Safe Birth:
A Call to Action

Artist: Akansha Patil

Title: Carmine Turbulence

The painting illustrates the emotional bond that exists between the family and the unborn baby.

The expecting mother is looking at the priceless bond between a healthy child and mother with hopeful eyes, hoping to have the same connection with her child when she gives birth.

Red indicates the massive blood loss caused by postpartum hemorrhage.

The Federation of Obstetric & Gynaecological Societies of India

IAPSM
Indian Association of Preventive & Social Medicine

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FOREWORD

Ms K. Sujatha Rao, IAS
Former Union Health Secretary,
The Govt of India

The World Health Organization (WHO) estimates that underdeveloped countries account for 99 percent of maternal fatalities. The most prevalent causes include obstructed labour, infection, and postpartum bleeding in the first 24 hours after delivery. Socio-economic and cultural determinants continue to create significant disparities in accessing maternal health care across these countries, including those in the South East Asia region.

It is devastating to think that in India, five women die every hour due to complications of pregnancy and childbirth.

In the past 15 years, India has made significant progress in reducing preventable maternal mortality, but we still have a long way to go.

We need to build on our successful efforts to date to promote safe birth practices through a whole-of-society approach. Combined efforts at national, district, facility and community level are needed to ensure that high quality and effective services are provided for better maternal health and safe births now and for the future.

As well as working towards achieving SDG 3.1, we must focus on our aspirational goal of ensuring that every pregnant woman's life and every birth is regarded as precious, and maternal death an aberration. To achieve this, taking a life-course approach will help us to look at the bigger picture, including many other aspects of women's health and underlying issues in the years before pregnancy and childbirth.

'Safe Birth - A Call to Action', sets out a multi-stakeholder approach. The report outlines specific calls to action and roles for every stakeholder group - government, policy makers, elected representatives, opinion leaders, media, medical experts, professional associations, community-based organizations, womens' groups, as well as women and their families.

'Safe Birth - A Call to Action' is a significant milestone and a critical effort under the safe birth inititative as it lays down the pathways to achieving the goal of raising the reproductive health of women throughout all of India and reducing maternal mortality to the bare minimum. I hope that the broad-based engagement and interventions outlined in this report will help galvanize the prompt action and ongoing efforts needed to help us realize this goal.

PREFACE

Dr. Bulbul Sood
Senior Regional Strategic Advisor, Jhpiego,
and former Country Director, Jhpiego, India

Improving maternal health is imperative to ensure the well-being of the current and future generations. The risks associated with pregnancy or childbirth cost the lives of 830 women every day around the world. There are significant disparities in accessing maternal health care due to socio-economic and cultural determinants.

In India, the current maternal mortality ratio (MMR) is 103 per 100,000 live births. However, in order to achieve SDG Target 3.1: Reduce the maternal mortality ratio to less than 70 per 100,000 live births, there is a need to promote safe birth practices through a multi stakeholder coalition and targeted interventions. Reducing preventable maternal mortality and improving maternal health and safe birth experiences calls for a whole-of-society approach and collective action of all stakeholders involved - health care professionals, individuals, and mothers, etc. Appropriate policy action at national, state and districts level and sustained action will provide the much-needed impetus to successfully minimize inequities and reduce maternal morbidity and mortality.

This document intends to put the focus on a multi-stakeholder approach and community participation to reduce preventable mortality and morbidity. It aims to generate a 'Call to Action' for each stakeholder group and engage individuals, organizations and communities in a shared commitment to improve maternal health.

The time to act is now. Let us join forces to promote maternal health. Healthy mothers contribute to make a healthy family and ultimately a healthy nation.

EXECUTIVE SUMMARY

This report serves as a call to action for the multi-stakeholder coalition that is working to lower the preventable maternal mortality ratio in India. Its goal is to mobilize communities, organisations, and individuals by suggesting targeted interventions to promote health-seeking behaviour of women and improve maternal health. The impact of the woman's own life cycle, community practices, social and environmental determinants, the health system's influence, the roles of stakeholders and the government, and the call to action for achieving safe birth outcomes in every setting and at every location of the nation, are all covered in the document.

In India, five women die giving birth every hour, which accounts for an estaimated 43,800 deaths every year. We can reduce preventable maternal mortality by addressing and controlling various underlying factors. India is a remarkable success story for multi-stakeholder collaboration. Maternal mortality ratios have decreased dramatically across India in the last fifteen years. However, there is still high disparity across the states. For example southern states are high-performing states (with low MMR), and northern and northeast states are amongst low-performing states (with high MMR). To achieve SDG Goal 3.1 - to lower the maternal mortality ratio to fewer than 70 per 10,000 live births by 2030, a lot remains to be done.

Everyone - individuals, families, obstetricians, gynecologists, family doctors, nurses & midwives, primary healthcare providers, community based workers, medical & nursing students, media, communities, local leaders, politicians, national governments and international agencies - has an important role to play at every level. The efforts must be guided by the best available evidence on maternal mortality and based on that, targeted interventions are needed to counter them.

This document is designed to support this effort. It reports the latest scientific knowledge on safe birth and maternal health. The breadth and depth of the evidence shows that maternal mortality is preventable and deserves far greater attention from policymakers, health professionals and other stakeholders. As mothers experience health consequences in specific ways, they deserve to be assessed in a special way. This document provides practical and reliable information for health professionals, and other stakeholders and an insight into the evidence on the suggested recommendations and guidance to all stakeholders.

With a focus on the life-course approach for safe birthing, this report provides insight into current maternal health schemes in India, gaps in their implementation, grassroots strategies, challenges for action, actionable areas and suggestions.

The following chapters have been discussed in the report.

Maternal health in India - This chapter provides a backdrop of maternal health statistics and burden of maternal mortality at the global and national level. It highlights the causes of the high maternal mortality ratio in some of the larger states in India - with postpartum haemorrhage being the most common cause for high MMR across India.

Life-course approach to maternal health - This chapter explains the concept of life-course therapy and its advantages of applying it to a woman's life (from birth to death) to experience a safe and healthy motherhood. It also explains and emphasizes a lifelong multi-generational approach, health development model of maternal health within gender-based equality, ethnicity, religion and culture in a woman's life, and the various outcomes after application of this therapy to life.

Health promotion for improved maternal health in India - Health promotion empowers people with information on what they could do to stay healthy, and to address challenges that influence the health and wellbeing of communities. It explains strategies for maternal health (Ottawa Charter) that are essential for health promotion. It further delves into focus areas and immediate needs for health promotion in India.

Maternal health policies: Generating social and political actions - This chapter deep dives into the various maternal health policies launched and implemented in India e.g., Janani Suraksha Yojana, Janani Shishu Suraksha Yojana, SUMAN, RMNCH+A among others. The positive outcomes of these schemes have been explained through National Family and Health Survey data indicators. The chapter also suggests actions that should be taken by the government prior to implementing the schemes so as to improve maternal health.

Empowering communities: Grassroots strategies - This chapter highlights the role of grassroots health workers and primary level health care in delivering health to the last mile. The roles and responsibilities of community health workers are explained to build understanding of how they are enabling and empowering community health. Examples of Village Health Sanitation & Nutrition Committee (VHSNC) and Rogi Kalyan Samiti/Patient Welfare Committee (RKS) have been included to demonstrate the role of Health and Wellness Centres in strengthening primary health care.

Maternal healthcare in India-Challenges to action - This chapter sheds light on the challenges for safe births in India. Examples of health indicators of low-performing and high-performing states are provided. The challenges to the maternal health are explained through WHO's framework of six building blocks in health systems.

Maternal health is influenced by many different stakeholders at many different levels who, when brought together, can yield remarkable results in the reduction of maternal mortality and achieving safe births. The key is to understand the depth of the issue and prioritize actions that will help achieve safe birth outcomes at the national and sub-national levels.

