CHAPTER- I

INTRODUCTION

1.1 BACKGROUND

Neonatal mortality received little attention from broader public health community or even from the maternal health and child health communities. The newborn and child health communities have recently begun to acknowledge that access to quality, comprehensive contraceptive services are important for health and survival of infants and children. The major concern of families, communities, and nations throughout the world is ensuring the survival and well being of children. (Mahmood, 2002).

Neonatal mortality refers to death occurring during the neonatal period, commencing at death and ending 28 completed days after birth. Early neonatal mortality refers to death occurring during the neonatal period, from birth to seven days after birth. Late neonatal mortality is the death of infants occurring during the neonatal period, from eight to 28 days of birth. Each year 27 million infants born in the country about 0.88 million dies before they complete one month of a cycle and total one million dies before their first birthday because of several reasons.

The important indicators of human development and general health conditions of any society are infant and child mortality. Until 1920, infant mortality rates in India had fluctuated at a high level (230 infant deaths per 1,000 live births) due to chronic food shortages, influenza and severe epidemics (smallpox, malaria, and typhoid), and poor sanitary conditions. Since 1920, there has been a steady decline in infant mortality and the reduction has been more rapid after the 1970s due to the government's efforts to extend health services to villages (Jain, 1982).

Although child survival programmes have helped reduce death rates among children under-five years over the past 25 years, the biggest impact has been on reducing mortality from diseases that affect infants and children over one month old. Greater

proportions of infant mortality occur during the first month of life (the neonatal period), a period when a child's risk of death is nearly 15 times (Yinger & Ransom, 2003).

All around the world, many efforts have been made over the past four decades, to improve the health of children with some notable successes. Achievements have not been as expected and child mortality rates are still high. Globally, it has been estimated that 10 million children under five years die in a year, out of which four million deaths occur in the first 28 days alone. Two-thirds of newborn deaths are due to infections, prematurity, and asphyxia, which are preventable. Of these deaths, 99% occur in the lower and middle-income countries (Kippenberg et al., 2005). One of the eight Millennium Development Goals (MDG) drawn up and accepted by the international community in 2000, as a means of achieving social and economic progress in all countries, is a reduction in under-five mortality rates by two-thirds by the year 2015. All countries need to make efforts where child mortality rates, especially newborn mortality rates, are high to meet this goal. (United Nations Development Program, 2000).

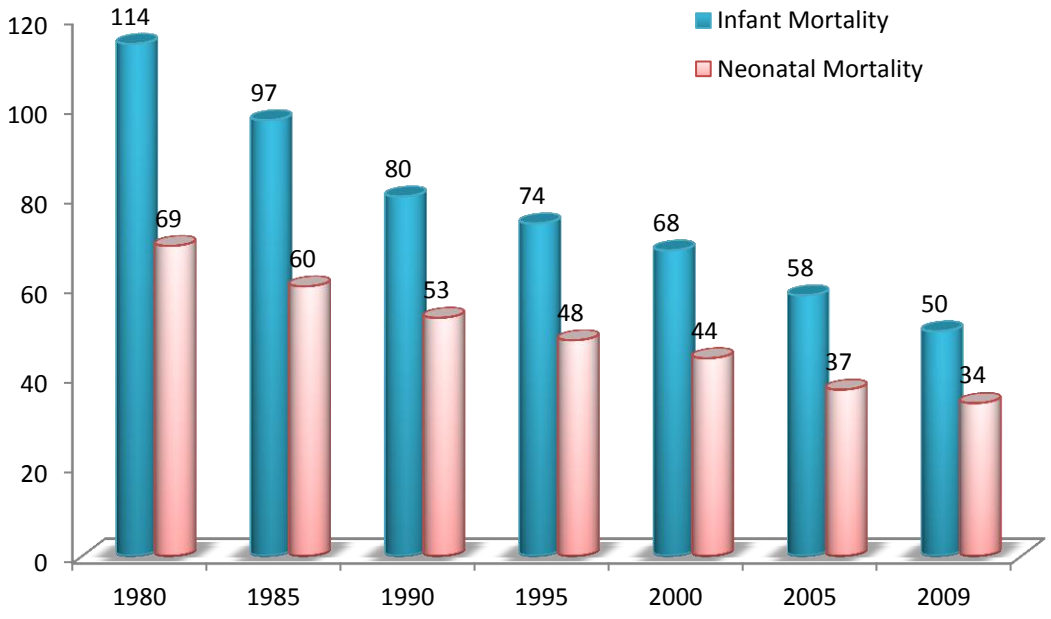

Figure1.1: Five year trends in overall Infant Mortality Rate and Neonatal Mortality Rate (per 1000 live births)

(Source: Home-based newborn care operational guidelines)

The proportion of death occurring within the first 28 days after birth has been up to 44% under 5years.The most risky period for an infant is before, during and shortly after birth, with most neonatal death occurring in first 7 days. The solution to this problem is to innovate and integrate i.e. we need not only to find out new appropriate interventions but also solutions that already exist; we need to improve access to mothers and newborn babies by improvising existing interventions.

The World Health Organization (WHO) stresses the need to focus more on the most vulnerable children. Many conditions resulting in newborn deaths can either be prevented or treated using low-cost interventions. There is the need for a combined approach to the mother and her baby during pregnancy, to have someone with knowledge and the skills with her during childbirth and effective care for both mother and baby after birth (Brundtland cited in WHO, 2002).

Maternal and neonatal outcomes are inseparable. The quality of care, both health facilities based and household-based, available during pregnancy, delivery and postpartum period has much impact on newborn health (Population Reference Bureau & Save the Children, 2006). Complications that affect women during pregnancy and childbirth also affect fetal and newborn health (Save the Children, 2006). Hence, to ensure better health for newborns, the mother and child should be treated as one entity. Any range of interventions that seek to prevent perinatal and neonatal deaths must address both maternal and neonatal factors.

In Indian society, many women due to circumstantial compulsions have limited access to healthcare. Indian women may need to evaluate for conditions such as protein malnutrition, beriberi or thiamine deficiency, pellagra or niacin deficiency, iron-deficient anemia, and lathyrism (see following) that may be related to the diet. A common practice of traditional Indian culture that has also influenced the health of the women in this population is the young age at which many girls are married. As per 1991 census report of India, the percentage of married women in the age range of 15-19 years is > 35%. Child bearing during the adolescent years poses significant health risks to both the mother and the infant, especially if the mother is poorly nourished.

