



# **Reporting the Survival Crisis: Re-narrating the Fundamental challenges of Neonatal Mortality in India**

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## The Salient Data at a Glance

- ❖ Death of 62.4 lakh newborn children occurred in India over eight years; in 2008-2015.
- ❖ Four States of India, namely, Uttar Pradesh, Rajasthan, Bihar and Madhya Pradesh account for 56% of all newborn deaths in the country.
- ❖ The risk of death is 30 times in the first 28 days as compared to that over 5 years after the birth.
- ❖ According to the U5 Mortality Rates, during these eight years, as many as 1.113 Crore children died before they could celebrate their 5<sup>th</sup> birthday. Out of these, 62.40 lakh children died within the first month (within 28 days); i.e. 56% children died as neonates.
- ❖ In India, in year 2008, newborn deaths were 50.9% of the children's Under-5 deaths. The proportion rose to 58.1% in year 2015.
- ❖ At the India level, Neonatal Mortality Rate (NMR) is 15 in the urban areas whilst it is 29 in the rural areas. It means that the rural NMR is 1.9 times of that in for the urban areas. Likewise, Madhya Pradesh Rural NMR is 1.8 times that of the Urban NMR (Rural NMR at 37 and Urban NMR at 21), Uttar Pradesh Rural NMR is 1.7 times (Rural NMR at 34 and Urban NMR at 20) and Bihar's Rural NMR is 1.5 times the Urban NMR (Rural NMR at 29 and Urban NMR at 20). The maximum divide is in Andhra Pradesh where the Rural NMR is 2.4 times the Urban NMR (Rural NMR 29 and Urban NMR 12). In the same vein, in Rajasthan Rural NMR is 2.3 times the Urban NMR (Rural NMR 34 and Urban NMR 15).
- ❖ The Government of India had allocated an outlay of Rs. 31890 Crore for the health of children and women between years 2014-15 to 2016-17. However, an amount of Rs. 7951 Crore remained unspent.
- ❖ When women do not have right to decide about their marriage or reproduction, certain riders in schemes naturally become exclusionary and women unfriendly. Only the women whose age at pregnancy is 19 years are eligible to receive the benefit of Matrutva Sahyog Scheme under the National Food Security Act and

that the benefit will accrue only until the first living child. Further, this benefit has also been tied to institutional delivery.

- ❖ An insight in to the analytics of India's Census 2011 shows that there are 17.6% women with one living child, 28.1% with two living children, 20.8% with three living children and 33.5% with four or more living children. This brings out that only 30.7% women will be able to receive the Matrutva Sahyog Yojana (under National Food Security Act-2013).
- ❖ During the 8 years (2008-2015), 26.30 lakh newborns died due to prematurity, i.e., at the rate of 948 per day! The World Health Organisation (WHO) notes that preterm maturity is the leading cause of child mortality and one or the other form of congenital deformity. 'Preterm' is defined as babies born alive before 37 weeks of pregnancy are completed or occurring during the 259 days of pregnancy. As per the studies in India, 2.6 Crore children are born every year. Out of these births, 35 lakhs are the preterm babies, i.e., 13 preterm births per 100 live births!



## **In Eight Years, 62.40 Lakh Newborns Perished: After All; the Threat to Life is Maximum immediately After the Birth**

Disrupted oxygen supply was seen as an immediate cause of recent child deaths in BRD Medical Collage, Gorakhpur. It was not a structural cause. There should be no efforts to mislead the incident into a direction of collapse of Public Health System. It will lead to the much worse scenario – Privatization! Rather, there is an urgent need to recognize the gravity of childhood illnesses and challenges to children’s survival. It is in the backdrop of this approach that the Community-centric Public Health System should be sought to be strengthened.

### **We have 6 Important Facts before Us -**

One- As per the Global Breastfeeding Scorecard, India’s economy bears a loss of Rs. 9000 Crores as the children are deprived of mother’s milk. When the children do not receive the breastfeed, 1 lakh children die due to causes associated with these phenomena. This report informs that 23 countries have achieved at least 60% of infants less than six months being exclusively breastfed. These countries are: Bolivia, Burundi, Cabo Verde, Cambodia, Democratic People’s Republic of Korea, Eritrea, Kenya, Kiribati, Lesotho, Malawi, Micronesia, Federated States of Nauru, Nepal, Peru, Rwanda, São Tome and Principe, Solomon Islands, Sri Lanka, Swaziland, Timor-Leste, Uganda, Vanuatu, and Zambia. Notably, India does not find a place in this list!

Two- As per a study by The Lancet, as many as 45000 women died during pregnancy and delivery in year 2015.

Three – According to Census 2011, 16 Crore women work in the form of fulfilling their domestic and care responsibilities. However, the existing economic policies do not recognise value of their contribution. In India, only the women belonging to the organised sector have been availing the benefit (paid leave) under Maternity Rights. This benefit has reached only 18 lakh women whilst India’s Health Management Information System placed the number of pregnant women at 2.96 Crore for the year 2016. With a view to enable these women to access economic assistance of Rs. 6000/- under the National Food Security Act, Maternity Benefit Scheme was implemented at a large scale from January 2017. However, thanks to the concomitant four riders under the Scheme, as many as 70% women have been deprived of the benefits of the scheme.

Four – A 2016 study by the Jawahar Lal Nehru University and the Indian Institute of Technology (Roorkee), expenditure incurred on maternal health pushes 46.6% women in to poverty. It demonstrates that the maximum adverse impact occurs on the tribal women because a very large chunk of them (71.5%) were pushed in to poverty for having had to spend on accessing maternal health services.

