National vision, strategy and operational plan (with targets) for improving quality of care on RMNCAH services is developed	Desk Review
2. Partners are aligned and resources mobilized for implementation of the national operational plan	Desk Review
3. Implementation of the national operational plan is costed and funds allocated in the budget	Desk Review
4. Human resources for implementation of the national plan are committed, and roles and responsibilities of different stakeholders are agreed	Desk Review
5. Regular review of progress against targets are conducted, and the national plan is adjusted as required	Desk Review

Milestones for implementation by Strategic Objective	Source
7.1.3. National advocacy and mobilization strategy for quality of care is developed and implemented	
1. Professional associations, academics, civil society and the private sector are brought together and mobilized to champion the network and support implementation	Desk Review
2. National advocacy and mobilization strategy developed, implemented and monitored	Desk Review * (b)
7.2. ACTION	
7.2.1. WHO evidence-based standards of care for RMNCAH are adapted and disseminated.	
1. National standards and protocols for RMNCAH quality of care are compiled and reviewed	Desk Review
2. National standards and protocols are adapted and updated using WHO standards of RMNCAH care	Desk Review
3. National standards and protocols are incorporated into national practice tools	Desk Review
4. Updated national standards, protocols and practice tools are disseminated to all revenant stakeholders and used	Desk Review * (a,b)
7.2.2. National package of improvement interventions is adapted (or developed) and disseminated	
1. Quality improvement interventions in the country are compiled and reviewed and best practices are identified	Desk Review
2. Quality of care situation is assessed and quality gaps identified based on the national standards of care	Desk Review
3. National package of quality improvement interventions to address identified quality gaps is developed and disseminated, drawing on the WHO quality improvement intervention	Desk Review
7.2.3. Clinical and managerial capabilities to support quality improvement are developed, strengthened and sustained	
1. A national resource center (at QIS) with tools to improve capabilities of health care providers and managers is established and functioning.	Desk Review * (b)
2. National and district resource pools and facilitators with expertise in quality improvement (including participatory learning and action) are identified and trained	Desk Review
3. Quality improvement and Participatory Learning and Action (PLA) manuals for national, district, sub-district, facility and community level groups and committees are developed and used	Desk Review * (a,b)

Milestones for implementation by Strategic Objective	Source
4. Regular meetings for participatory learning on quality improvement at district, sub-district, facility and community levels are scheduled and implemented	Desk Review * (a,b)
7.2.4. Quality improvement interventions for RMNCAH are implemented	
1. Demonstration sites for quality of care in RMNCAH services are identified and established to implement national package of improvement interventions	Desk Review
2. Improvement package is adapted to district context	Desk Review
3. Resources and technical support to implement the improvement package in the districts provided	Desk Review
4. Success of demonstration sites is regularly reviewed and assessed	Desk Review * (a,b)
5. Refined package of effective and scalable QoC interventions is identified from demonstration sites	Desk Review
6. Implementation of refined package of interventions is expanded in new districts and health facilities	Desk Review * (a,b)
7.3. LEARNING	
7.3.1. Data systems are developed/strengthened to integrate and use quality data for improved care	
1. A national minimum set of RMNCAH quality of care indicators at the district and national level are aligned with the common cross-country indicators, is agreed and validated	Desk Review
2. Process to add a minimum set of RMNCAH quality of care indicators in the national health information system established and supported as appropriate. In addition, other local information sources (e.g. maternity registers) updated to monitor prioritized indicators for district and facility level, as needed.	Desk Review * (a,b)
3. Data collection, synthesis and reporting is standardized and data quality is monitored and assessed	Desk Review * (a,b)
4. Capabilities in data collection, synthesis and use for improving care at health facility, district, sub-district and national levels are strengthened	Desk Review
5. System for collection and reporting of case studies/stories from the field, and testimonials developed and used	Desk Review * (a,b)
6. Key data is shared with health facility staff, district and sub-district health teams and community groups to inform user decision-making, prioritization and planning	Desk Review * (a,b)