1.2 CAUSES OF NEWBORN DEATH

Newborn deaths are caused birth asphyxia (21 percent), infections: tetanus, sepsis, meningitis, pneumonia, and diarrhea (42 percent). The birth process was the antecedent cause of 2/3 of deaths as a result of infections; lack of hygiene at childbirth and during the newborn period and home deliveries without skilled birth attendants. Low birth weight infants and preterm newborns as well as social, cultural and health practices which delay care to the newborn are the reasons due to which neonatal deaths occur. According to estimation, up to 72 percent of these neonatal deaths (almost 3 million deaths) could be prevented through basic, cost-effective interventions (Lawn et al., 2005).

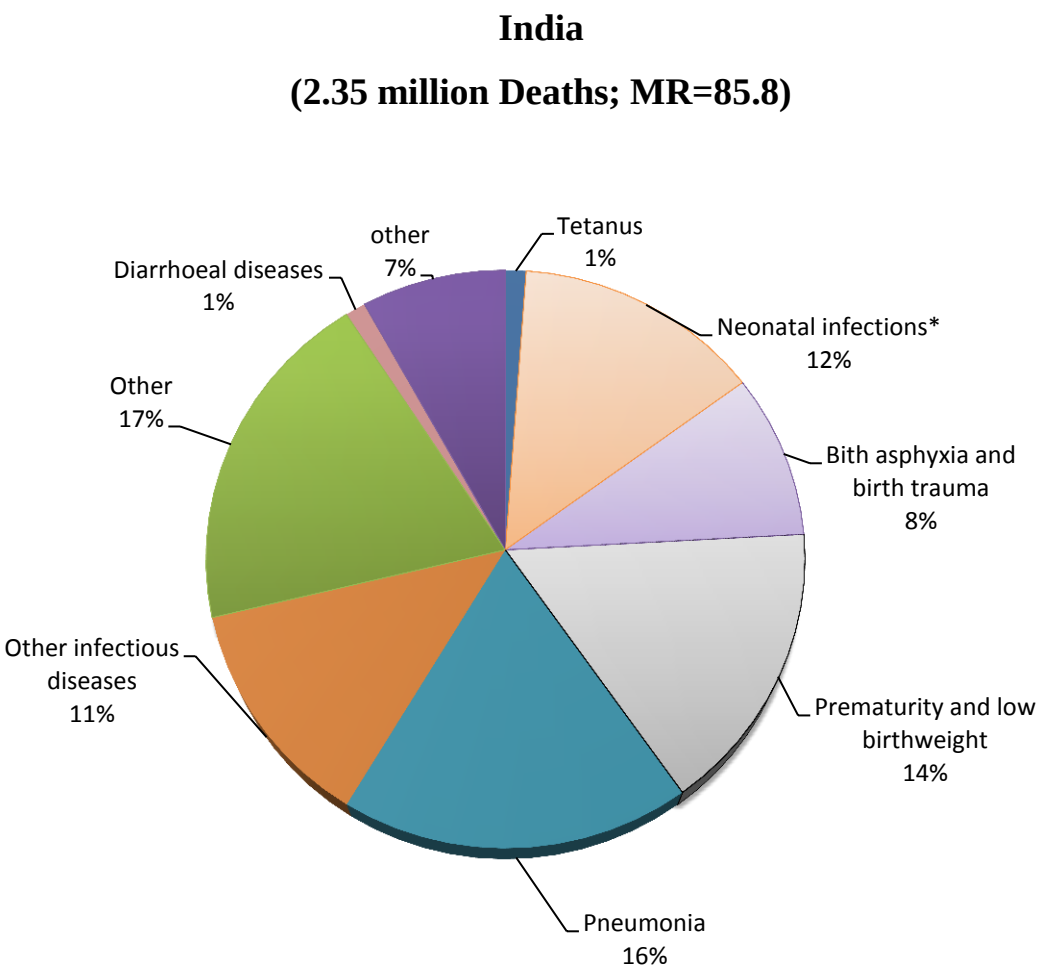

Figure 1.2: Causes of neonatal and child mortality in India

Ideally, every ill newborn baby is to be admitted to the hospital, but hospitals with facilities for newborn care are inaccessible for rural populations. Parents due to traditional believe and practical difficulties are unwilling to move ill newborn babies from home; so most newborn deaths occur at home. As a result of serious difficulties in transporting sick newborns to a hospital, those who arrive are seriously ill and eventually die.

The basics reasons associated with poor newborn health and survival are low income, poverty, illiteracy, home deliveries, i.e., lack of skilled care at birth, no health system at the grassroots, dysfunctional distant facilities, low demand for newborn care and harmful traditional practices can be associated with poor newborn health and survival.

COMPARISON BETWEEN INDIA AND WORLD MATERNAL AND INFANT MORTALITY RATE

MATERNAL AND INFANT MORTALITY RATE		
	India	**World**
Infant Mortality Rate, per 1000 live births	38	43
Maternal Mortality Rate, per 100,000 live births	167	216
Underweight Children, percent	29.4	14
Total fertility rate	2.40 births per woman	2.36 births per woman
Low birth weight babies, percent	16	28

Maternal and neonatal concerns are inseparable. The value of care, both health facility-based and household-based, accessible during pregnancy, delivery and the post-partum period has the sizeable impact on newborn health (Population Reference Bureau

& Save the Children, 2006).Impediments that affect women during pregnancy and childbirth also affect fetal and newborn health (Save the Children, 2006). The mother and child should be treated as one entity. Any assortment of interventions that prevent perinatal and neonatal deaths must be present for both maternal and neonatal factors.

Maternal health refers to the fitness of women throughout pregnancy, childbirth and the postpartum period. While maternity is often a gratifying experience, for most females it is associated with suffering, ill-health and sometimes even death. Maternal health care encompasses preconception, prenatal, and postnatal care. Goals of preconception care include providing education, promoting health, screening, and interventions for womenfolk of reproductive age to reduce risk factors that might affect future pregnancies. Prenatal care is a complete care that women receive for themselves throughout their pregnancy. Women who receive prenatal care from the start of their pregnancies have better birth outcomes than those who receive little or no care throughout their pregnancies. Postnatal care includes regaining from childbirth, concerns about newborn care, nutrition, breastfeeding, and family planning. The main direct cause of maternal indisposition and mortality include hemorrhage, infection, high blood pressure, unsafe abortion or obstructed labour.