Five – First 28 days of life after birth constitute the most sensitive period. This age of childhood is fraught with dangers of death. The risk of death in this period of 28 days after birth is 30 times that of child dying without completing 5 years of life (Journal of Perinatology, 2016).

Six – The Start to life begins with the risk of death.

- 85% of total Under -5 Child Deaths occur within the first year itself.
- 67% of total Infant Deaths (before completion of 1 year) occur within the first 28 days.
- 74% of all neo natal deaths occur within the first 7 days of child birth.
- 37% of all child deaths in 4 weeks or 28 days of birth take place on day 1 itself, i.e., within 24 hours of birth.

Factors including early marriage, inadequacy of appropriate diet during pregnancy, discrimination, psychological-physical-emotional instability, lack of rest and required health care services, unsafe delivery, child not receiving mother's breast milk after the birth compound and make the base for maternal and child deaths, especially that of the newborns. What is needed is that the principle of 1000 Days (period of nine months of pregnancy and breastfeeding of the child for up to 2 years and beyond, until the child is taking the breastfeed) rather needs to be scrupulously implemented in a widespread manner.

We now need to be abreast with this reality. It makes us appreciate that the sensitivities of the State governance continue to be in slumber.

## **The State of Newborns in India Dying Without Seeing the Light of the Day**

Whilst making a fact-focused analysis of data on Neonatal Mortality Rate (NMR), Infant and Child Mortality Rates (IMR and U5CMR) and the actual number of child deaths at different ages from birth to 5 years for the country as well as for the states of India over the eight years from 2008 to 2015, it has been found that as many as 1.113 crore children perished before completing their 5 years of life.

The astonishing fact is that 62.40 lakh children out of these 1.113 crore died within the first month of birth (neo natal mortality, i.e. death occurring within 28 days of birth). Thus, we may say that 56% of Under-5 deaths have been the neonatal deaths.

The situation analysis over the eight years shows that the proportion of Neonatal Mortality Rate (NMR) in the Under-5 Child Mortality Rate (number of deaths of children under 5 for every 1000 live births) has been going up. It stood at 50.9% in year 2008 and that it rose to 58.1% in year 2015! However, the estimated number of the neo natal deaths has come down during the period from 9.23 lakh to 6.67 lakh.

A more sensitive interpretation of the situation can be that every hour 'physical' hearts of 74 newborns had stopped functioning in the year 2015; though sensitivity in the heart of society and its dispensation had not been aroused and that their complete functionality had remained deficient. Should it not disturb us to realise that between the years 2008 to 2015, on an average 89 newborns have been perishing every hour?

## **Status of States in India**

### **Neonate death means death occurring within 28 days of birth**

In Madhya Pradesh, as many as 6.18 lakh children had died within 28 days of birth during the period 2008 to 2015. Whilst a total of 93, 700 children died in the year 2008, the number did come down to 64, 500 in year 2015. However, effective responsiveness of the State does not appear to have been there in addressing the concerns on neonatal, infant and maternal health.

During the same period, Uttar Pradesh witnessed the death of 16.84 lakh newborns. The number of deaths of newborns came down from 2.52 lakh to 1.72 lakh during the period. During these eight years, deaths of newborns were at 5.12 lakh in Rajasthan, 6.54 lakh in Bihar, 1.70 lakh in Jharkhand, 2.92 lakh in Maharashtra, 3.35 lakh in Andhra Pradesh and 2.95 lakh in Gujrat.

Four States, namely Uttar Pradesh, Rajasthan, Bihar and Madhya Pradesh account for 56% of total neonatal deaths in the country.

### **Infant Deaths: Deaths Occurring Within One Year of Birth**

As many as 91 lakh children were not able to observe their first birthday in India during the period 2008 to year 2015. Whilst the Infant Mortality Rate (IMR) has come down from 53 to 37, still year 2015 accounts for death of 9.57 lakh infants.

Situation is rather pathetic and alarming in four States in India with the number of infants' deaths at 24.37 lakh in Uttar Pradesh, 8.94 lakh in Madhya Pradesh, 7.31 lakh in Rajasthan and 10.3 lakh in Bihar. These States too account for 56% of Infant Mortality in the country. However, situation of infant deaths is no less painful in States of Maharashtra (3.96 lakh), Andhra Pradesh (5.11 lakh), Gujrat (4.13 lakh) and West Bengal (3.68 lakh).

### **Under 5 Child Mortality**

During the years 2008 and 2015, as many as 1.113 crore children said goodbye to this world before they could even observe their 5<sup>th</sup> birthday. We did not welcome them. We did not take care of them. Their lives faded in to non-existence. Uttar Pradesh accounted for 31.11 lakh of these deaths whilst Madhya Pradesh had the share of 11.59 lakh, Rajasthan contributed the death of 8.9 lakh children and Bihar accounted for the deaths of 13.40 lakh children.

Numbers apart, one needs to think for a while as to what agony the bereaved family goes through when a new entrant in the family vanishes away in 28 days of arrival, or the life extinguishes at one or five years of age!

When every structural system of India and all political parties were busy in debating over the rise in Gross Domestic Product (GDP) and were dishing out promises, commitment for children's life, survival and protection evaded their priorities. In fact, all the political thoughts and political parties apparently hold on to the belief that children's lot will change for the better automatically with an accelerated economic growth. This is delusory. It is rather mandatory that there must be unequivocal commitment for bringing about change in situation of the children, be it in political, economic or social sense. This obligatory sense of commitment has been and continues to be missing in India. Whilst the world-wide discourse on Millennium Development Goals (MDGs) has been there, some health schemes for children have been sought to be framed in India to appear to be in sync with the MDGs. Apparently, the effort is rather limited only to generating 'awareness'.