ABBREVIATIONS

AB-HWC - Ayushman bharat-health and wellness centre

ANC - Antenatal care

ANM - Auxiliary nurse midwives

ASHA - Accredited Social health activist

AWW - Anganwadi workers

BPCR - Birth Preparedness and Complication readiness

BTL - Below the Line

CHC - Community Health Centres

CHW - Community Health Workers

CMHO - Chief Medical and Health Officer

CSSM - Child Survival and Safe Motherhood Programme

DH - District Hospital

EMOC - Emergency Obstetric Care

EDD - Expected Date of Delivery

FOGS I- Federation of Obstetric and Gynecological Societies of India

GDP - Gross Domestic Product

GOI - Government of India

HIC - High Income Countries

HMIS - Health Management Information System

HWC - Health and Wellness Centres

ICDS - Integrated Child Development Services

IFA - Iron and Folic Acid

INAP - India Newborn Action Plan

IPHS - Indian Public Health Standards

JSY - Janani Suraksha Yojana

JSSK - Janani Shishu Suraksha Karyakram

KFOG - Kerala Federation of Obstetricians & Gynecologists

LMIC - Low-Income Countries

LHV - Lady health Visitor

MAA - Mother's Absolute Affection

MCH - Maternal and Child Health

MMR - Maternal Mortality Ratio

MNCH - Maternal Newborn and Child Health

MO - Medical Officer

MoHFW - Ministry of Health and Family Welfare

MPW - Multi Purpose Worker

NGOs - Non-Governmental Organizations

NFHS - National Family Health Survey

NHM - National Health Mission

NRHM - National Rural Health Mission

NQAS - National Quality Assurance Standards

ORT - Oral Rehydration Therapy

PHC - Primary Health Centres

PMMVY - Pradhan Mantri Matru Vandana Yojana

PNC - Post Natal Care

PPH - Postpartum hemorrhage

PRI - Panchayati Raj Institutions

QS - Quality Standards

RCH - Reproductive and Child Health

RKS - Rogi Kalyan Samities

SDG - Sustainable Developmental Goal

SRS - Sample Registration System

TBAs - Traditional Birth Attendants

TT - Tetanus Toxoid

UN-SDG - United nations - Sustainable Developmental Goal

UIP - Universal Immunization Programme

UMMID - Unique Methods of Management and Treatment of Inherited Disorders

UPHC - Urban Primary Health Centres

VHSNC - Village Health Sanitation and Nutrition Committee

WHO - World Health Organization

Artist: Darshan Manjare

Title: Reality

While giving birth to a child, a mother needs to deal with a lot of physical challenges. A mother attempts to direct the lifelike ship towards the shore on a stormy sea despite the numerous challenges she has in life.

I have made an effort to depict the relationship between mother and child as well as their life journey in my painting.

SAFE BIRTH: CALL TO ACTION

Improving Maternal Health and Safe births- Call-to-Action

Improved maternal health and safe birth are together an outcome of efforts from multiple stakeholders. Combined efforts at national, district, facility and community level can ensure that high quality and effective services are provided for achievement of safe births and maternal health in the long run. Strategic partnerships are required to foster sustainable and effective solutions for preventable maternal deaths and safe births. Commitment should focus on improvement of care delivery and policy change further upstream and supporting integration of clinical care and public health systems effectively[1].

Role of governments

- To advocate for a policy agenda that supports health system interventions to improve utilization of services, quality of care and better trained or skilled staff.
- To support all physical and social determinants of health, including equitable access to quality education, safe housing, food security, and financial protection.
- To invest in midwifery programmes: Empowering midwives is one of the surest ways to safeguard maternal health and increase safe childbirth in the country. Midwives support a woman throughout the antenatal, intra-partum and postnatal continuum of care. They also help in task shifting, thus reducing the workload of doctors/gynaecologists/obstetricians. It would make maternal care more cost-efficient by avoiding unnecessary medical interventions, particularly caesarean sections [2,3].
- To promote policies that remove barriers to health care access, equity and quality. There is a need to expand financial protection schemes across all states and union territories. Out-of-pocket expenditures are a potential problem that needs to be solved urgently. High maternal healthcare expenditure prevents pregnant women from lower socio-economic categories to fully access quality healthcare; We cannot aim at achieving our goals unless we spend enough for the health of our population. Maternal health schemes need to be expanded in a manner that reduces the out-of-pocket expenditures [2].
- To recruit and retain the community health workers, such as ASHAs, ANMs, Staff Nurses, Midwives and doctors in rural and hard to reach areas, Government initiatives must take into account their education, regulation, finance, and personal and professional support[3].

- To reduce the maternal health disparities amongst the states. Governments should put emphasis on transformation of the aspirational districts, especially in the low performing states[3].

Role of policy makers

- To consider comprehensive packages of services that include a life-course approach. Such interventions must include awareness and advocacy at eachstage of a woman's life that address specific issues associated with that particular phase while preparing for the next stage.

- To take action to expand service delivery to remote, inaccessible areas through telemedicine or physical infrastructure build up.

- To drive improvement of public health infrastructure, workforce and resources in such a way that it ensures that women give birth at setups that provide multidisciplinary care which is culturally appropriate and client-centric.

- To explore incentivization of the health workforce that is trained in obstetrics to work in rural and remote areas, to ensure skilled birth attendance.

- To direct substantial research funding towards building the evidence base to inform and expand the understanding of maternal health needs and to identify effective interventions and technologies to improve outcomes across different settings. To support and encourage research that identifies environmental, social and biological factors that influence maternal health, supports evidence based best clinical practices in medicines and therapeutics, and drives quality improvement methods.

- To allocate funding to understand user behaviour such as non adherence to the current clinical guidelines and how to persuade doctors/clinicians to follow them, and making services more appealing to mothers who still do not utilize them.

- To develop a policy on handing over case notes or paperwork to pregnant women, so that they are responsible for keeping and bringing the case notes to each antenatal appointment. This will promote a positive pregnancy experience, and give them a greater sense of control and satisfaction over the continuation and quality of care that they receive[4].

- To consider the implementation of community mobilisation through facilitated participatory learning and action (PLA) cycles with women's groups to enhance maternal health, especially in rural, remote or underprivileged areas with limited access to healthcare facilities. Participatory women's groups provide a chance for women to discuss their concerns during pregnancy, including obstacles to getting treatment, and to boost support for pregnant women[5].

Role of professional associations & private health facilities

- Aim to strengthen partnerships between government, professional bodies, bilateral and multilateral donors and international and national agencies. This will enable scale up of the efforts and funding and accountability towards maternal care across the maternal health continuum[6]. There is also a need to encourage and broaden public private partnership[6].

- Government should support the private sectors with financial aids to expand the outreach into all regions. This is a government role not a professional assication role.

- Invest in capacity building initiatives of private sector health facilities, to expand facilities beyond urban environments where they are more frequently utilized.

- To promote knowledge sharing in the private health sectors with an objective of collaborative problem solving.

- To ensure that the knowledge of post-partum contraception and family planning is provided to women during their antenatal care visits in private as well as in public health sectors.

- To engage private hospitals at district level and below in stipulated maternal health interventions and should follow the Quality of Care (QoC) framework[9].

- To support standalone private practitioners providing pregnancy care and family planning services to work in coordination with the district health system, especially for referral and notification. Recognition of efforts of private practitioners in working towards the improvement of the maternal health indicators will surely encourage them to further work towards this goal of achieving safe motherhood.

Role of civil societies and corporate setups

- To ensure a bottom-up approach involving all key stakeholders from community-level up to the policy level in provideingcare to pregnant women. These include self-help groups, rural practitioners, Panchayati Raj Institutions (PRIs), religious leaders etc. It is important to collaborate with and support the work of professional bodies and entities that are dedicated to improving maternal health and birth outcomes.

- To consider how corporate sector involvement would be a useful cross-sectoral collaboration.

Role of health care personnel and health care delivery system

- To create an enabling health care delivery system that ensures that the expectant mother receives respectful maternity care throughout her labor and birth. This means that the care arranged for, and offered to, all women upholds their dignity, privacy and confidentiality, moreover ensures freedom from violence and maltreatment and allows for informed decisions[7] throughout labor and delivery. Similarly respect should be provided by the pregnant women and their families to the doctors and health care workers.

- To use straightforward and socially acceptable communication methods to effectively communicate with women in labour, and ensure that quality improvement process and risk stratification are consistent and constant requirements at all levels of health care delivery.

- To ensure that postnatal care services are strengthened with special focus on complicated deliveries, haemorrhage cases and initiation and continuation of breastfeeding. Maternal health beyond delivery should also receive undivided attention[7].

- To ensure that referral systems are strengthened across the levels of healthcare delivery.

- To ensure trainings, protocols and standard operating procedures are in place for all kinds of healthcare providers for providing skilled care, identification of high risk pregnancies and timely referral of all complicated cases to higher level appropriate facilities.

- Maternal and Perinatal Death Surveillance and Response (MPDSR) needs to be strengthened. Every maternal death needs to be analysed to address the barriers to favourable maternal and neonatal outcomes.

- Formation of integrated skill laboratories at public health facilities is a newer option that can be explored. This strategy aims to build capacity of healthcare providers (specialists, medical officers, nurses and community health officers) by utilizing skill labs. The integrated approach will ensure availability of updated skills to service providers at health facilities. The main objectives of these skill labs should be to enhance technical capacity of doctors and nurses for better maternal and neonatal complication management and to facilitate reinforcement of key technical skills and knowledge of health care providers.

- To encourage more regular and aggressive monitoring of population level trends in maternal health indicators so as to develop region specific and timely intervention plans for improvement of care. Maternal health surveillance should be improved by focusing on the accuracy, specificity, timeliness, transparency and quality of epidemiological data on maternal health[8].

Role of medical colleges and nursing schools

- Capacity building of medical and nursing students and creation of standard operating procedures should be carried out by medical and nursing colleges. Operational and systems research in maternal health should be carried out by departments like obstetrics and gynecology and community medicine.