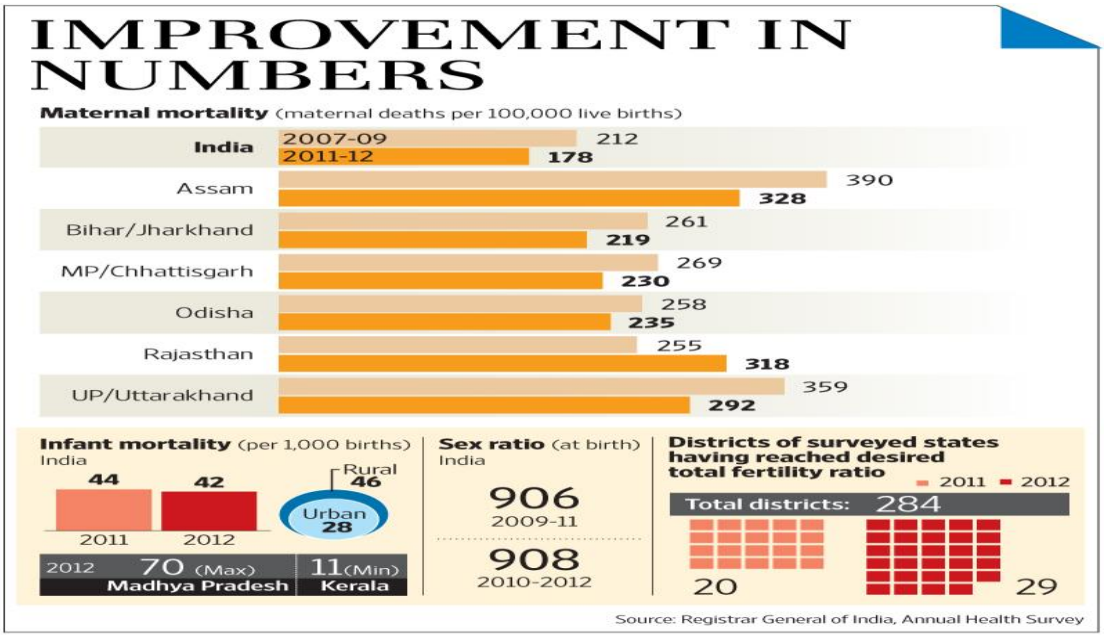

Figure 1.3: Improvement in numbers

India's maternal mortality rate declined 16% in 2011-12 from 2007-09, according to data from Registrar General. Pregnancy-related and infant deaths in the country have declined significantly from a few years earlier, according to the latest data released by the Registrar General of India, but experts say there's not much to cheer in the numbers given that India still lags behind Developed nations and even its poorer neighbors. Although the MMR dropped from 212 deaths per 100,000 live births in 2007-09 to 178 in 2010-12, India could not achieve the target of 103 deaths per live births by 2015 under the United Nations-mandated Millennium Development Goals (MDGs).The MMR in southern states fell 17% from 127 to 105, closer to the MDGs. Assam and Uttar Pradesh/Uttarakhand were the worst-performing states, with an MMR of 328 and 292, respectively. Kerala and Tamil Nadu have surpassed the MDG with an MMR of 66 and 90, respectively. Infant mortality declined marginally to 42 deaths per 1,000 live births in 2012 from 44 deaths in 2011. Madhya Pradesh registered the highest infant mortality at 56, and Kerala the least at 12. Among metropolitan cities, Delhi, the national capital, was the worst performer with 30 deaths per 1,000 live births in 2012. One in every 24 infants at the national level, one in every 22 infants in rural areas, and one in every 36 infants in urban areas still die within one year of life, the reported.

According to the Annual Health Survey (AHS), which covers nine states, India has made headway in institutionalizing child deliveries, i.e., taking place in hospitals. More than 40% of child deliveries in Chhattisgarh and 79% in Madhya Pradesh were institutional in 2012, compared with 34.9% in Chhattisgarh and 76.1% in Madhya Pradesh in 2011.The states covered by the AHS are Rajasthan, Uttarakhand, Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, Chhattisgarh, Odisha, and Assam.More than 85% of the total births took place in government institutions in Madhya Pradesh and Odisha in 2011, and this was more than 60% in the other states surveyed, except Jharkhand, according to the latest AHS data.

But total fertility ratio (TFR) or the average number of children given birth by a woman, reach a preferred level of 2.1 in only 29 out of 284 AHS districts, whereas in 2011 it was 20 districts, according to the AHS data. The data released by the Registrar General also show that the sex ratio at birth improved by 2 points to 908 females per

1,000 males in 2010-2012 from 906 in 2009-2011. Chhattisgarh reported the highest sex ratio at birth (979) and Haryana the lowest (857).

MATERNAL MORTALITY RATIO (MATERNAL DEATHS PER 100,000 LIVE BIRTHS IN WOMEN AGED 15 TO 49), BY REGION, 1990, 2010 AND 2015