### **Major Reasons for the Death of Younger Children**

Systemic studies at world, regional and national levels bring out four key factors for a very high neonatal mortality – complications due to preterm birth (43.7%), obstructed and complicated deliveries (19.2%), infections including Pneumonia, Sepsis and Diarrhoea (20.8%) and congenital deformities (8.1%).

India's Sample Registration System (SRS) attributes reasons for infants' death to preterm birth and low birth weight, (35.9%), Pneumonia (16.9%), birth asphyxia (9.9%), other non-communicable diseases (7.9%), diarrhoea (6.7%), congenital deformities (4.6%) and infections (4.2%).

In fact, having sensitivity for security and life of children is the most crucial attribute. The causes that lead to children's untimely deaths are not incurable. The course of treatment is also not exorbitant. The moot question is whether we intend to adopt an attitude of equality towards women? Do we intend to strengthen the basic public health services for securing the survival of newborns?



# Being Born Preterm<sup>1</sup> Might Mean an Earlier End to Life;

## (Every Day 948 Preterm Babies are Dying)

The Minister of State for Health and Family Welfare, Government of India informed on 31<sup>st</sup> March 2016 that in year 2015, 33.4 lakh preterm births had taken place. India accounts for 22% of all preterm births occurring across the world. He said that state wise data on preterm births were not available. World Health Organisation (WHO) too has stated that 1.5 Crore preterm births take place in the world and that India holds a major share of the same. This is a formidable challenge because it takes 40 weeks for the foetus to develop fully. Any preterm birth means that the child has not developed to the full extent.

In setting the perspective on right to life for the children in the right earnest, it is important to determine as to when to begin the count for the life of the children. Barring certain academic endeavours, the public discourse on child rights coincides the boundary of child rights with the birth of the child. We tend to forget the truth that the life of a child begins with the stage of formation of foetus. Further, it is not an honest and efficacious act to seek to separate child's rights from the fundamental rights of the women giving birth to them.

A report by the Registrar General (Population Department), "India – Statistical Report on Causes of Deaths 2010-13" informs that 48.1% deaths of the newborns owe their major genesis to the joint cause of 'preterm birth and low birth weight'.

## Deep Impact of Preterm Birth

An assessment of Neonatal Mortality Rate (NMR) and data on live births occurring in a year during the period from 2008 to 2015 shows that as many as 62.4 lakh children had died within 28 days of birth. As per Journal of Perinatology (December 2016), cause for 43.6% neonates' death (occurring within 28 days of birth) pertains to preterm maturity and the associated complications. It turns out that during the 8 years, 26.30 lakh newborns died due to prematurity, i.e., at the rate of 948 per day!

The World Health Organisation (WHO) notes that preterm maturity is the leading cause of child mortality and one or the other form of congenital deformity. 'Preterm' is defined as babies born alive before 37 weeks of pregnancy are completed. There are sub-categories of preterm birth, based on gestational age<sup>2</sup>:

- extremely preterm (<28 weeks)
- very preterm (28 to <32 weeks)
- moderate to late preterm (32 to <37 weeks).

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<sup>1</sup> Born or occurring after a pregnancy significantly shorter than normal, especially after no more than 37 weeks of pregnancy.

<sup>2</sup> <http://www.who.int/mediacentre/factsheets/fs363/en/>: Factsheet on Preterm Birth, November 2016

The WHO Factsheet of November 2016 informs that India with 35, 19, 100 preterm births tops the list of 10 countries with the greatest number of preterm births.

As per the studies in India, 2.6 Crore children are born every year. Out of these births, 35 lakhs are the preterm babies, i.e., 13 preterm births per 100 live births!

Normally, the average length of pregnancy, or gestation, is counted at 40 weeks during which the foetus fully develops. The preterm babies who survive, often have lifelong health problems such as cerebral palsy, vision, hearing loss, intellectual disabilities (including learning disability) and diseases pertaining to the respiratory system. Therefore, such circumstances have a lifelong impact both on the individual as well as the family, be it from the social, physical, or psychological perspective.

## Causes of Preterm Birth

Preterm birth occurs for a variety of reasons. Most preterm births happen spontaneously, but some are due to early induction of labour or caesarean birth, whether for medical or non-medical reasons. Common causes of preterm birth include multiple pregnancies, infections and chronic conditions such as diabetes and high blood pressure. However, often no cause is identified. There could also be a genetic influence. Better understanding of the causes and mechanisms will advance the development of solutions to prevent preterm birth, the WHO notes.

**Cause 1:** Spontaneous preterm birth (spontaneous onset of labour or following pre-labour premature rupture of membranes). The cause of spontaneous preterm labor remains unidentified in up to half of all cases.

**Cause 2:** Provider-initiated preterm birth (defined as induction of labour or elective caesarian birth before 37 completed weeks of gestation for maternal or fetal indications (both “urgent” or “discretionary”), or other non-medical reasons).

About 45% to 50% of such births occur without an identified cause, 30% occur due to the placental abruption and 20% based on choice by the pregnant woman or her family.

As per the Rapid Survey on Children (RSOC) 2013-14 Report by the Ministry of Women and Children, Government of India, 46% women in India never received any Post Natal Checkup (PNC). Likewise, 40% newborns did not receive any checkup after birth. The report also informs that 68.7% children were weighed within 24 hours of birth. This indicator on birth weight stands at 28.2% for Uttar Pradesh, 46% for Bihar, 56.8% for Rajasthan, 61% for Madhya Pradesh, 88.4% for Maharashtra and 98.2% for Kerala.