Milestones for implementation by Strategic Objective	Source
7.3.2. Mechanisms to facilitate learning and share knowledge through a learning network are developed and strengthened	
1. National and international resources on QoC are accessed through a dedicated QoC website	Desk Review
2. Virtual and face-to-face learning networks and communities of practice are established and supported at the global, national and district level	Desk Review * (a,b)
3. Learning collaboration between health facilities and districts are established and supported	Desk Review * (a,b)
4. Government focal person and national institution to coordinate and sustain a national learning network are identified	Desk Review
7.3.3. Data and practice are analyzed and synthesized to generate an evidence base on quality of care improvement	
1. Data is regularly analyzed and synthesized to identify successful interventions	Desk Review * (a,b)
2. Best practices and variations are identified and disseminated in-country and between countries	Desk Review
7.4. ACCOUNTABILITY	
7.4.1. National framework and mechanisms for accountability for QoC are established and functioning	
1. Quality indicator dashboard to track progress at facility, district and national levels are developed and regularly updated and published	Desk Review * (a,b)
2. Inputs and outputs in the national operational plan for QoC are tracked and regularly reported, and reports disseminated to stakeholders and discussed in national forums	Desk Review * (b)
3. Regular multi-stakeholder dialogue is conducted to monitor progress and resolve issues	Desk Review * (a,b)
4. Periodic independent assessments of progress to validate routinely reported results are conducted	Independent assessment
7.4.2. Progress of the regional and global network on RMNCAH quality of care is regularly monitored	
1. Annual progress report is published	Desk Review
2. Network plan is reviewed, revised and shared	Desk Review
3. Annual review and planning meeting of the network (members and affiliates) is held	Desk Review

Milestones for implementation by Strategic Objective	Source
4. Learnings of implementation are summarized and made available in the public domain (including peer reviewed publications)	Desk Review
7.4.3. Impact of the global initiative on RMNCAH quality of care is evaluated	
1. Evaluation designs are developed and agreed	Desk Review
2. Pre-intervention qualitative and quantitative data collection is established and implemented	Desk Review * (a,b)
3. Interim impact analysis is performed and used to inform program implementation	Desk Review * (a,b)
4. Final impact analysis is performed and disseminated	Desk Review

***: Indicator has more detailed data source requirements.**

a: Indicator may require sub-national (e.g. district, sub-district, facility, community) data collection.

b: Indicator may require regular or ongoing (e.g. quarterly, 6-monthly, or annual) update of information.

Annex-1

Reference

1. National Institute of Population Research and Training (NIPORT), Mitra and Associates, ICF International. Bangladesh Demo¬graphic and Health Survey 2014. NIPORT, Dhaka, Bangladesh: 2015.
2. National Institute of Population Research and Training (NIPORT), International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), and MEASURE Evaluation. (2017). Bangladesh Maternal Mortality and Health Care Survey 2016: Preliminary Report. Dhaka, Bangladesh, and Chapel Hill, NC, USA: NIPORT, icddr,b, and MEASURE Evaluation.
3. WHO. Standards for Improving Quality of Maternal and Newborn Care in Health Facilities. Geneva, Switzerland 2016. doi:978 92 4 151121 6. http://www.who.int/maternal_child_adolescent/documents/improving-maternal-newborn-care-quality/en/
4. WHO. Strategies toward Ending Preventable Maternal Mortality (EPMM) 2015; Vol 6736. doi:ISBN 978 92 4 150848 3. http://apps.who.int/iris/bitstream/10665/153540/1/WHO_RHR_15.03_eng.pdf
5. Moran AC, Jolivet RR, Chou D, et al. A common monitoring framework for ending preventable maternal mortality 2015–2030: phase I of a multi-step process. BMC Pregnancy and Childbirth 2016;16(1):250. doi:10.1186/s12884-016-1035-4.
6. WHO. Every Newborn: An Action Plan To End Preventable Deaths. 2014. www.who.int/about/licensing/copyright_form/en/index.html%5Cnhttp://apps.who.int/iris/handle/10665/127938.
7. Moxon SG, Ruysen H, Kerber KJ, et al. Count every newborn: a measurement improvement roadmap for coverage data. BMC Pregnancy and Childbirth 2015;15(2):S8. doi:10.1186/1471-2393-15-S2-S8.
8. Every Woman Every Child. Indicator and Monitoring Framework for the Global Strategy for Women's, Children's and Adolescents' Health (2016-2030). New York, USA; 2015. doi:10.1017/CBO9781107415324.004.

   http://www.who.int/life-course/publications/gs-Indicator-and-monitoring-framework.pdf
9. WHO. Quality Equity Dignity: A Network to Improve Quality of Care for Mothers, Newborns and Children. Geneva, Switzerland
10. Tunçalp , Were W, MacLennan C, et al. Quality of care for pregnant women and newborns-the WHO vision. BJOG 2015:1045-1049. doi:10.1111/1471-0528.13451.

11. Primary Healthcare Performance Initiative (PHCPI). Methodology Note; 2015.

12. WHO, IHP+. Monitoring, Evaluation, and Review of National Health Strategies, a Country-Led Platform; 2011.

13. WHO. Monitoring the Building Blocks of Health Systems: A Handbook of Indicators and Their Measurement Strategies; 2010. doi:10.1146/annurev.ecolsys.35.021103.105711.

14. WHO Western Pacific Region. First Embrace: First Biennial Progress Report. Geneva, Switzerland; 2016.

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