- Medical colleges and nursing schools need to grow as knowledge pools for creation of human resources for health and linkages with district health systems.

Role of women and their families

- To be empowered and educated in reproductive health as a necessary area of action.

- Promotion of community driven initiatives goes a long way in achieving short, medium and long term goals[10]. This can be primarily coordinated by women's groups.

- Involvement of men as supportive partners in decision making for pregnancy and child birth is needed to improve timely care seeking behaviour during antenatal, delivery and postnatal periods.

Role of Media

- Media is the first source of information and thus has an important role to play in creating awareness and knowledge about the safe pregnancies and public schemes to be utilized by the women in the communities.

- Electronic, print and web media should focus on presentation of the facts and making maternal health a political agenda by increasing media coverage.

- Media or social media have done a great job in providing health-related information to the people. However, it has also spread misinformation causing much harm. Therefore, it is necessary to share information from reliable and credible sources by following a thorough fact check to keep the trust of the women and their families who wish to utilize health care services.

Artist: Akshay Bhau Shinde

Title: Sorrow after Nirvana

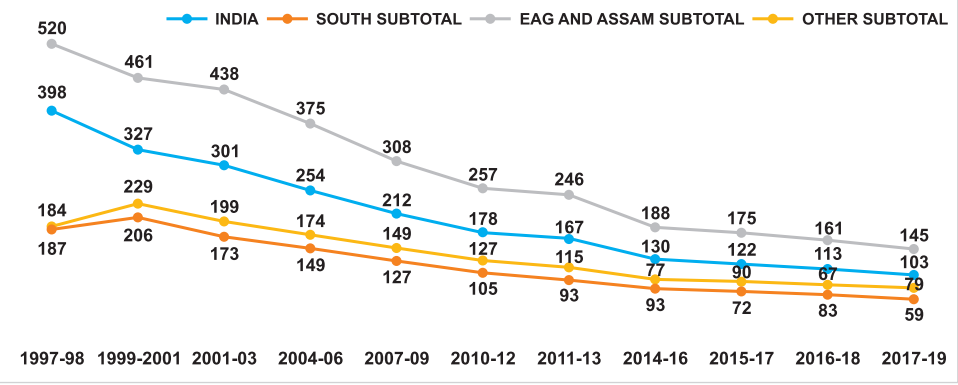
Placenta has to be completely removed during delivery otherwise the mother will die. The painting in the back is from the Ajanta Caves. It is used to show the ancient history of maternal mortality. The scene depicts Gautam Buddha's mother, Rani Mahamaya, who died a few days after the Buddha's birth.

The painting seeks to depict the loss of the pillars of home, with the misery and disruption of loosing a mother

Overview:

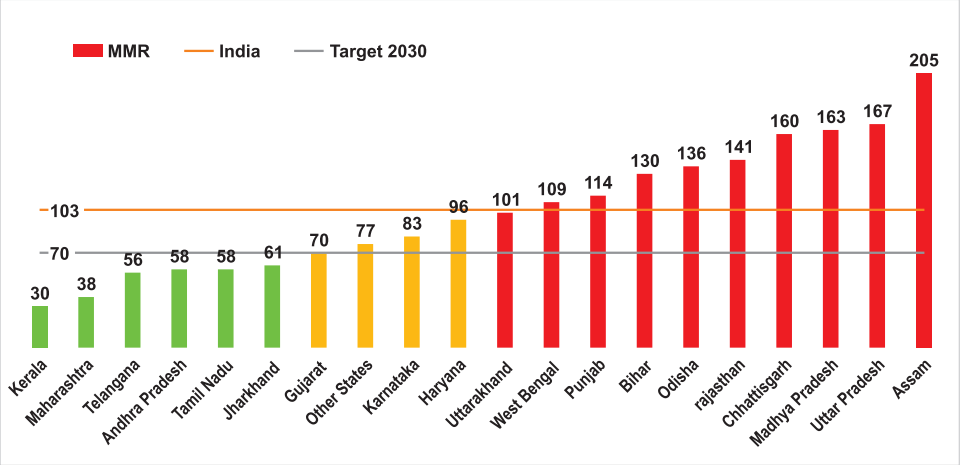
Maternal health depends on the core aspects of family planning, prenatal, natal and postnatal care. Maternal health is equally imperative for new-born survival and has direct implications on newborn health and well-being. Globally, around 810 women die every day due to preventable causes related to pregnancy and childbirth[11]. Globally, there are wide variations in maternal deaths. High-income countries (HICs) have a lower maternal mortality ratio (MMR) of 3-12 per 100,000 live births[12]. In comparison, low-income countries (LICs) and lower middle-income countries (LMICs) bear a high burden (94%) of global maternal mortality[13]. By 2030, the MMR should be 70 per 100,000 live births globally as per SDG 3.1, with no nation having an MMR of more than 140 per 100,000 live births[14]. Currently the MMR in India is 103 per 100,000 live births[14]. There has been a reduction from 212 per 100,000 in 2007-09 to 103 per 100,000 in 2017-19 (Fig.1).

Figure 1: Trend of MMR in India (Sample Registration System / SRS: 1997-2019)



However, there still is a wide variation amongst states, with MMR as high as 205 per 100,000 in Assam and as low as 30 per 100,000 in Kerala (Fig.2). Going by the current rate of decline, India is unlikely to achieve SDG 3.1 by the 2030 target. Though several policies and programs are in place at the national and sub-national level which aim to improve overall safe births in India, we still have unfinished business towards delivering the UN-SDG targets.

Figure 2: Maternal Mortality Ratio across the 20 larger states of India (SRS 2017-19).



The highest contributing factors to maternal deaths:

The challenges in achieving these numbers lie in the core mechanisms and factors that influence maternal health and childbirth in a resource constrained setting. In India, more than 80% of maternal deaths are due to postpartum haemorrhage (PPH), abortion, puerperal sepsis, hypertension in pregnancy (pre-eclampsia, eclampsia, and associated disorders), ectopic pregnancy, obstructed labour and infection[14]. The remaining 20% of deaths can be attributed to causes such as pre-existing diseases that are aggravated by pregnancy. These include anaemia, heart disease, diabetes, malaria, jaundice, high fertility and multi-organ system failure[14,15]. These conditions can also lead to prolonged hospitalisation, major invasive procedures, chronic illness and hysterectomy[14]. Most of the maternal deaths go unaddressed due to social factors such as illiteracy, age, cultural practice, patriarchy and violence against women, which have a huge impact on maternal health and safe births[14].

Shift the focus towards citizen partnership:

The major issues concerning pregnancy and childbirth have largely been addressed by the ongoing maternal and child health programs in India. However, to achieve the goals, we need to now focus on the core components at the individual, community and the national level that influence the outcomes of pregnancy and safe births. It is necessary to identify the potential actionable areas in the realm of maternal health. Initiatives need to be taken at the societal, institutional, stakeholder, and policy levels to address the disparities in maternal health, successfully minimize care inequities, and attenuate maternal morbidity and mortality in order to have a long-lasting and systemic influence on maternal health and safe births.

Midwifery service initiative:

The Government of India (GOI) started the Midwifery Service Initiative in 2018 and has committed to train about 90,000 midwives as per the International confederation of midwives (ICM) standards[16]. Global evidence shows that midwives provide women-centred, evidence-based, respectful, maternity care and the guidelines of this initiative includes the concept of Midwifery-Led Care Units (MLCU's) managed by Nurse Practitioners in Midwifery (NPM) at medical colleges, district hospitals, first referral units (FRUs) and community health centres (CHC)[17]. With the aim of the task-shifting of normal pregnancy and childbirth care to midwives, the workload on doctors/obstetricians would decline significantly and it would make maternal care more cost-efficient by avoiding unnecessary medical interventions, particularly caesarean sections[17]. Midwives can play a catalytic role by serving women across high-load MMR states, especially those in remote areas and from marginalised communities. Investing in empowering midwives is one of the surest ways to safeguard maternal health and increase safe childbirth in the country.

Public-private partnerships:

Private sector obstetric care creates a substantial opportunity to reduce maternal mortality. Private healthcare providers (i.e, all non-public sector providers) are a key source of healthcare services for almost 40% of families in developing nations like India[18]. A dynamic private sector that is actively involved in enhancing and preserving the standard of care for pregnant women and newborns has is to be nurtured, and encouraged. We can provide more women and newborns with high quality health services that are tailored to their needs through an efficient partnership with the private sector[19].

Promote respectful maternity care:

Every woman around the world has a right to receive respectful maternity care. However, problems such as disrespect, abuse (physical, sexual. Verbal), ill-treatment, stigma and discrimination, health system condition and constrains, demand for informal payments, poor rapport between women and providers, infrastructural issues such as lack of water supply, sanitation, electricity, and crowded rooms are prevalent in India[20]. Disrespectful care is therefore a topic of public health concern and has an effect on utilization of services, affects the progress of the country in terms of healthcare, and affects mothers physically as well as psychologically.