The preterm babies especially need to be initiated with breastfeed (colostrum feeding) immediately after birth. Situation on this account is not good in India. As per National Family Health Survey – 4 (NFHS – 4) of 2015-16, only 41.6% newborns received breastfeed immediately after the birth. This indicator is poorly placed at 25.1% for Uttar Pradesh, 34.5% for Madhya Pradesh, 34.9 % for Bihar, 46.1% for Chhattisgarh and 50% for Gujrat.

## Pollution is Also a Major Factor

Atmospheric particulate matter, also known as Particulate Matter (PM) or particulates, are microscopic solid or liquid matter suspended in Earth's atmosphere. Air/environment contains innumerable number of particulate matter. They have impacts on climate and precipitation that adversely affects human health. Presence of fine particles with a diameter of 2.5 µm (micrometer) or less is growing at an alarming rate. They contain carbon, nitrate, Sulphur and crystal. They are caused by emissions of smoke from cars and bigger trucks, thermal energy plants, burning waste and industrial metal processes. They are so small that they can infiltrate in to lungs. In India, the quantum of PM 2.5 µm had gone up by three times the normal level.

A study by The Stockholm Environment Institute of University of York brings out an astonishing finding that environmental pollution is a major reason for preterm births. It informs that the pregnant women who inhale air with more of PM 2.5 µm tend to deliver preterm births. In India, 10 lakh preterm births occur due to this exposure to air pollution.

## The Determinants of Risk

There are some important factors that are responsible for the phenomenon of preterm birth. These are manifested in the pregnant women in ways like:

- Nutritional imbalance: Undernutrition, obesity or lack of micronutrients
- Life style: Smoking, consuming liquor or other intoxicating substances
- Stress or depression
- Excessive physical labour
- Remaining in standing posture for extended time
- Early age pregnancy: The adolescent girls are not ready to bear children
- History of prior preterm birth
- Multiple pregnancy
- Having contracted infections
- Diseases like diabetes or high blood pressure
- Genetic factors

## Preterm Babies Can Be Saved

About 65% of preterm babies' lives can be saved. It requires that the community, family and staff of local health centres are endowed with understanding, skills and reflexes in addressing the health and care needs of the preterm babies. We need to appreciate that a normal delivery requires specific medicines, proper technique and post-natal care. Probably, we may all be aware that the preterm infants should be given Kangaroo Care (like the

Kangaroo holds its newborn child close to its body). It is a method of caring for a premature baby in which the infant is held in skin-to-skin contact with a parent, typically the mother, for as long as possible each day. The technique is most commonly used for low birth-weight preterm babies, who are more likely to suffer from hypothermia, while admitted to a neonatal unit to keep the baby warm and support early and continued breastfeeding. It also protects the baby against any infection.

Now, one needs to reflect for a while whether creating this kind of care requires any specialist or a five-star health facility to be deployed. The answer is in the negative. However, despite this, medical care for the preterm babies in our country today is one of the costliest medical care services. In fact, not much effort has been made to invest in the existing Public Health System in the country. Of course, India Newborn Action Plan (INAP) has been launched in September 2014.

It is important to appreciate in the Indian context that two-thirds of women in the country do not have access to any type of maternity support. National Health Mission (NHM) provides a Card (Mother and Child Card - MCH Card) to the pregnant women so that their health can be monitored. The Card incorporates a message that “the pregnant woman should consume more food, more often during the day, she should get at least two hours of rest during the day (routine activities should be interspersed with short periods of rest throughout the day)”. However, economic poverty deprives her of the increased and more frequent food intake as well as the adequacy of rest.

In today’s situation, security of the life of both the mother and the foetus have become vulnerable because the women are not able to exercise their maternity rights (paid leave for the working pregnant women, economic assistance to her, availability of full health care services, counselling, immunisation and nutritious diet).



## Life Cut Short to 28 Days: Yet, Rs. 7951 Crore Allocation for Child Health Remained Unspent

On an average, every day between year 2008 to 2015, India has witnessed death of 2137 newborns every day. We still have a yawning gap between the registered deaths of infants and those which are officially estimated using valid survey methods. The difference in the data owes its genesis to a lack of organic linkage between the field health system and the governance architecture. The Registrar General of India's report for year 2015 states that India recorded only 76.6% of deaths. Only 31.9% deaths were registered in Bihar. The figures for other States were 53.8% in Madhya Pradesh, 44.2% in Uttar Pradesh and 73.5% in West Bengal. It can be safely assumed that in view of non-availability of functional registration system, the situation of newborn children can be assessed using the Neonatal Mortality Rate (NMR) and estimated data on live births.

From the perspective of Indian Constitution, one normally expects that the State will discharge its responsible and credible responsibility in ensuring right to life for the citizens. However, this expectation is now turning in to an illusion given the policies of privatization and liberalisation being skewed in favour of the market.

Our current situation is such that infant deaths demolish all other norms of country's development. India is discredited with the highest number of newborn children's death in the world. Between the years 2008 and 2015, as many as 62.40 lakh children succumbed to death within 28 days of their birth. It is thus rather important to examine the causes of this phenomenon and see where our commitment to saving children's life is getting compromised at the policy level.

The roots of the problem of newborn's death are embedded under the ignominious tendencies of gender disparity of the community (which have far-reaching implications on healthy behaviour) on the one hand, and the policies of curbing the public health and nutrition services, on the other. National Family Health Survey – 4 (NFHS – 4) informs that 26.8% marriages occur in India under the age of 18 years. The proportions of the States for girl's marriages taking place before attaining the legal age of 18 years are: Bihar (39.1%), Andhra Pradesh (32.7%), Madhya Pradesh (30.0%), Rajasthan (35.4%) and West Bengal (40.7%) and Gujrat (24.9%). The early marriages become the cause of girls' getting pregnant at an early age. This results in these girls to successively become weak, malnourished and unsafe.