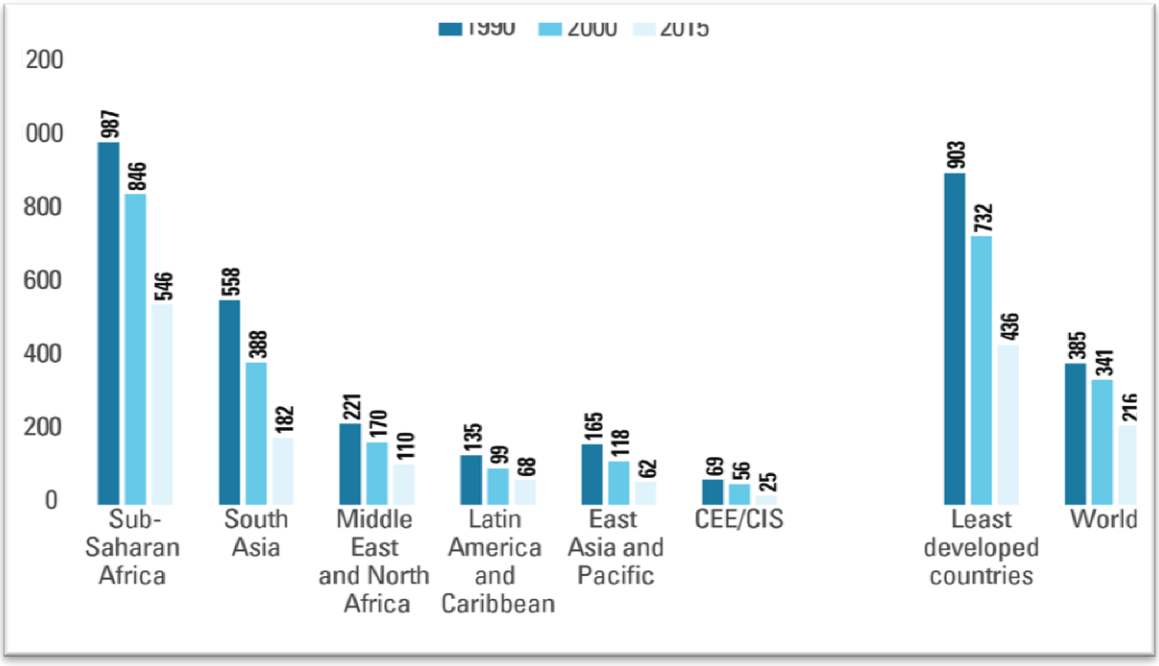

Figure 1.4: Maternal Mortality Ratio

1.3 NUTRITION AND PREGNANCY

Like females elsewhere in the world, Indian women also need to maintain a quality diet during their pregnancy to produce healthy descendants. A pregnant mother should always be careful about what she should consume and what she shouldn't. There is a traditional credence that the pregnant woman has to take ample of diet for two persons because she has one more life within her. It is crucial that the mother should take quality and balanced food so that the baby gets essential nutrients for healthy growth and development. When the pregnant woman consults a gynecologist or an obstetrician, she is routinely advised to take a balanced diet. This enables the mother as well as the child to get apt nutrition for their body during the growing stage. Customarily a balanced diet

contains all the necessary nutrients and minerals. A balanced diet is always connected with the quality and the quantity of food and is tested for food allergy if any on the mother. Eating healthy food during pregnancy does not mean increasing the quantity of food. It lays emphasis on quality which is highly essential for the mother and the baby. It is presumes that a mother, well-nourished previously and throughout pregnancy, may not face problems related to pregnancy and delivery of a healthy infant. On the other hand, an undernourished woman is more likely to have complications during pregnancy and also during delivery and might bear an infant of less than normal weight and even poor physical health.

Nutrition surveys conducted in many developing countries have exposed that the diet consumed by a majority of the population is based mainly on cereals, roots, and tubers and contains small amounts of legumes, vegetables and the insignificant amount of meat, fish and egg. In overall, diet lacks in calories, proteins, certain vitamins, and minerals. The factors that affect food habits may include among others, educational and monetary level of the community, the accessibility and the cost of food, the social and the cultural do. Traditional beliefs influence strongly the pattern of food eaten. In many parts of India, there are taboos and prejudices concerning the diet of a pregnant woman. In some cultures, an affirmative effort is made to keep the weight gain low as it is thought that it could smoothen delivery. Various animal foods and eggs are also forbidden.

Minor complications during Pregnancy

There are certain minor complications that can occur during pregnancy and after child birth. These may include nausea and vomiting, minor infections in the mother or baby, constipation, temporary hair loss, uncontrollable or accidental urination, temporary stress and incontinence.

The serious pregnancy related complications that can happen before, during, or after childbirth include: high blood pressure during pregnancy which may complicate the delivery, pre-term labour, failure to progress through the stages of labor, allergic reaction to medication, harmful stress to the baby, abnormal presentation, problems with the umbilical cord, uterine inversion, which means that the uterus turns inside out, prolonged

pregnancy, infection, postpartum depression, heavy bleeding before, during, or after pregnancy.

1.4 FACTORS RELATED TO MATERNAL AND INFANT HEALTH

It is an irony to see why women do not go for health facilities, even when they are available free of cost. It is also unfortunate that many mothers do not seek health facilities either for themselves or for their offspring, even when they see other broods dying early, and even if they are told that diseases and death can be prevented. Their unwillingness to utilize the services, their indifference to the risk to their children, or their incompetence to obtain or their ignorance of availability of the services, might be endorsed broadly to social, cultural and economic factors. The most important social factor is a high rate of illiteracy and lack of schooling among females in India. In fact, lack of education is the root-cause of ignorance, indifference, superstition, conservatism to medical services for themselves and their offsprings. The adult literacy (percentage of literates 15 years and above) among females in India is just 20 as against 40 to 80 in certain Asian countries and 50 to 96 in South America. Education exposes women to current ideas, creates awareness and persuades them of the necessity of use of medical facilities. There is a handy relationship between utilization and education. Let us first take an example of the nutritional position among pregnant women (PW) and nursing mothers (NM). They are exposed to additional risks of malnutrition and even premature death. It is largely believed that only ‘rich' people can have healthier nutritional status. There is, of course, substantial truth in this, so far as the amount of food is concerned. But this is not the whole truth, especially when a quality of food is concerned, and also when health services, during certain critical periods, pregnancy and nursing are concerned.

1.5 LOW BIRTH WEIGHT

A child's nutritive future begins with a females' nutritional status in adolescence and then in pregnancy. Low birth weight occurs because of deprived motherly health and nutrition and poor fetal growth. These infants suffer from infections, weakened immunity, learning disabilities and weakened physical development. The chronic cases

die almost immediately after birth. An undernourished mother is more likely to give birth to an underweight infant, thereby perpetuating the intergenerational cycle. Inadequate diet or rest, smoking, infections and cultural practices that restrict diet during pregnancy deter women from gaining weight. Besides, long hours of physical labor increases the possibilities of low birth weight babies.

Low Birth Weight (LBW) has been defined as a birth weight (less than 2.5 kg) taken commonly within the first hour of life. Low birth weight babies need additional care in feeding. For them, oral feeding has to be started earlier. To ensure proper care of LBW infant's additional skills of mothers in feeding them need to be built upon. In India, about 70 percent of newborns remain weighed at birth.

1.6 MATERNAL AND INFANT HEALTH CARE PROGRAMME

Provision of maternal health care services to ensure safe motherhood is one of the major components of Reproductive and Child Health (RCH) programme. Under the RCH programme antenatal, natal and postnatal care and management of unwanted pregnancies are provided through government health facilities. The RCH focuses on empowerment of women and recognizes their right to reproductive choice. It focuses on enhancing the health status of women and children. The priorities of RCH include: reduction of infant mortality and morbidity; reduction and administration of reproductive tract infections (RTI) and sexually transmitted infections (STI); life-cycle approach to women's health from conception and birth through adolescence and childbearing to post-menopausal and geriatric care; and child health, especially reduction of under-five mortality and morbidity rates and elimination of micronutrient and vitamin A deficiencies, maintaining regular contact with Auxiliary Nurse Midwives (ANM) and ensuring their visit to every family for immunization, provide training and facilitation of ANM and VHN on antenatal and postnatal care, prevention of malnutrition among children, promotion of maternal nutrition, improving quality of antenatal and postnatal care, birth companionship programme mentoring programme for field health functionaries, ensuring systematic conduct of verbal autopsy in the case of every maternal death, ensuring provision of basic emergency obstetric and newborn care services in the primary health centres, empowering Village Health Nurses (VHN) for management of sick neonates, sustaining

100 percent immunization focus on the remote areas, Vitamin A prophylaxis programme, quality care to sick children through the strategy of Integrated Management of Neonatal and Childhood Illness (IMNCI) and promoting exclusive breastfeeding are the major components of RCH project. Integrated Child Development Scheme (ICDS) aims to improve the health and nutritional status of the children and women of poor sections. Children up to the age of six years, pregnant women and lactating mothers are the main beneficiaries of the project through Anganwadi centers. Under this scheme, the facilities such as supplementary nutritious diet, health checkups, primary health care/consultation services, vaccination, nutrition and health education, and preschool informal education are provided.