Artist: Kusumavati Hira

Title: Mother Birth

Creation in itself is a very beautiful process. Look around the nature that surrounds us, a seed that has the potential to grow into a tree is surrounded by a fragrant flower.

It is the law of nature, a positive environment is important for a pleasant creation. At last, we can say - a mother doesn't give birth to a child but a child gives birth to a mother.

Life-course approach in maternal health 2

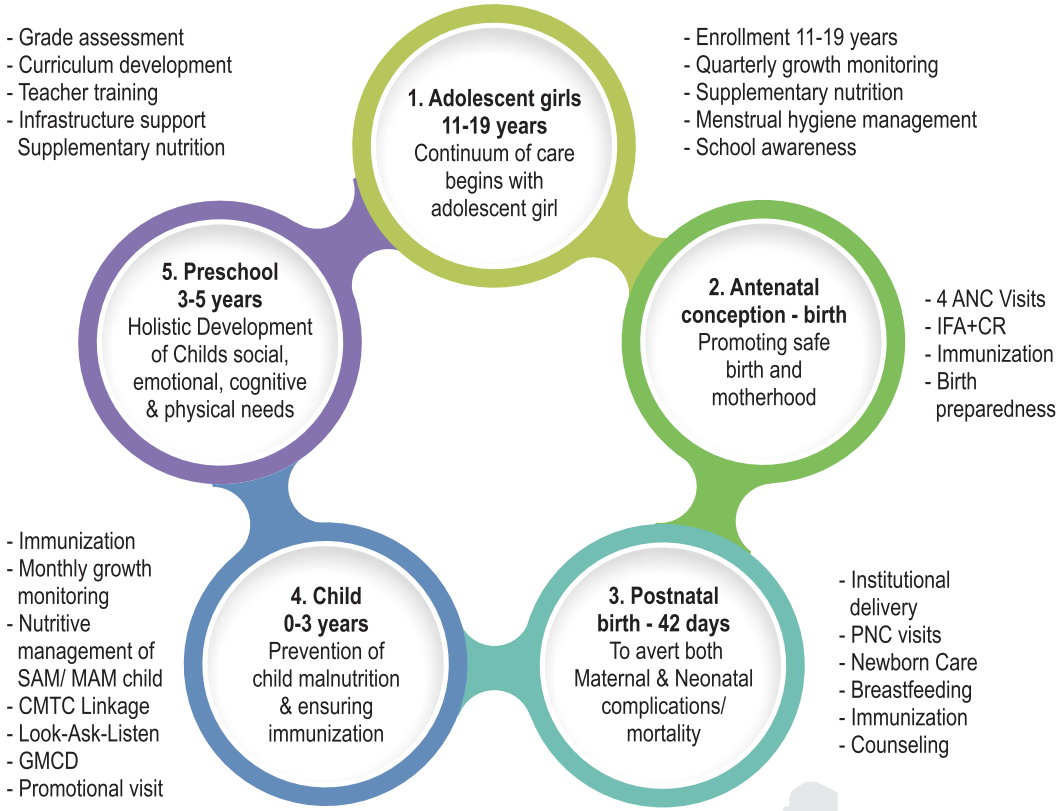
Several aspects of a woman's health need to be looked after, years before the actual phase of pregnancy and child birth[21]. Adequate and timely interventions can positively impact the outcomes of safe births and motherhood. It is imperative to look at the big picture through a life-course approach to build a greater understanding of the underlying issues.

Each life stage influences the next and together, the social, economic and physical environments in which we live. A life-course approach examines the long-term effects of exposures (biological, behavioural, psychosocial, environmental) during gestation, childhood, adolescence and young adulthood on health and chronic disease in later life and across generations. It also assesses the maternal health in the context of gender equality, ethnicity, religion, and culture, among other factors in a woman's life[22]. There is an interplay of multiple factors that influence pregnancy outcomes and safe birth. (Figure 3)

Figure 3. Interplay of factors in the context of pregnancy outcomes

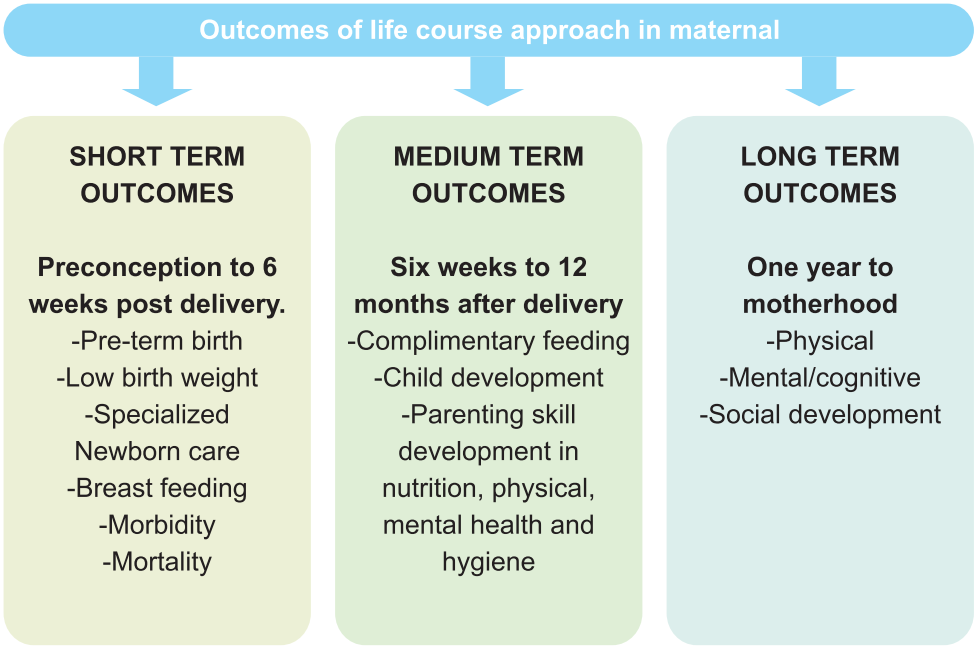
The life-course approach demands a comprehensive package of services, awareness and advocacy interventions for each life stage, addressing specific issues of that particular phase in a woman's life. Figure 4. demonstrates the health related service packages that can be administered during each phase of a woman's life cycle[23]. In addition, counselling, information, education and services for prenatal care, safe delivery, post-natal care, breast feeding and infant and women's health care are also necessary components. Treatment of infertility, abortion, including prevention of abortion, and management of the consequences of abortion, are also necessary components of achieving safe birth outcomes. Treatment of reproductive tract infections and sexually-transmitted diseases, as well as advocacy for responsible parenthood, are important, but often neglected, components of this approach. Governments and communities can play a crucial role in effective implementation of these interventions by creating enabling systems and an environment that is, people-centred, inclusive and based on the life-course approach.

Figure 4. Possible service packages at each phase of the life course in women



The outcomes of the life-course approach can be categorised as short, medium, and long term[21,22,23] (Figure 5). Most of the life-course approach of maternal and child health frameworks and programmes focus on the short term and, to some extent, medium-term outcomes. However, emphasis is also needed on longer term outcomes including those related to improving parenting skills, and overall physical, mental/cognitive and social development needs of a woman[24]. This could be also achieved by improved health promotion in India for maternal health.

Figure 5: Outcomes of life-course approach in maternal health



Artist: Dhanraj Deepak Kalmani

Title: Suffocation

The topic of my painting is about safe birth. I have tried to express through my painting that the mother has to suffer difficulties at the time of delivery, such as Nuchal Cord.

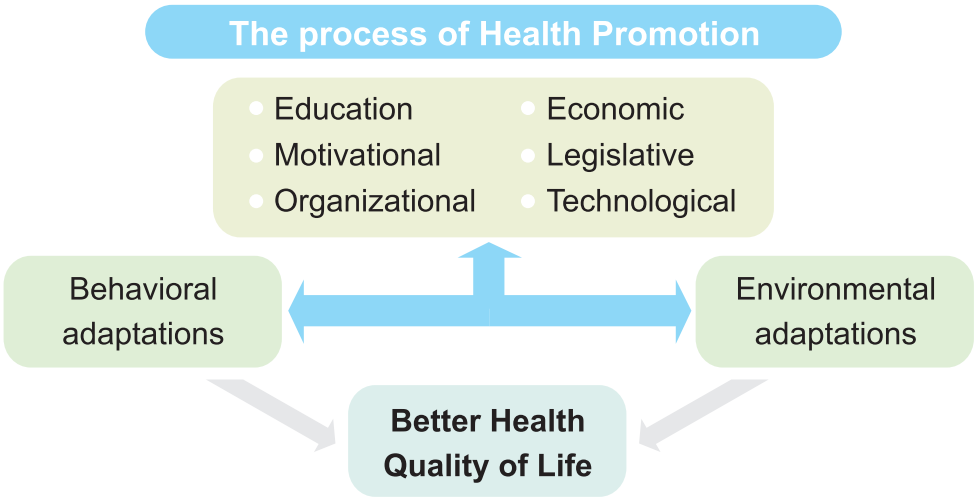
The umbilical cord can get wrapped around the baby's neck causing it to strangle a baby by cutting off oxygen flow to the brain or compressing the carotid artery.