As per the NFHS – 4, only 21% pregnant women receive all services under the Ante Natal care (ANC) – 4 health checkups, at least one injection of Tetanus Toxide and Iron Folic Acid (IFA) tablets for 100 days. The proportion is very poorly placed at 3.3% in Bihar and 11.4% in Madhya Pradesh whilst it stands at 32.4% in Maharashtra and 21.8% in West Bengal. Given this status, how can one have safe deliveries and expect safety of the newborns?

These services are crucial for safeguarding the lives of women and the infants because it is only because of anaemia and lack of appropriate health care that the probability of maternal and newborn's women becomes high.

The NFHS – 4 also informs that 50.3% pregnant women in India suffer from anaemia. The figures pertaining to anaemic pregnant women for states are: Bihar (58.3%), Gujrat (51.3%), Jharkhand (62.6%), Madhya Pradesh (54.6%), Uttar Pradesh (51%) and West Bengal (53.6%).

Poverty has a huge impact on health. In fact, poverty and health are intricately related. Despite the recognition of the need to make maternal and child health a better part of public health services, the same has not been translated in to a reality. In India, a family has to incur an out-of-pocket (OOP) expenditure of Rs. 3198/- to defray the expenses for availing a delivery care service (from its own income/resources). The OOP expenditure stands at Rs. 7782/- in West Bengal and Rs. 3487/- in Maharashtra whilst it is Rs. 1387/- in Madhya Pradesh and Rs. 1724/- in Bihar. It is notable that when the government makes too little investment in the health sector, pressure on private expenditure spirals up. Poor proportion of government allocation and expenditure on health care services in States like Madhya Pradesh and Bihar deprives the poor from being able to access better health services.

## **Urban-Rural Disparity**

Certain special health care services are particularly required during pregnancy, delivery and newborn stages. In India, these services are largely concentrated in urban areas and are awfully inadequate in the rural areas. Comparative data on Neonatal Mortality Rate (NMR) bears it out. At the India level, NMR is 15 in the urban areas whilst it is 29 in the rural areas. It means that the rural NMR is 1.9 times of that in for the urban areas. Likewise, Madhya Pradesh Rural NMR is 1.8 times that of the Urban NMR (Rural NMR at 37 and Urban NMR at 21), Uttar Pradesh Rural NMR is 1.7 times (Rural NMR at 34 and Urban NMR at 20) and Bihar's Rural NMR is 1.5 times the Urban NMR (Rural NMR at 29 and Urban NMR at 20).

The maximum divide is in Andhra Pradesh where the Rural NMR is 2.4 times the Urban NMR (Rural NMR 29 and Urban NMR 12). In the same vein, in Rajasthan Rural NMR is 2.3 times the Urban NMR (Rural NMR 34 and Urban NMR 15).

It is also evident from National Family Health Survey – 4 (NFHS – 4) that in the rural areas, only one in five pregnant women is receiving the complete Ante Natal Care (ANC) services.

Also, in adolescence, deprivation from nutrition and education and child marriage constitute major causes for maternal insecurity and death of the newborns.

## **The Truth About Government Programmes**

We are concerned that lakhs of children are dying within one month of birth or are dying in very early age in India and that the governance system remains beset in the market-driven and private sector sponsored tactfulness of economics. The Government of India had allocated an outlay of Rs. 31890 Crore for the health of children and women between years 2014-15 to 2016-17. However, a whopping amount of Rs. 7951 Crore remained unspent; and that there was no commotion on this slip! This amount has been appropriated by the State Governments towards other purposes like religious functions and political favors.

What irks one most is that misdemeanor has been committed at the cost of children's rights.

Children's health and their survival is directly linked with the health and social status of women. It is the Health Policy and Programming of the government that can play a major role in securing the survival of children's lives. The Government of India has been implementing India Newborn Action Plan (INAP). Alongside, the Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A) Strategy is also being implemented. It is claimed that the government is planning to provide Mandatory Newborn Health Care and Treatment at all Delivery Points. Special Newborn Corners. However, one wonders as to the ground reality of these action plans.

Let us appraise the budget for the years 2014-15 to 2016-17. During these three years, an allocation for Rs. 2947 crore was made for survival of newborns and maternal health. Out of this allocation, an amount of Rs. 838 Crore remained unspent.

Madhya Pradesh failed to utilise the sum of Rs. 445 Crore from the allocation of Rs. 2677 crore. Rajasthan did not spend Rs. 552 Crore out of the budgetary allocation of Rs. 2079 crore, Uttar Pradesh reported the lapsed amount of Rs. 1643 crore out of Rs. 4919 crore and Maharashtra failed to use an amount of Rs. 744 Crore out of the allocated amount of Rs. 2119 crore!

Budget for Approved State Project Implementation Plan under RCH Flexible Pool (2014-15 to 2016-17)												
Amount in Lakh Rs.												
States	SPIP	Exp.	Unspent	SPIP	Exp.	Unspent	SPIP	Exp.	Unspent	Total Allocation	Total Unspent	In %age
Bihar	97267.32	70630.64	-26636.7	97644.21	74567	-23077.2	99794.32	65679.66	-34114.66	294705.85	-83828.6	-28.4
Madhya Pradesh	74097.47	67560.8	-6536.67	92524.01	76025.88	-16498.1	101071.83	79612.26	-21459.57	267693.31	-44494.4	-16.6
Rajasthan	66197.89	52451.72	-13746.2	70887.54	49154.08	-21733.5	70793.66	51039.65	-19754.01	207879.09	-55233.6	-26.6
Uttar Pradesh	141859.5	101101.6	-40757.9	151734.3	101974.6	-49759.8	198297.17	125451.4	-72845.74	491890.95	-163363	-33.2
Maharashtra	67968.59	47744.07	-20224.5	63169.16	44521.79	-18647.4	80740.63	45223.83	-35516.8	211878.38	-74388.7	-35.1
India	996105	737419.5	-258686	1044753	792273.4	-252480	1148152.72	864209.9	-283942.78	3189010.82	-795108	-24.9

Source - Ministry of Health and Family Welfare, Government of India.