1.7 BIRTH CARE OF NEWBORN

The most respected of all feminine types in India is the mother, higher than the wife. A wife and her offspring may desert a man, but his mother will certainly not do so. Mother represents a boundless love that knows no bargain, love that never dies. The mother gives birth to the succeeding generation. Mother is irreplaceable in this world. She is a living goddess, who always takes all the labors for her child and gives love and care. She is the one who devotes sleepless nights during the child`s sickness and other bad days. She appreciatively involves in all the happy and sad moments and understands the likes and dislikes of her children. She always directs us to go ahead on the right path and do the right things in the life. She is our first teacher who teaches us life skills. She teaches us to disciplined, behave properly, posses good manners and makes us understand our roles and responsibilities towards the family, society, and country. Nothing in this world can be equated with the genuine love and care that a mother gives her children.

Every newborn has the birthright to the best possible environment for its growth and development, especially because children are assets for a nation's development. According to W.H.O., "A healthy child is nation's pride." Maternity is a beautiful and blissful experience for women. The wellbeing of the mother during pregnancy is important to give birth to a healthy baby. The best and most priceless gift the mother can give the infant is the gift of health. There is no sign in biology, which tells us so much about the past events and the future trail of life, as the care of the newborn baby at birth.

The mother has a crucial role to play in the life of her infant. To escalate the place of the mother in rearing her child, the words of Sir Johnson Spencer, the author of the famous "One-thousand-families-survey," are worth recalling. He said "In the study of these families and attempting to correlate their environment with the health of the children, there emerged one dominating factor- the capacity of the mother. If the mother failed, her children suffered. In spite of lapses and failures, the mother stood out as the cornerstone of the family structure and remained the chief guardian of child welfare". Thus, the mother is modeled as the custodian of the child's health.

Mother plays a vital role in identifying minor developmental deviations and early shreds of indication of sickness because she is constantly and closely watching her baby. So, she needs the elementary knowledge and skills about mother craft, child nutrition (feeding), inoculation, environmental sanitation, personal hygiene, and common complications in children. Family life education and mother's expertise care during pregnancy, safe delivery, avoidance of hypothermia and infections, promotion of breastfeeding, home care of newborn babies, early recognition of a sickness and prompt medical care are important points about which a mother should have enough knowledge.

The physical care of mother and infant are carried out. There are many do's and don'ts for the expectant and nursing mother. These range from diet, sleep, psychological states, to the various behavioral manifestations and social interactions.

1.8 PREPARATION FOR BIRTH

In arranging for birth, Indian women, in general, live with their husbands or in joint families and seek counsel from their mothers-in-law or the elder ladies in the family. The advice of maternal figures is highly valued and followed as a rule. The expectant mothers follow the childbearing rituals passed on from generations. Sleep positions, eating habits, massages, holy rituals and level of motion are all influenced by the opinions of elderly women of the family. Women are given very little or no knowledge regarding the actual childbirth process. Often, women are very dreadful, as they only know the pain associated with normal delivery. The maternal figures of the family like the mother-in-law pass on customs regarding nutrition, hygiene, and daily doings during

pregnancy. Cold foods such as fruits are avoided during pregnancy for fear of falling ill. In some traditions, women only drink hot tea and rice milk. The older women of the family determine each expectant mother's activity level. Some women are told to escalate their activity levels to prepare the body for labor, while others rest throughout the pregnancy to save energy. Sleeping patterns are also regulated, and some women do not sleep on their back or turn over during pregnancy. Use of a cushion to be placed between the legs is also advised so that the stomach is not pressed.

1.9 SUPPORTS DURING LABOR

Pain is expected during labor and is a part of the natural labor process. There is little or no knowledge about options such as epidurals in some communities. Depending on birth location, some women obtain pain relief from warm water and massage, while others receive very little support or no support at all. In cases of births taking place in hospitals, provision of a higher rate of pain relief is there in the form of medicines. One study found that pain relief was administered in private hospitals to be 9.9 percent while the public hospitals had a rate of 0.9 percent. Female relatives and neighbors most of the times support the mother by serving tea, heating water and helping with wrapping the newborn after birth. Birth location often determines the amount and type of support received. Women who give birth in hospitals are supported by nurses, although the extent of this support varies from Private hospitals to Government Hospitals. Some mothers express dissatisfaction with the lack of physical touch and comfort in the hospital. At home, women are supported by the wise women of the family who massage and give warm water bath and the warm compress of stitches, care for more diligently, and this also varies from family to family.

1.10 ANTENATAL CARE

Globally, approximately 85 percent of pregnant women receive antenatal care from a trained health personnel at least once, only six in ten (58 percent) take at least four antenatal calls. The regions with the maximum rates of maternal mortality, like sub-Saharan Africa and South Asia, very few women received at least four antenatal visits (49 percent and 42 percent, respectively).Regular contact with a doctor, nurse or midwife

during pregnancy lets women receive services fundamental to their health and that of their future children. The World Health Organization (WHO) commands a minimum of four antenatal care visits. However, global approximations point to this that only about half of all pregnant women receive this acclaimed quantity and quality of care. Antenatal care can help women plan for the delivery and understand warning signs during pregnancy and childbirth. Micronutrient supplementation, treatment of hypertension to prevent eclampsia, immunization against tetanus, HIV testing are provided to the new mothers, in addition to medicines to prevent mother-to-child transmission of HIV in cases of HIV-positive pregnant women. In areas where malaria is prevalent, health personnel also provide pregnant women with medicines and insecticide-treated mosquito nets to help prevent this enervating and sometimes deadly disease.

Antenatal care (ANC) refers to pregnancy-related health care, which is usually provided by a doctor, an ANM, or another healthcare professional. Ideally, antenatal care should monitor a pregnant lady for signs of complications, detect and treat pre-existing and concurrent problems of pregnancy. She should be provided guidance and counseling on precautionary care, diet during pregnancy, delivery care, postnatal care, and related problems. In India, the Reproductive and Child Health Programme aims at providing at least three antenatal check-ups which should include a weight and blood pressure check, abdominal examination, immunization against tetanus, iron and folic acid prophylaxis, as well as anemia management (Ministry of Health and Family Welfare, 2005).