Health promotion for improved maternal health in India

3

Health promotion informs people of what they could do to stay healthy, and to address the variables in the community that influence health and wellbeing. **The Ottawa Charter for Health Promotion** proposes five strategies that are essential to successful health promotion: build healthy public policy, create supportive environments, strengthen community action, develop personal skills, and reorient health services[25]. Several health promotion strategies have been recommended in the context of maternal health (Fig 6) in the prenatal, antenatal and post-natal periods.

Figure 6: Health Promotion Strategies for Maternal Health



Birth preparedness and complication readiness (BP/CR) is a strategy that needs to be adopted widely[26]. It is delivered by health care providers in the antenatal period to the mother and her family members. Health education is provided on several elements to prepare the mother and their families for utilizing skilled care at birth in a timely manner. The elements include: decision on desired and closest places for delivery, preferred birth attendant/labour companion, funds for all expenses related to birth and in case of complications, necessary supplies and material, transport to a facility for birth and identification of compatible blood donors in case of complications[26].

One of the unmet areas is **patriarchy.** Males are usually the decision makers in the household. Their involvement in different phases of maternal reproductive cycle is important to facilitate and support self-care among women, home care, use of skilled care during pregnancy, childbirth and the postnatal period for women and new-borns[27]. This can be achieved through mass media campaigns, community and workplace-based outreach and education targeted at men, and facility-based counselling sessions for men, couples or groups.

Culturally appropriate skilled maternity care is a necessary strategy at healthcare facilities[28]. Programmes have been modified as per local cultural context and such practices incorporate acceptable and respectful care, employed mediators and interpreters, and used participatory approaches to engage in dialogue with communities[28]. This approach helps in improving acceptability of the health care system.

Similarly, improving the quality of facility-based health care services is important for scaling up interventions to improve health outcomes of mothers and newborns. Involvement of perspectives of women, families and communities on the quality of maternity care services influences decisions to use this care. Additionally, community participation in programme planning, implementation and monitoring is also recommended to improve use of skilled care during pregnancy, childbirth and the postnatal period for women and newborns. It also helps increase the timely use of facility care for obstetric and newborn complications and ultimately improves maternal and newborn health.

Community-organized transport schemes can address challenges due to lack of transport, particularly for obstetric complications. Such schemes are recommended in settings where other modes of transport are neither reliable nor sustainable.

Artist: Bhairavi Indulkar

Title: Maternal Bond

The painting associates the structure of the placenta which provides the baby with oxygen and nutrients in the womb to Tree of Life.

Yoni Mudra is also referred to as the Shakti Mudra and is dedicated to the Hindu goddess Shakti and equates her to every woman whose womb has immense possibilities for not only giving life to another human being but also of expression, freedom, and transformation for herself.

Maternal health policies: Generating social and political actions

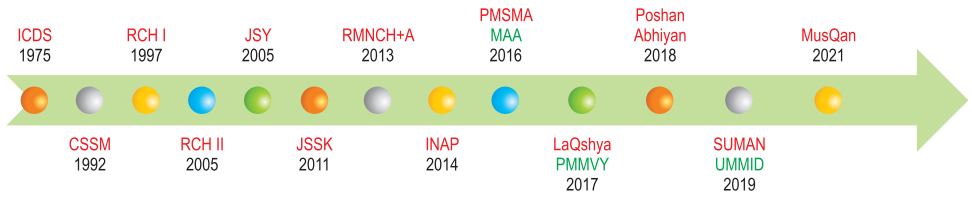
4

Maternal health is a priority for all countries alike. In India the focus is on providing affordable, accessible and quality maternal care, with a purview of achieving safe birth and infant outcomes. The government has introduced several schemes in the last five decades. These schemes have contributed to attaining better morbidity and mortality outcomes, but a lot needs to be done to ensure last mile coverage.

Maternal and child heath initiatives in India

The government health programs at national and sub-national levels are presented in Fig 7. as per the year they were launched.

Figure 7: Launch of various national programs



Integrated Child Development Services Scheme (ICDS)

Launched on 2nd October, 1975, the Integrated Child Development Services Scheme is one of the flagship programs of the GOI. The beneficiaries under the scheme are children in the age group of 0-6 years, pregnant women and lactating mothers. The objective was to reduce the incidence of mortality, morbidity and malnutrition among pregnant women and children through supplementary nutrition, nutrition and health education, immunization, health check-ups and referral services[29].

Child Survival and Safe Motherhood programme (CSSM)

Launched in 1992, the program has an objective of improving the health status of infants, children and reducing maternal morbidity and mortality, through strengthening various services and programmes like the Universal Immunisation Programme (UIP); Oral Rehydration Therapy (ORT); universalising prophylaxis schemes for control of anaemia in pregnant women; training of traditional birth attendants (TBA), provision of aseptic delivery kits; and strengthening of first referral units to deal with high risk and obstetric emergencies[30].

Reproductive and Child Health (RCH)	Phase I launched in 1997 and phase II in 2005, with an objective of combating and reducing mortality ratios of mothers, infants, and children. After the positive and successful outcomes of RCH I, it was extended to RCH II in 2005 with the objective of providing better services to improve reproductive and child health[31].
Janani Suraksha Yojana (JSY)	A demand promotion and conditional cash transfer scheme launched in April 2005, with the objective of reducing maternal and neonatal mortality by promoting institutional delivery among poor pregnant women[32].
Janani Shishu Suraksha Karyakram (JSSK)	Launched on 1st June, 2011, it entitles all pregnant women delivering in public health institutions to expense free delivery including free drugs, diagnostics, blood and diet, free transport from home to institution, between facilities in case of a referral, and drop back home. Similar entitlements have been put in place for all sick newborns accessing public health institutions for treatment until 30 days after birth. In 2013, this has been expanded to include sick infants and antenatal and postnatal complications[33].
Reproductive, Maternal, Newborne, Child and Adolescent Health (RMNCH+A)	Launched in 2013, the RMNCH+A strategy promotes links between various interventions across thematic areas to enhance coverage throughout the lifecycle to improve child survival in India. Linking maternal and child health to reproductive health and other components like family planning, adolescent health, HIV, gender, and preconception and prenatal diagnostic techniques. All interventions are aimed at reproductive, maternal, newborn, child, and adolescent health under a broad umbrella, and focus on the strategic lifecycle approach[34].
India Newborn Action Plan (INAP)	Launched in 2014 to advance the Global Strategy for Women's and Children's Health and achieve single digit neonatal mortality rate and single digit still-birth rate by 2030 through strategic implementation of six packages[35].

Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)	Launched in 2016, it ensures quality antenatal care and high risk pregnancy detection in pregnant women on 9th of every month[36].
Mother's Absolute Affection (MAA)	Launched in 2016 with an attempt to bring an undiluted focus on the promotion of breastfeeding and the provision of counselling services for supporting breastfeeding through health systems[37].
Labour room Quality improvement Initiative (LaQshya)	On 11th December 2017, the Ministry of Health and Family Welfare (MoH&FW) launched the LaQshya initiative, aiming to strengthen key processes related to labour rooms and maternity operation theatres. The objective is to improve quality of care around birth and ensure respectful maternity care[38].
Pradhan Mantri Matru Vandana Yojana (PMMVY)	Launched in 2017 to provide partial compensation for wage loss in terms of cash incentives so that the woman can take adequate rest before and after delivery of the first living child. The cash incentive provided would lead to improved health seeking behaviour amongst pregnant women and lactating mothers[39].
Poshan Abhiyan/National Nutrition Mission	Launched in 2018 to lay emphasis on the nutritional status of adolescent girls, pregnant women, lactating mothers and children from 0-6 years of age. To prevent and reduce stunting and under-nutrition in children, and to reduce anemia in children, and women in the age group of 15-49 years[40].
Surakshit Matritva Aashwasan (SUMAN)	This initiative started in 2019 with an objective of zero preventable maternal and newborn deaths and high quality of maternity care delivered with dignity and respect[41].
MusQan	This program aims to ensure provision of quality child-friendly services in public health facilities to reduce preventable newborn and child morbidity and mortality[42].
Unique Methods of Management and treatment of Inherited Disorders (UMMID)	Launched in 2019 with an objective of providing genetic testing and counselling services to pregnant women to prevent inherited disorders in newborns[43].