Often, an attempt is made to dismiss people coming from the rural areas and those from the tribal community as 'superstitious' and are meted out a second-grade treatment. A conclusion dished out from the analysis of public health services over three decades seeks to portray an image that the backward people do not wish to avail the health care services. However, an evaluation of the functioning of 54 Special Newborn Care Units (SNCUs) which are being operated across all districts of Madhya Pradesh informs that the community is accessing their health care services to a good extent, provided the same are made available in a dignified manner.

It is a notable fact that the Bed Occupancy Ratio in tribal dominated 28 districts has been more than 100%. Balaghat district has had the Bed Occupancy Ratio of 240% whilst it has been 204% in Barwani, 166% in Chhatarpur, 193% in Guna, 164% in Jabalpur, 262% in

Bhopal, 26% in Indore, 247% in Gwalior and 156% in Shivpuri. At the State level, the Bed Occupancy Ratio in the SNCUs has been 119%. The data shows that these units have far lesser number of beds as compared to the need and demand. Another indicator of inadequacy of resources in these units is with regard to the shortage of as many as 209 Radiant Warmers, 243 Infusion Pumps and 155 Pulse Oximeters.

It is again borne out that the Special Newborn Care Units (SNCUs) are deep in crisis because they are not yet fully equipped. In year 2016-17, as many as 93, 395 newborns were admitted out of whom 12, 865 newborns died. It could be a moot question whether the case fatality has anything to do with the ill-equipped SNCUs!

In the same vein, Maternity Benefit Scheme introduced with effect from 1<sup>st</sup> January 2017 has not been able to reach 70% of the women population belonging to the unorganised sector. Therefore, it is a pity that a huge number of women have been deprived of the scheme. The impact of the exclusion is that these marginalised women are not able to take adequate rest during pregnancy and that they have to continue to work for making up their wages. These women receive limited nutrition and that their continued involvement with wage work prevents them from having regular health checkup. Consequently, foetus is not able to grow to the full extent. This is the precise reason for the death of 35.9% newborns as either they are preterm born or they had Low Birth Weight (LBW). When the newborns do not get breastfeed from the mother, they become prone to infections. As per the Registrar General of India, 23.6% of newborns die because of infections (16.9% due to Pneumonia and 6.7% due to Diarrhoea). The Government of India has been oblivious to this background and has sought to limit the understanding of the Maternity Rights Programme only as a cash transfer scheme, which is essentially a cash depleting initiative. Therefore, it is no wonder that as against the need for an amount of Rs. 16.7 Thousand Crore, the government could put together only an allocation of merely Rs. 2.7 Thousand Crore!

## **Status of Health Services**

Effective health care services are crucial in addressing the challenge of newborn and child deaths and for securing their survival. Keeping in view the geographical and cultural diversity of India in view, ensuring the availability of functional public health system assumes the central role for the government. A perusal of the Rural Health Statistics – 2016 issued by the Ministry of Health & Family Welfare, Government of India depicting the status of rural health care system in India's rural areas brings out that India has a long way to go in demonstrating its commitment for securing public health services to the people in a realistic manner. One also wonders whether it is the right policy to go for privatization of the public health system and if yes, what should be the protocol in securing its effective governance, particularly keeping in view the situation of the poor - disadvantaged, deprived and the excluded? Some of the highlights on severely under-resourced public health system as brought out by the Rural Health Statistics 2016 is given below:

- Gaps in Availability of Surgeons: As of 31st March 2016, the Community Health Centres (CHCs), as against the requirement of 5510 Surgeons, only 884 (16%) are in position. The rest are vacant. Madhya Pradesh needs 334 Surgeons. However, only 83 posts are in

position. Likewise, in Maharashtra, only 87 out of 360, in Uttar Pradesh, only 117 out of 773, In Gujarat, only 41 out of 322, in Jharkhand, only 36 out of 188 and in Rajasthan, only 127 out of 571 posts of Surgeons are in position. Further, notably there is a huge gap in the number of required and sanctioned post of Surgeon. Whilst the countrywide CHCs require to be manned by 5510 Surgeons, only 2657 posts have been sanctioned! Therefore, if the manpower planning itself is wanting, deployment is bound to suffer.