1.11 BIRTH ATTENDANTS AND HEALTH CARE SERVICE PROVIDERS

On an average, 83.1 percent of births are attended by skilled healthcare personnel in India. This varies from region to region. Traditional birth assistants (TBAs) deliver 37 percent of home births in India now also. These TBAs often lack basic knowledge regarding safe birthing practices. They could have a large influence in reducing maternal mortality if suitably trained. If the would-be mother is educated properly on birthing positions, sanitary practices, weighing of the baby, maintaining adequate newborn body temperature, and handling postpartum hemorrhage, maternal and infant health in India

possibly will improve dramatically. The other 63 percent of home births are unattended, and women who deliver in a hospital are attended by nurses and doctors. The majorities of TBAs, who attend 37 percent of home births in India are married and have never been to school. They may be trained or untrained, but the trained TBAs are commonly younger with less work experience and are also paid very little for their services. The untrained TBAs are older; more experienced, and are unpaid. Most TBAs entered the field after attending several family births, birthing their child, or following the footsteps of a family member.

1.12 LOCATION OF BIRTH

The decision about the birth location is made by the woman's father, brother or husband. According to the World Health Organization (WHO), 61 percent of births in India take place at home. Majority of these home births are not administered by a skilled birthing assistant. Seventy-six percent of mothers reported using the sitting or squatting position for their delivery. The remaining 24 percent birthed in the supine position. Eating and drinking customs, as well as rest and movement during labor are determined by the mother-in-law or other older maternal figures in the family.

1.13 PLACENTAL DELIVERY

After delivery, when the placenta is delivered, a cord is cut and rubbed by an herbal oil, face powder, or ash mixture on the cut section. The placenta is buried near the house or in some communities burned. Nine days after birth, a ceremony is conducted at the placental burial site to declare the name of the baby. At home births, the baby is sometimes not caught after being delivered and remains lying on the floor till the placenta is delivered.

1.14 NEONATAL CARE IN POSTPARTUM PERIOD

A postpartum period or postnatal period is the period which commences immediately after the birth of a child and continues about for six weeks. The World Health Organization (WHO) describes the postnatal period as the most critical or life-

threatening and yet it remains the most ignored phase in the lives of mothers and babies. Studies time and again have shown that most deaths occur during the postnatal period.

Newborn deaths in the first month of life, which are mostly avertable, represent 45 percent of total deaths among children under five. As mortality among children under five drops globally, deaths among these children are more and more focused on the first days of life. This makes concentration on newborn care critical than ever previously. In 2015, an estimated 2.7 million children died in their first month of life; almost 1 million or 36 percent died on the first day of life. Despite unending challenges, major progress has been made in improving neonatal survival. Neonatal mortality is on the waning globally. The world's neonatal mortality rate fell from 36 deaths per 1,000 live births in 1990 to 19 per 1,000 live births in 2015, a 47 percent decline. The result is a drop in neonatal deaths worldwide from 5.1 million in 1990 to 2.7 million in 2015.

Most of the new-born deaths (80 percent) are due to complications associated with preterm birth, intrapartum events such as birth asphyxia, or infections such as sepsis or pneumonia. Thus, aiming the time around birth with proven high impact interventions and quality care for small and sick new-borns may prevent up to 80 percent of newborn deaths. The "Every Newborn Action Plan" (ENAP) calls for an increased focus on time around birth with targeted high impact interventions as a strategy for reducing not only new-born deaths but also maternal deaths and stillbirths, generating a triple return on investment.

The postpartum period begins after the delivery of the child. In Hindu societies, a “sutak” or “pollution confinement” period, which is a span of time for which the mother and baby are considered impure, follows the birth. The mother and baby are placed in confinement, usually a room in the house, during the “sutak” period. This usually ranges from a length from 3 to 10 days, and no family or community members may interact with the mother or the baby during this time. At the end of this period, a “kuanpujan” or “ceremony at the well” is performed, in which the mother and baby are purified and then allowed normal routine.

1.15 RITES IN COMMUNITY

In some societies' women receive a henna tattoo after birth, this is meant to check depression and sickness and promote a strong bonding between the mother and the baby. A ceremony is conducted on the ninth day postpartum to declare the name of the baby at the placental burial site. Additionally, the "kuanpujan" ceremony is performed around the same time to denote the cleanliness of mother and baby. Hindu women traditionally follow the hot and cold balanced diet. Hot foods are those which are high in protein, sodium, and acid, while cold foods are those that are sweet or starchy. Many women are instructed to avoid cold foods to avoid sickness and have more hot foods during the postpartum period and to relieve stomach pain. Other women in India by and large continue to heed the advice of their mothers-in-law regarding the postnatal period.

The first bath

If delivered by a TBA, the baby is most likely to be bathed in warm water immediately after birth by the assistant. In some communities, women report waiting at least 9 days before bathing their baby, and some waited as long as 3 months. Bathing is believed to be the cause of sickness and fever in the infant.

Food and drink

Newborns are given warm water, honey, mustard oil, tea, or goat's/cow's milk after birth before breastfeeding is initiated. Most women initiate breastfeeding within a few hours after birth and continue to totally breastfeed for 6–7 months. The newborn is normally not weighed after birth in India. Several factors add to the absence of weighing, such as lack of access to scales at home, lack of knowledge of scale used in the hospitals, blind faith that the "evil eye" will come upon the baby, and cultural traditions passed on through the generations. Due to these factors, most babies are simply said to be 2.5 to 3 kg, even when they have not been weighed. India accounts for about 40 percent of the world's low birth weight newborns; this is a large area of focus for improvement.

The infant mortality rate is 47 per 1000 live births, and the neonatal mortality rate is 32 per 1000 live births.