DAKSHATA	This program was launched by the GOI with a goal to strengthen quality of care during the intra-partum and immediate postpartum periods, through competent and confident providers in public sector institutions. Since 2015, the program has been scaled across 25 states and union territories in a phased manner[44].
MANYATA	Launched in 2016, it is the flagship program for private sector providers, driven by Federation of Obstetrics and Gynaecological Societies of India (FOGSI), to reduce preventable maternal and newborn mortality in India. The program received leadership and technical assistance from Jhpiego and support from the MSD for Mothers initiative. The program follows 16 clinical WHO standards, for antenatal, intra-partum and postpartum care, to ensure that women receive quality maternity care and applies innovative methods like virtual trainings sessions, mentoring visits, drills and simulation to train and equip private healthcare providers. As of 23 July 2022 the program is being implemented in 14 states[45].

Successful government policies and their outcomes:

The outcomes of the schemes like JSY and PMMVY are remarkable. According to National Family Health Survey (NFHS) data from 2005-2016, there has been a significant increase in the number of visits of mothers attending more than four times during antenatal period (11.1%-26.4%), and an increase in the number of institutional deliveries (20.6%-73.8%). Antenatal checkups, pregnancy registrations, post-natalchecks and also deductions in the delivery expenditures, have been observed, owing mostly to these government conditional cash transfer programs. The primary health centers which have received the National Quality Assurance Standards (NQAS) certificate from the Government, are conducting more deliveries than community centers and district hospitals in some districts[46]. There is also an increase in the number of deliveries at night in Primary Healthcare Centres (PHC) compared to the number of deliveries during the day. This is an indication that if infrastructure is improved, it can lead to positive behavior change in the communities.

State government policies: How southern states achieved the lowest MMR in India

Few state governments have also taken special policies to address the issue. In the early 1980s, Kerala invested heavily in social welfare systems, which gave the state well-developed public health facilities[47]. In the late 1980s and early 1990s, Tamil Nadu created one of the first state-run public health organizations in India, which focused on the efficient implementation of best practice and the rapid training of health care workers and their deployment to villages and rural areas[48]. It also established a unique semi-governmental organization called the Tamil Nadu Medical Services Corporation. This corporation handles the purchasing, storage, and distribution of drugs and medical supplies across the state; provides other services such as equipment maintenance, and is responsible for the quality and accountability of the state's medical supply system. This resulted in Tamil Nadu having higher-quality maternal and child health services[49].

These states have focused on pro-women policies like maternity benefit schemes, birth companionship, and the provision of food and compulsory stay for 24 hours following delivery. The implementation of these schemes has followed a community participatory approach at multiple levels including block level meetings with all the Panchayat members and local leaders, where community members are briefed about the available services at PHCs. The health centres prepare a list of women residing in the catchment area, who are expected to deliver in the subsequent month, which is displayed as an Expected Date of Delivery (EDD) chart in the PHC. This simple tool helps track the mothers and counsel them to come to the PHCs for delivery. When women come for their antenatal check-up, nurses take them as a group to the labour room and wards and brief them about the facilities available. Popularly known as “maternity picnics", these sessions have helped women to gain confidence about the services available at PHCs. The state's emergency transport system now has a fleet of 434 ambulances on the road, parked at strategic locations and accessible within an hour. If required, in times of emergency, private vehicles are hired and paid for from untied funds. Intra-natal referrals from PHCs are mostly accompanied by nurses who receive a small incentive. A referral nodal medical officer's (MO) post has been created who would be informed of all referral cases. It is due to these interventions that southern states like Kerala and Tamil Nadu have the lowest MMR in India, among all states[50].

Considerations for the programs/schemes/interventions and policies

Every pregnancy is unique, and every pregnant woman needs special attention. Every pregnant woman should have access to high-quality prenatal care in order to diagnose and avoid life-threatening issues during childbirth. The government intensifies and enhances its present efforts to improve the quality and quantity of nutrition for the general public, particularly vulnerable groups like women and children. The recent introduction of newer programs like DAKSHATA, LAQSHYA, SUMAN and MusQan aims to strengthen the health system.

For improving the quality of care at public health facilities, NQAS for District Hospitals (DH), Community Health Centres (CHC), Primary Health Centre (PHC) and Urban-Primary Health Centres (UPHC) have been drafted and operationalized through the National Quality Assurance Program. While states were in the process of implementing the Quality Management System using NQAS[46], LaQshya initiatives focused on intrapartum and immediate postpartum care, which takes place in the labour room and maternity operation theatre. Increased utilization of PHCs was observed in all the districts[38]. Quality care is ensured with the help of direct monitoring by District Director of Health Services (DDHS). Kind staff and a user-friendly environment is essential to promote deliveries in the PHCs. It was also ensured under this initiative thathospital premises were clean, and provide basic facilities like clean linen, bed, food and water, and adequate privacy.

The increase in the proportion of institutional deliveries has not resulted in commensurate improvements in the key maternal and new-born health indicators. It is estimated that approximately 46% maternal deaths, over 40% stillbirths and 40% newborn deaths take place on the day of the delivery. A transformational change in the processes related to care during delivery, which essentially relates to intrapartum and immediate postpartum care, is required to achieve tangible results within a short period of time.

Artist: Sampada Pujare

Title: Stree

Stree is one of nature's exquisite creations, and she has the power to regenerate life. It is believed that a woman begins a new life after the birth of a child. She stands a possibility of passing away while giving birth.

A divine source from which new life is born is known as "Yoni," and "Jaswand" is its representation used in this painting.

Empowering the community: Grassroots strategies

5

Connecting with communities and driving behaviour change for the betterment of their health is a challenging, yet rewarding, task. There are cultural and social hindrances and winning people's trust to instil a positive behaviour is imperative. Health promotion strategies also become successful only when the community takes trust in the personnel providing the services. Here comes the role of grassroot level workers and health systems. The Bhore Committee had the progressive vision of providing health care at the doorstep of the people which paved the way for primary health care workers and this vision got strengthened in the light of Alma Ata Declaration[51].

India has a vast network of government primary healthcare facilities and there are community health workers which include Accredited Social Health Activists (ASHAs); Anganwadi workers (AWWs), Auxiliary Nurse Midwife (ANM) and multipurpose health workers (MPW) male or female[52]. The Indian Public Health Standards (IPHS) have clearly outlined the infrastructural changes, workforce and equipment needs for which resources should be readily made available at all levels of public health system. However, in true reality the systems are not up to date and lacking in several aspects. At the sub-center level, community health workers act as the interface between the community and the health system and play important roles in the smooth functioning of these centers. A number of studies have demonstrated the positive impact of community health worker (CHW) programs on the promotion of reproductive health services and family planning, appropriate care seeking, antenatal care during pregnancy, and skilled care for childbirth[53].

ASHAs, ANMs and AWWs are the key persons involved in providing maternal care to the women at the grassroot level. They are residents of the community and selected by the community, trained, deployed and supported to work in their own villages. This makes them more acceptable to their community.

ASHAs are incentive-based workers and are mostly involved in the identification of new pregnancies, birth and deaths, mobilization and counselling of mothers, supporting in seeking timely health care, identifying and referring complicated cases for skilled care. ANMs on the other hand, are permanent workers under the national health mission and are responsible for the implementation of schemes based on maternal and child health components in the community. They are primarily involved in early registration of pregnancy, antenatal care, micronutrient supplementation of children and pregnant women, antenatal and postnatal care, conducting health checkups and management and referral of complicated cases to higher centres. Anganwadi workers (AWWs), though employed under the integrated child health development scheme (ICDS), actively liaise with the ASHAs and ANMs to provide immunization, health check-up, antenatal and postnatal check-up services. Additionally, as a part of their job they provide health education and counselling on nutrition and breastfeeding etc.

However, there are certain challenges to the functioning of the grassroots system. The numbers of workers employed are lesser than the minimum requirement for a most centres. There is wide variation in the workforce across different districts. At times CHWs are overburdened with multiple tasks and hence the quality of services suffer[53]. However, in many states, ASHAs payout is low and often delayed by inconsistent and insufficient financial rewards resulting in ASHAs being demotivated to work.

There has been increased community engagement following introduction of these cadres of workers. Since 2006 to 2021, there has been an overall increase in the promotion of maternal health services according to the NFHS (3 & 5), the coverage of four or more antenatal care visits (ANC) increased from 50.7 % to 58%, institutional delivery rates increased from 40.8% to 88.6%, and the percentage of births with a skilled attendant increased from 48.8 to 89.4% (NHFS 5). Most of these successes can be attributed to the involvement of grassroot level workers. The unique selling point of this cadre is that they are individuals from within the community, so they are well-versed with the local culture and belief system. Women have trust in these workers which makes them approach trained workers for their health care needs. Support and access to health care services in many populations has been improved[54]. In fact, for the commendable work and outstanding contribution in protecting and promoting health, ASHAs were recently honoured with World Health Organizations (WHO) 2022, Director General's Global Health Leaders Award at the 75th World Health Assembly[52]. India has had success with this innovative strategy of involving people from within the community and training them into skilled workers and as first point of contact with the health system. Further improvement and development of indicators and long-term impact will be visible only if this cadre of workers is strongly strengthened in terms of numbers and capacity. Several case studies from India and abroad have shown how these workers have been instrumental in delivery of many maternal health initiatives that have proved to be fruitful for the upliftment of the society and the state as a whole.