- Gaps in Availability of Obstetricians and Gynaecologists: As of 31st March 2016, the Community Health Centres (CHCs), as against the requirement of 5510 Obstetricians and Gynaecologists, only 1292 (23.6%) are in position. The rest are vacant. Madhya Pradesh needs 334 Obstetricians and Gynaecologists. However, only 79 posts are in position. Likewise, in Maharashtra, only 119 out of 360, in Uttar Pradesh, only 115 out of 773, In Gujarat, only 51 out of 322, in Jharkhand, only 39 out of 188 and in Rajasthan, only 87 out of 571 posts of Obstetricians and Gynaecologists are in position. Further, notably there is a huge gap in the number of required and sanctioned post of Obstetricians and Gynaecologists. Whilst the countrywide CHCs require to be manned by 5510 Obstetricians and Gynaecologists, only 3005 posts have been sanctioned! Thus, in case of this specialization too, manpower planning has left a lot to be desired!
- Gaps in Availability of Paediatricians: As of 31st March 2016, the Community Health Centres (CHCs), as against the requirement of 5510 Paediatricians, only 1758 (31.9%) are in position. The rest are vacant. Madhya Pradesh needs 334 Paediatricians. However, only 76 posts are in position. Likewise, in Maharashtra, 250 out of 360, in Uttar Pradesh, only 154 out of 773, In Gujarat, only 44 out of 322, in Jharkhand, only 15 out of 188 and in Rajasthan, only 94 out of 571 posts of Paediatricians are in position. Further, notably there is a huge gap in the number of required and sanctioned post of Paediatricians. Whilst the countrywide CHCs require to be manned by 5510 Paediatricians, only 2766 posts have been sanctioned! Thus, in case of this vital specialization too, manpower planning is very poorly placed.

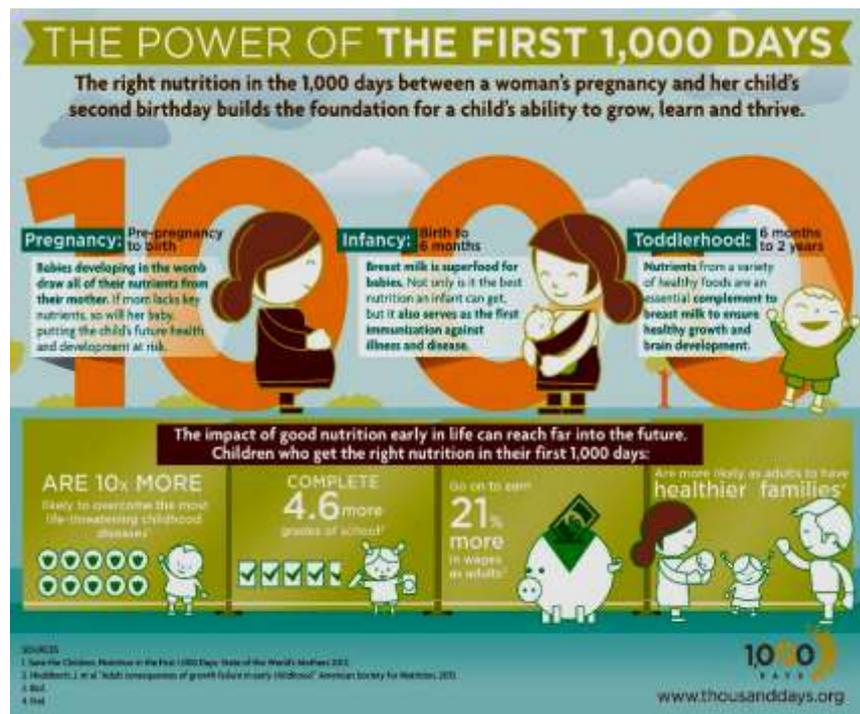
If we do not perceive the problem of maternal security and survival of newborns from the perspective of socio-economic-political rights, we will not be able to eliminate the problem from its roots. The issue needs to be treated as an election agenda and calls for a widespread public discourse. Until this is done, allocation of economic resources for them will not be prioritised and the status quo will remain. When the politics of religion is replaced by discrete principles and values, there will be no room for mob violence; rather there will be community-wide mobilization for securing the survival of the newborns.

# The Fractured 1000 Days Cycle

## The Power of the First 1000 Days

The 1000 Days Cycle pursues a life-course approach, from pre-conception throughout the first two years of life. The framework of interventions<sup>3</sup> is as follows:

- 1. Interventions targeted at women of reproductive age:** It includes intermittent iron and folic acid supplementation for menstruating women.
- 2. Interventions targeted at pregnant women:** The essential interventions include: daily supplementation with iron and folic acid for women during pregnancy, intermittent iron and folic acid supplementation for non-anaemic pregnant women, Vitamin A supplementation in pregnant women, Calcium supplements in pregnant women, reaching optimal iodine nutrition in pregnant and lactating women and finally Nutrition care and support for pregnant women during emergencies.
- 3. Interventions targeted at young infants (0–5 months):** These include early initiation of breastfeeding, exclusive breastfeeding, counselling and support for appropriate feeding of low-birth-weight infants and infant feeding in the context of human immunodeficiency virus.
- 4. Interventions targeted at infants and young children (6–23 months):** These include continued breastfeeding, complementary feeding, use of multiple micronutrient powders for home fortification of foods consumed by infants and young children 6–23 months, Vitamin A supplementation for children under five years, Vitamin A supplementation in children with measles, daily iron supplementation for children 6–23 months, Zinc supplementation for diarrhoea management, reaching optimal iodine nutrition in young children, management of children with Severe Acute Malnutrition, management of children with Moderate Acute malnutrition, nutritional care and support of HIV-infected children 6 months to 14 years and nutritional care and support during emergencies.



## India is Home to Fractured 1000 Days Cycle

<sup>3</sup> Essential nutrition actions: improving maternal, newborn, infant and young child health and nutrition, WHO, 2013.

As we have seen above, 'The 1000 Days Cycle' is the critical window of time between the start of a woman's pregnancy and her child's second birthday. Here, nutrition lays the foundation for a person's lifelong health, cognitive development and future potential. The window requires that the national nutrition programming is *truly* prioritised and stronger integration with health programming is addressed hinging on enhanced intersectoral approaches.