During this time, the mother-baby bonding is strengthened, and there is a general sense of well-being between mother and baby. In addition to massaging a newborn with oil, a new mother is also given a full body massage with warm sesame/mustard oil, in order to stimulate the blood circulation, soothe her bones & muscles and help her body cells & tissues to heal faster, thus making her calm, centered and alert. Extra pressure is gently applied on the lower abdomen to push the uterus back. In case of a C-section, massage is confined to the arms, legs, shoulders and the back. Very hot water is poured on the lower abdomen and the pelvic area, to hasten the contraction of the uterus and the pelvic passage. A postpartum belt is worn, or a long sheet of cloth is tied around the lower abdomen, to push the uterus back and help it keep in place as well as rid the stomach of gas. Commercial soaps are avoided to wash off the body oil. Instead, a paste of chickpea flour mixed with a pinch of turmeric powder and 1 tsp of milk cream is used as soap for the new mother and the baby. Savories made from sesame seeds, dry nuts, fenugreek seeds/leaves, garlic, drumsticks & carom seeds are given to new mothers to increase milk supply. Edible gum cooked with dry nuts and wheat is given to strengthen the back and the reproductive organs post-delivery. Fresh cow's milk is given first thing in the morning to enhance the quality of the new mother's milk. Veggies like beans, squash, carrots, beets, green leafy vegetables, zucchini are cooked in ghee (clarified butter) to nourish the body and enable bowel movements. Lentils, cereals and whole grains are seasoned with whole spices and served hot. Gassy veggies like cabbage, potatoes, and cauliflower are avoided for the first three weeks after childbirth, as they de-harmonize the five body elements and disturb the digestive system. Leftover food is avoided, and the organic fresh food is preferred. The new mother is directed to eat on time and not too much or too little so that the digestive system is not unduly taxed. Chewing betel leaves after a meal helps in keeping digestion smooth. In addition to a specific diet, the new mother is also given a series of Ayurvedic tonics to help in contraction of the uterus and pelvic area, to strengthen the bones and muscles and to improve immunity and enhance the quality of breast milk, for three months.

1.16 INFANT CARE

Infant feeding is believed newborns are highly susceptible to injury (evil eye). Admiring a newborn is discouraged because it may cause envy and cast the evil eye. Physical examination of the newborn may also be considered casting the evil eye, and some Indian families may be reluctant even to have their newborns weighed for this reason. There are some precautions practiced preventing the consequences of the evil eye (e.g. applying kohl on the infant's forehead – (Hindus only). Infants are usually placed in the maternal bed, and mother and child stay together for up to 40 days. Infants are usually massaged with oil daily and sometimes twice or thrice a day. Some ethnicities practice giving honey mixed with ghee to evacuate the meconium. In Australian hospitals, this practice is prohibited because of the risk of bacterial infection and increasing the level of blood sugar. Health professionals should inform women of this policy, explain the potential risks and discourage this practice after discharge.

1.17 GOVERNMENT PROGRAMME FOR CHILD HEALTH

India has been at the forefront of the global effort to reduce child mortality and morbidity. Its continuous commitment and ongoing efforts have resulted in a 59% reduction in under-5 (U5) child mortality since 1990. India has proven, that it can reach even the most hard-to-reach and vulnerable children with affordable life-saving interventions, as also are evident from its polio eradication strategies. The Government of India (GOI) recognizes child survival and development as essential for the overall development of the society. This is reflected in its policies committed to providing adequate services for children before and after birth and throughout childhood to facilitate their full physical, mental, and social development. India has more than any other country to global under-5 and newborn deaths. Despite considerable strides, progress within India has not been uniform i.e., reduction in neonatal mortality lags reduction in post neonatal deaths. Given its demographic and cultural diversity, India does face numerous challenges with significant rural-urban, poor rich, gender, socio-economic, and regional differences. More girls than boys are dying, and newborns delivered in the rural setting are twice as likely to die as those born in urban areas.

Furthermore, neonatal mortality varies considerably between states and regions. The four large states of Uttar Pradesh, Bihar, Madhya Pradesh, and Rajasthan together account for more than half of the country's neonatal mortality, which accounts for about 14% of global newborn deaths. Newborn health ha captured the attention of policymakers at the highest level in India. This has resulted in a strong political commitment to end preventable newborn deaths and stillbirths and recognize newborn health as a national development necessity. In this regard, the GOI is building on a series of efforts, policy decisions, and program introduced over the past two decades to address maternal and newborn health.

Milestones in Child Survival Program in India

• 1992 – Child Survival and Safe Motherhood Program (CSSM)

• 1997 – RCH I

• 2005 – RCH II

• 2005 – National Rural Health Mission

• 2013 – RMNCH+A Strategy

• 2013 – National Health Mission

• 2014 – India Newborn Action Plan (INAP)

India Newborn Action Plan (INAP)

The India Newborn Action Plan (INAP) is India's committed response to the Global Every Newborn Action Plan (ENAP), launched in June 2014 at the 67th World Health Assembly, to advance the Global Strategy for Women's and Children's Health. The ENAP sets forth a vision of a world that has eliminated preventable newborn deaths and stillbirths.

- Builds on existing commitments under the National Health Mission and 'Call to Action' for Child Survival and Development

- Aligns with the Global Every Newborn Action Plan (ENAP); defines commitments based on specific contextual needs of the country
- Aims at attaining Single Digit Neonatal Mortality Rate by 2030, five years ahead of the global plan
- Emphasizes strengthened surveillance mechanism for tracking stillbirths
- Focuses on ending preventable newborn deaths, improving quality of care and care beyond survival
- Prioritizes those babies that are born too soon, too small, or sick—as they account for majority of all newborn deaths
- Aspires towards ensuring equitable progress for girls and boys, rural and urban, rich and poor, and between districts and states
- Identifies major guiding principles under the overarching principle of Integration: Equity, Gender, Quality of Care, Convergence, Accountability, and Partnerships
- Defines six pillars of interventions: Pre-conception and antenatal care; Care during labour and childbirth; Immediate newborn care; Care of healthy newborn; Care of small and sick newborn, and Care beyond newborn survival
- Serves as a framework for states/districts to develop their action plan with measurable indicators.

National Rural Health Mission has directed efforts toward strengthening infrastructure and improving deployment of trained staff, backed by increased funding. Further, the RMNCH+A approach has helped identify gaps in providing skilled birth attendance, postnatal care for mothers and newborns, and specific interventions for managing childhood illnesses such as diarrhea and pneumonia.

1.18 PROBLEM STATEMENT

The newborn health has been neglected despite the huge number of deaths which are caused due to various reasons such as: mother's inability to seek skilled care during

delivery, unhygienic delivery practices which result in infections of the newborn, bathing baby immediately after delivery, improper cord care, delaying immediate contact between mother and newborn because of the belief that the newborn is dirty and must be cleaned before contact and the fact that most neonatal deaths are unseen and undocumented. Neonatal mortality requires a continuity of care between maternal and child health which is lacking in many settings with care for neonate often receiving little attention in maternal and child health programmes.