Health and wellness centres

In 2018, the GOI launched its flagship Ayushman Bharat program, the world's largest government-funded health care program with an aim to bring quality and affordable health care closer to the homes of the people. Aligned with SDGs' rallying call of 'leaving no one behind,' Ayushman Bharat strives for Universal Health Coverage. Under this initiative, the GOI envisions upgrading 150,000 Sub-Centers (SCs), Primary Health Centers, and urban Primary Health Centers across the country to Health and Wellness Centers (HWCs) in a phased manner, by the incremental addition of Community Health Officers (CHOs) to deliver comprehensive primary health care (CPHC) services.

During and after the Covid period, more than three lakh tele-consultations were done in a day at AB-HWCs. This assures specialist consultation for the continuum of care, minimizing physical travel of patients, reducing both cost and potential hardship[55].

Village Health and Sanitation Nutrition Committee (VHSNC)

To address issues related to health and its socioeconomic determinants at the village level, the Village Health and Sanitation Nutrition Committee was established which supports the decentralized health planning procedure. The committee plays a leading role in providing a platform for enhancing community health awareness and access to health services, addressing particular local needs, and acting as a framework for community-based planning and monitoring. It functions as a Gram Panchayat committee's sub-committee. It has a minimum of 15 members, including: an elected member of the Panchayat, who will serve as the committee's chair[56], individuals working in the field of health and health-related services, community members/beneficiaries, and representatives from all subgroups of the community, especially the most vulnerable sections. The committee's member secretary and convener must be an ASHA who resides in the village. ANM, AWW, ASHA, and ICDS supervisors are involved in servings at the household level as part of the committee's primary duty to raise awareness on nutrition, surveys on nutritional needs and its deficiencies among women and children[56]. The supervisors also facilitate early detection of malnourished children in the community; tie up referral to the nearest Nutritional Rehabilitation Centre (NRC) as well as follow up for sustained outcomes.

Rogi Kalyan Samities (RKS)

The National Rural Health Mission (NRHM) launched Rogi Kalyan Samities, or Hospital Management Committees in 2005, as a platform to enhance responsibility, participation, and the operation of public health institutions. It is a committee at the hospital level that holds the hospital's management and administration responsible for making sure that all patients have access to high-quality services with the least amount of financial hardship[57]. RKS plays a supportive and complementary role in the hospital administration in and ensuring the provision of universal, equitable, and high quality services.

Artist: Rushi Chandgude

Title: Surge of Life.

Like the wave of a sea and a flow of a river, if it gets to a surge, things become problematic.

Metaphorically connected to this artwork, I am trying to draw attention to the subject of safe birth, raising awareness of the injustice and pain inflicted on the innocent newborn, who has been left motherless.

The baby's uncertain future is expressed by the sudden surge in slow-flowing waves that symbolise life and depict the disrupted fate of the child.

Maternal healthcare in India - Challenges to action

6

In the last two decades there have been substantial achievements in maternal health in India, across all indicators. This momentum must be maintained to make significant strides in areas that need attention. Recent statistics at national level reveal the areas of concern in maternal health, which need priority attention. (Table 1)

Table 1: Comparison of maternal health indicators from the NFHS data [58, 59]

Indicators	NFHS-4 (2015-16) (%)	NFHS-5 (2019-21) (%)
Mothers who had antenatal check-up in the first trimester	58.6	70.0
Mothers who had at least four antenatal care visits	51.2	58.1
Mothers who consumed iron folic acid for 100 days or more when they were pregnant	30.3	44.1
Mothers whose last birth was protected against neonatal tetanus	89.0	92.0
Institutional births	78.9	88.6
Births attended by skilled health personnel	81.4	89.4
Mothers who received postnatal care from a doctor/nurse/LHV/ANM/midwife or other health personnel within two days of delivery	62.4	78.0

An analysis for low performing and high performing states reveals wide variation in the coverage of major indicators (Table 2)[52]. At least four antenatal care visits were observed in only 25.2% of the mothers in Bihar. Women in both Bihar and Uttar Pradesh had very low consumption of Iron-Folic Acid tablets during pregnancy. Tetanus toxoid (TT) coverage was the only indicator that was similar across low and high-performing states. Kerala has been the best performing state for the last many years with the most recent skilled birth attendance rate being 100%. Other states like Orissa, Maharashtra and Telangana are also improving towards the best in most of the indicators.

An analysis for low performing and high performing states reveals wide variation in the coverage of major indicators (Table 2)[52]. At least four antenatal care visits were observed in only 25.2% of the mothers in Bihar. Women in both Bihar and Uttar

Low performing states NHFS 5 (2019-20)						
	Mothers who had at least four antenatal care visits (%)	Mothers whose last birth was protected against neonatal tetanus (%)	Mothers who consumed iron folic acid for 100 days or more when they were pregnant (%)	Mothers who received postnatal care from a doctor/nurse/ LHV/ANM/ midwife/ other health personnel within 2 days of delivery (%)	Institutional births (%)	Births attended by skilled health personnel (%)
Assam	50.7	94.5	47.5	65.3	84.1	86.1
Uttar Pradesh	42.4	92.1	22.3	72	83.4	84.8
Madhya Pradesh	57.5	95	51.4	83.5	90.7	89.3
Rajasthan	55.3	93.4	33.9	85.3	94.9	95.6
Chattisgarh	60.1	91.9	45	84	85.7	88.8
Jharkhand	38.6	90.8	28.2	69.1	75.8	82.5
Bihar	25.2	89.5	18	57.3	76.2	79
High performing states NHFS 5 (2019-20)						
Kerala	78.6	95.2	80	93.3	99.8	100
Orissa	78.1	95.2	60.8	88.4	92.2	91.8
Maharashtra	70.3	90.1	48.2	85.4	94.7	93.8
Telangana	70.4	89.6	57.9	87.6	97	93.6

Areas for action

Antenatal

- Though there has been an improvement in the proportion of mothers who had first trimester antenatal checkup and at least four antenatal clinic visits, the numbers still remain low. Quality of antenatal care is another priority area that need attention to further reduce maternal mortality and morbidity.

- An understanding of the reasons and the possible remedial actions is important, as early registration of pregnancy and more frequent antenatal visits are potential opportunities for early detection of high-risk cases and health education of the mothers.

- Anemia is the leading medical cause of maternal mortality in India. Iron deficiency anemia is highly prevalent in reproductive age women in India. As per the NFHS 5, 57.4% women in the reproductive age group suffer from anemia[60]. Despite the prioritization of distribution of iron folic acids, free of cost, during the antenatal period to all pregnant women, there still is a lack in the intake of IFA tablets by the women. This gap needs to be addressed, as IFA consumption is a major intervention for reducing complications during delivery.

- Neonatal tetanus has been eliminated in India. This has been a great achievement for the country and a major chunk of this success is attributed to tetanus toxoid vaccination during pregnancy[61]. The coverage of this vaccine has improved and has crossed the 90 percent mark as per recent data. However, it is important to ensure that the significance of this vaccine is not forgotten and its coverage remains to be high in the coming future[61].

Intra-natal

- A lot of emphasis has been placed on the importance of institutional delivery and skilled birth attendance. Both institutional delivery rates and skilled birth attendance rates have improved. This can be attributed to incentive based programs like Janani Suraksha Yojana (JSY). However, there is a long way to go on this front. It is necessary to look into the reasons why some women still resort to delivery at home or through unskilled birth attendants[62].

- Additionally, it was observed that a proportion of institutional deliveries in public health setups stands as only 61.9% (NFHS), which is low. Deliveries in private setups result in additional out of pocket expenditures.

- Access to skilled health care, quality of care and cultural beliefs are important determinants of poor institutional delivery rates, especially in public healthcare institutions. Efforts need to be channelled towards these components, both on the provider and patient side.

Postnatal

- Postnatal care remains amongst the most neglected area in the spectrum of maternal healthcare services in India.

- As per NFHS 5, women who had an institutional delivery were more likely to receive postnatal care within two days of delivery than women who delivered elsewhere. However, the proportion of mothers who received postnatal care within tow days of delivery has declined to 61% in 2019-21 from 65% (2015-16). This decline raises alarm as the immediate postnatal care is most crucial period due to the fact that the majority of maternal and newborn deaths occur during this phase.

- The postnatal period involves several areas which need special attention, such as: postpartum hemorrhage, early initiation of breastfeeding, breastfeeding support, infant weight gain, mother's health after complicated deliveries or pregnancies with medical illnesses[62]. Hence this area needs a lot of work in terms of assessment of barriers to care and possible interventions.

Going by the WHO framework that describes health system challenges in terms of six core components or "building blocks", the several challenges faced by the maternal health care are discussed in table 3[63].

Table 3. Major challenges in maternal health as per WHO framework

Component	Major Challenges
Service delivery	Number and distribution of maternal health facilities is inadequate and highly variable across states of India. Public health infrastructure where available, is insufficient to cater to the needs of our vast and segregated population, more so in remote, inaccessible areas of the country[63]. Lack of supportive supervision and monitoring of existing health facilities in the maternal context makes setups redundant. Transport mechanisms for taking pregnant women to give birth at a health centre are limited, making women more comfortable in delivering at their homes, and at most times in the presence of unskilled birth attendants. Blood transfusion services are very limited across the country, with insufficient or irregular supplies at most existing centres. This is a significant obstacle for women who require blood, especially during times of emergency.

Health Workforce	Lack or insufficient number of ANMs, Nurses & Midwives and doctors adds burden on the staff and compromises on the quality of care[65]. Coverage of safe birth and maternal health practices is affected by gaps in knowledge and practices of health care workers. Poorly trained and unskilled workers shows lack of uniformity in their skills and knowledge and a deficit in translation of knowledge into practice, and an inability to provide evidence-based and updated capacity building[65,66]. Improper incentives and lack of supervision marks a clear difference between objectives on policy paper and actual reality at the grassroots level[66]. Violence against the health care workers compromises the service delivery.
Health Information System	There is no robust registration system that puts together data of all pregnant women and carries them through untill the time of delivery and beyond. Data has huge gaps in time and under-reporting also hinders the entire process. Lack of reliable estimates of maternal mortality and clean data on causes leads to inability to define areas of action[67]. Owing to several disincentives, institutional level data, especially from the private sector, continues to suffer from poor quality and hence results in incomplete translation into policies[67].
Access to Essential Medicines	Low availability, high prices and poor affordability of medicines are key impediments to treatment access in healthcare. The underprivileged people from tribal / hilly / remote and rural communities are deprived from healthcare especially during high-risk pregnancies and for women seeking abortion[68].
Health Financing	High maternal healthcare expenditure prevents pregnant women from lower socio-economic categories to fully access quality healthcare[69].
Leadership and Governance	Limited expansion of maternal health schemes, both at centre and state levels. Lack of high level political commitment towards maternal health.

Addressing these challenges is the need of the hour. This is achievable only through inter-sectoral efforts, high levels of commitment from multi-disciplinary stakeholders and diversified innovative strategies that target women, communities and health systems.

To address the challenges, WHO proposed a framework for Ending Preventable Maternal Mortality (EPMM) and proposed ten milestones[70] towards advancing maternal health. Tracking the implementation of the strategies, and alignment of these milestones are set out in table 4.[70]

Table 4. WHO Framework for Ending Preventable Maternal Mortality

Components	Addressals
Policies and Plans	The role of policy makers is to act as a funnel to gather information through consultation and research to reduce and extract from the information, a policy or a set of policies to promote what is the preferred course of action. The policy's goal should be to provide high-quality 24-hour delivery and emergency obstetric care. Skills development and empowerment of medical officers, nurses, and midwives for Emergency Obstetric Care (EmOC) services, even in the absence of an obstetrician, should be implemented quickly and effectively within a functional referral system.
Quality of care	Quality of care is a necessity at all levels, right from the sub-centre level to tertiary level. People's trust in the public health system will only increase if good public health infrastructure is accompanied by quality and timely service delivery[70]. Quality of care can be provided by adapting the WHO standards for respectful and maternal by health professionals across states.
Equity	The disparities at regional or national and sub-national level can be accessed by the health indicates and the NHFS and the efforts can be taken accordingly to reduce it. All identified 'transformational aspirational districts' should be strengthened by focusing on the key performance indicators of health especially in the low performing states to reduce the heterogeneity.

Data for action	To have a scheme charted out for maternal health, reliable estimation of the number of maternal deaths is key, that can be achieved through and up to date registration system; appropriate household surveys or service readiness assessments tools[67]. A reliable registration system will enable us to channel our interventions to lower the maternal mortality ratio.
Investment	Out of pocket expenditure can be reduced from 65% to 30% of total healthcare spending by increasing public spending from 1% to 2.5-3% of GDP, as proposed in the National Health Policy 2017[69,71].
Workforce	Compensation packages and bonuses to health staff members will enable them to stay motivated and give a better standard in care towards pregnant women. There should be clear policies for posting and transferring staff, delegation of authority, and accountability for public-health and facility-based staff[65,66]. There should be empowerment of frontline workers.
Response and Resilience	Strategies like birth preparedness and complication readiness and response plans, that include promoting maternal health, should have coordinated mechanisms in place for their implementation, and ensure procurement of emergency supplies and monitoring of survival and health outcomes.
Commodities	High availability, affordable prices and easy access to medicines. Equitable distribution and access to medical commodities and products (equipment, technologies and diagnostics) to facilitate the delivery of high quality maternal care in India.
Accountability	Implementation of accountability mechanisms to improve maternal health, including coordination of stakeholders, and processes to count and review maternal deaths (MPDSR).
Research, Innovation and Knowledge Exchange	In public and private sectors research for emerging evidence, including knowledge exchange, should be focused to improve maternal health.

As per NFHS 5, average out of pocket expenditure for most recent live births in women aged 15-49 years is Rs. 10,035 and this was eight times higher in private health facilities than in public health facilities. Despite the rollout of multiple social benefit programs related to maternal health, the high expenditure associated with it continues to be a policymaker's dilemma and a potential problem to be solved urgently. According to WHO recommendations every country should spend 5% of the total GDP on its health. Overall India's expenditure on health is very low [71] although India's public health expenditure has increased from 0.9% of GDP in 2015-16 to 1.1% of GDP in 2020-21[71]. Central and state government expenditure on healthcare has improved from 1.3 % of GDP in the past year to 2.1 percent of GDP in 2021-22 though it still remains inadequate (Economic Survey 2021-2022)[71].

Developed countries like UK, USA, Canada are spending nearly 10% of their total GDP on health. As per the National budget for the year 2022-23, only 3.3 % of India's GDP is accounted for by the health sector(71). We cannot aim to achieve our goals and targets unless we spend enough for the health of our population. Leadership and governance in building a health system involves ensuring that strategic policy frameworks that exist and are combined with effective oversight, coalition-building, regulation, attention to system design and accountability. Governance in maternal health is a cross-cutting theme, intimately connected with issues surrounding accountability. In the context of health systems strengthening, it is an integral part of the health system. Maternal health is a large domain in public health and hugely influences the nation's progress, but rarely it is a political agenda apart from creation of health infrastructure.

There is a need for developing a holistic approach that caters to all issues right and strategies to progress the maternal health from the individual level to the national level. High variation across states and districts calls for region specific, patient centric actions. Lessons need to be learned from the well performing states while challenges to action need to be understood for the poor performing states of the country. The need is to channel our resources towards health systems strengthening and working towards financial protection.

Conclusion

India accounts for 18% of the world population with a wide heterogeneous mix of cultures and development(72). India has more than 2,000 ethnic groups with genetically distinct ancestry and diverse lifestyles and has undergone heterogeneous economic growth over the past few decades, which would be expected to lead to wide variations in health and disease distribution in different parts of the country(73). However, understanding the populations and their requirements can help remove operational and functional inequalities across the country.

When it comes to maternal health, it is important to acknowledge the coming together of various organizations and departments to make the process accessible and usable. The key is to understand the depth of the issue and prioritize actions to achieve safe birth outcomes at the national and sub-national levels. We have

achieved tremendous success as a nation through the past decades owing to the introduction of new schemes, policies and programs which are suited, to the local needs and communities.

Now we need to focus on the last mile to achieve our targets in line with the sustainable development goals. This is achievable through multi-sectoral coordination and stakeholder collaboration along with tailor-made strategies specific to communities and their needs.

Artist: Manasi Kishor Mankame

Title: Red Melancholia

A woman who does not get adequate medical care during childbirth is helpless.

In Red Melancholia, I have tried to depict these emotions of all women who deliver without adequate care and also go through excruciating pain during the process of bringing a new life into existence. Many women unfortunately, lose their life in the process.

References: Call to action

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Artist: Ashwathi Avinash

Title: Ikshana

The womb, where a fetus (unborn baby) develops and grows indicates the first home of an unborn child. This piece of art emphasizes on the role of healthcare community in preventing postpartum hemorrhage and delivering safe birth.

Compared with the past, advances in modern medicine today make it possible to prevent maternal mortality through postpartum hemorrhage through early detection and measures for prevention.

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