In many settings/communities, the care for the neonate often receive little attention in either maternal or child health programmes. Neonatal mortality requires continuity in the elements of care, which is lacking. The greatest gap in care often occurs during the critical first week of life when most neonatal and maternal deaths occur, usually at home and without any contact with the formal health sector. (Lawn et al.,2005) About 70 percent of all sickness care takes place in the home (WHO, 2002). It is estimated that 60 percent of newborn deaths occur on the first day of delivery as a result of asphyxia, 47 percent on the second day due to infections, and 81 percent is due to severe infections. However, triplets have 4 times risk of dying, twins have 5 times risk, low birth weight babies have 8 times risk of dying, and partially breastfed babies have 4 times risk of dying (WHO, 2006).

Clean delivery, resuscitation, management of infections, thermal protection, breastfeeding, and eye care to reduce blindness are the measures by which neonatal deaths can be avoided, but some measures are being avoided in slums which results in the death of newborns. Elderly women who are inclined with traditional beliefs and practices in the community greatly influence young mothers of neonates in using all sorts of herbs and other concoctions in either treating sick neonates or protecting the newborn from becoming ill.

The condition is almost same in the area under study. The study was done to investigate the various community practices that influence the survival of newborns in slums of Lucknow.

1.19 RATIONALE FOR THE STUDY

Some unacceptable practices such as unskilled attendants during delivery, unhygienic delivery practices, poverty, illiteracy, home deliveries, i.e. lack of skilled care at birth, no health system at the grassroots, dysfunctional distant facilities, low demand for newborn care and harmful traditional practices can be associated with poor newborn health and survival and superstitions associated with caring for the newborn greatly affect newborn survival in the slums of Lucknow. The first week of life is very critical when most neonatal and maternal deaths often occur at home and without any contact with the formal health sector. This study, therefore, sought to identify the gaps in the knowledge and practices of newborn care and to providing inputs into developing feasible and sustainable community-based interventions to improve neonatal survival in the in slums of Lucknow.

In cases of institutional delivery, when baby and mother is discharged after 48 hours according to an ideal situation it is expected that care for the newborn during this period is provided in an institution. When the mother and baby return home, although the newborn has crossed the critical first day, there is still the remainder of the first week and month during which neonatal mortality could be as high as 54%, and for which care has to be provided. Any illness during this period could result in newborn dying at home unless the baby is provided with appropriate care or referred to a facility equipped to treat sick newborns.

Many policies have been developed, and many are yet to be developed about neonatal health and survival. After that, all stakeholders will be tasked to implement the policies to give neonatal survival issues the needed attention. Community-based volunteers will be trained and given the necessary skills to ensure that the needs of neonates and their mothers are met. Neonatal survival will be made an issue of national interest to all stakeholders; hence household practices in caring for the newborn will be improved and modified to save newborn lives. Newborns lives can only be saved when neonatal survival will be made an issue of national interest for everyone not for an area or a community but the entire world.

1.20 MANAGEMENT OF THESIS

The present research has focused on newborn care community practices among the married women. **Chapter I-** *Introduction* begins with the background, global and national status of newborn health and national programmes related to maternal and child health care. **Chapter II-** *Review of Literature* deals with comprehensive reviewing of literature relevant to present study. The research objectives, conceptual framework of essential newborn care and research methodology have been explained in **Chapter III-** *Research Methodology*. The **Chapter IV -***Analysis and Results* presents the findings of the study with regards to the study objectives which are the demographic status of respondents, delivery care, mother's knowledge, attitude and practices regarding newborn care, the local terminology used for newborn. The **Chapter V-***Discussion* deals with discussion of the results from the findings of the study to support the specific study objectives. The **Chapter VI -***Conclusions and Recommendations* highlights the major findings of the research and the role of professional social workers, policy implications, and scope for future research(s) in the field of study.

1.21 DEFINITION OF KEY TERMS

Infant Mortality Rate -The infant mortality rate (IMR) is the number of deaths of infants under one-year-old per 1,000 live births. This rate is often used as an indicator of the level of health in a country. The infant mortality rate of the world is 49.4 according to the United Nations and 34.1 according to the CIA World Factbook.

Maternal Mortality Rate- Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

Underweight Children- Children weighing less than the normal amount for one's age, height, and build.

Total Fertility Rate -The number of children who would be born per woman (or per 1,000 women) if she/they were to pass through the childbearing years bearing children according to a current schedule of age-specific fertility rates.

Reproductive and Child Health (RCH) Programme- The Reproductive and Child Health (RCH) Programme was launched in October 1997. The main aim of the programme is to reduce infant, child, and maternal mortality rates

Maternal and Child Health Services - Maternal And Child Health (MCH) Services are the various facilities and programs organized for the purpose of providing medical and social services for mothers and children. Medical services include prenatal and postnatal services, family planning care, and pediatric care in infancy.

Traditional Birth Attendant (TBA) - A traditional birth attendant (TBA), also known as a traditional midwife, community midwife or lay midwife, is a pregnancy and childbirth care provider. Traditional birth attendants have performed wide variety of tasks including outreach and case finding, health and patient education, referrals, home visits and care management

Low Birth Weight Babies- Low birth weight (LBW) is defined by the World Health Organization as a birth weight of a- infant of 2,499 g or less, regardless of gestational age. Normal weight at term delivery is 2500–4200 g (5 pounds 8 ounces – 9 pounds 4 ounces).

Auxiliary Nurse Midwives- Auxiliary nurse midwife, commonly known as ANM, is a village-level female health worker in India who is known as the first contact person between the community and the health services. ANMs are regarded as the grass-roots workers in the health organization pyramid.

Neo-Natal Mortality - the statistical rate of infant death during the first 28 days after live birth, expressed as the number of such deaths per 1000 live births in a specific geographic area or institution in a given time.

Post Partum Period - postpartum period or postnatal period is the period beginning immediately after the birth of a child and extending for about six weeks. Less frequently used are the terms puerperium or puerperal period.

Prenatal Care- Prenatal care, also known as antenatal care is a type of preventive healthcare, with the goal of providing regular check-ups that allow doctors or midwives to treat and prevent potential health problems throughout the pregnancy while promoting healthy lifestyles that benefit both mother and child.

Pre Mature Birth -A premature birth is a birth that takes place more than three weeks before the baby is due. In other words, a premature birth is one that occurs before the start of the 37th week of pregnancy. Normally, a pregnancy usually lasts about 40 weeks. Premature birth gives the baby less time to develop in the womb. Premature babies, especially those born earliest, often have complicated medical problems. Most premature births occur in the late preterm stage. Depending on how early a baby is born, he or she may be:

- Late preterm- born between 34 and 36 weeks of pregnancy
- Moderately preterm- born between 32 and 34 weeks of pregnancy
- Very preterm- born at less than 32 weeks of pregnancy
- Extremely preterm -born at or before 25 weeks of pregnancy.