The question is: Is it happening in India? The straight answer is in the negative. Being born is neither a prerequisite nor a guarantee to get a life to live. Being born and then being able to draw up the life canvas are the major challenges of today. Whatsoever claims that one may make of development occurring in the country, the truth persists that India is home to the highest number of maternal and child deaths across the world. As many as 1.13 crore children could not celebrate their fifth birthday during the eight years from 2008 to 2015.

The bigger crisis is that death had occurred to 62.40 lakh of these children before they had even completed 28 days from birth. This is known as Neonatal Mortality. First 28 days of life after birth constitute the most sensitive period. This age of childhood is fraught with dangers of death. The risk of death in this period of 28 days after birth is 30 times that of child dying without completing 5 years of life (Journal of Perinatology, 2016).

Some key points to be noted are: 85% of total Under -5 Child Deaths occur within the first year itself, 67% of total Infant Deaths (before completion of 1 year) occur within the first 28 days, 74% of all neonatal deaths occur within the first 7 days of child birth and that 37% of all child deaths in 4 weeks or 28 days of birth take place on day 1 itself, i.e., within 24 hours of birth.

In Madhya Pradesh, as many as 6.18 lakh children had died within 28 days of birth during the period 2008 to 2015. Whilst a total of 93, 700 children died in the year 2008, the number did come down to 64, 500 in year 2015. However, effective responsiveness of the State does not appear to have been there in addressing the concerns on neonatal, infant and maternal health.

During the same period, Uttar Pradesh witnessed the death of 16.84 lakh newborns. The number of deaths of newborns came down from 2.52 lakh to 1.72 lakh during the period. During these eight years, deaths of newborns were at 5.12 lakh in Rajasthan, 6.54 lakh in Bihar, 1.70 lakh in Jharkhand, 2.92 lakh in Maharashtra, 3.35 lakh in Andhra Pradesh and 2.95 lakh in Gujrat.

Four States, namely Uttar Pradesh, Rajasthan, Bihar and Madhya Pradesh account for 56% of total neonatal deaths in the country.

### **Major Reasons for the Death of Younger Children**

Systemic studies at world, regional and national levels bring out four key factors for a very high neonatal mortality – complications due to preterm birth (43.7%), obstructed and complicated deliveries (19.2%), infections including Pneumonia, Sepsis and Diarrhoea (20.8%) and congenital deformities (8.1%).

India's Sample Registration System (SRS) attributes reasons for infants' death to preterm birth and low birth weight, (35.9%), Pneumonia (16.9%), birth asphyxia (9.9%), other non-communicable diseases (7.9%), diarrhoea (6.7%), congenital deformities (4.6%) and infections (4.2%).

At the same time, anaemia is the major factor for causing excessive bleeding at the time of delivery leading even to maternal death.

Combined and compounded together, the factors including the phenomenon of early age marriage, lack of appropriate food and care during pregnancy and discrimination, imbalanced mental-physical-emotional upkeep, lack of rest, unavailability of the requisite health care services, delivery not being safe and post-delivery the newborn not getting breastfeed from the mother co-create the base for maternal and infant mortality (particularly the neonatal mortality). The situation, in effect, calls for a widespread adoption of the principle of 1000 days (nine months of pregnancy and child's age of 2 years, until on breastfeed). If the women and children are neglected during this period, it is rather fait accompli that the levels of maternal, neonatal and child mortality will be unacceptably high. It is only the society's arrogance that will be higher than these levels!

### **Early Age Marriage – The First Step towards Death**

An insight in to National Family Health Survey (4) – [NFHS-4] makes it abundantly clear that across the spectrum of 1000 days, neglect, corruption, stupidity and non-fulfillment of accountability to the point of inhumanness are rampant around us.

The authoritative studies in India inform that in India, 26.8 percent women get married before reaching the age of 18 years. The proportion stands at 39.1 percent for Bihar, 32.7 percent for Andhra Pradesh, 32.6 percent for Assam, 30 percent for Madhya Pradesh, 35.4 percent for Rajasthan, 40.7 percent for West Bengal and 32.2 percent for Tripura. However, it is another thing that the State Governments do not demonstrate commitment to preventing child marriages despite having the Prohibition of Child Marriage Act in place.

### **Teenage Pregnancy**

Teenage pregnancy (or pregnancy before the age of 20 to 24 years) is afflicted with higher risk to the life of both the mother as well as the foetus.

The question to be asked in case of teenage pregnancy is whether the mother herself could fully achieve her physical-mental and emotional development. There is a higher risk that babies born from teenage mothers are born too early, or that they have a low weight at birth. In India, 7.9 percent women get pregnant during the age 15 to 19 years. This is not an ideal age to get pregnant.

The data on women getting pregnant before the age of 19 years across different states stands at 18.3 percent in West Bengal, 18.8 percent in Tripura, 10.6 percent in Telangana, 13.6 percent in Assam, 11.8 percent in Andhra Pradesh, 12.2 percent in Bihar, 12 percent in Jharkhand and 8.3 percent in Maharashtra.

It is notable that the Government of India has taken a very harsh view on this aspect that only those women will be able to access the benefit of Matrutva Sahyog Yojana under the National Food Security Act who would be 19 years in age at the time of pregnancy. However, we need to appreciate that it is the same Government of India which has submitted to the Supreme Court that the sexual relations made by the married couples in the age 15 to 18 years are not perceived to be ‘marital rape’! Does it not reflect the immoral, contradictory and anti-women perspective of our policy makers?

### **Care of the Pregnant Women: An Acutely Irresponsible Attitude**

Every year, 2.58 crore women are registered as pregnant women in India. The health care protocol requires 4 Ante Natal Care (ANC) during the pregnancy. No one would expect any carelessness and discrimination in this regard. However, the hopes are severely dashed in this service deliverance system. Only 51.2 percent pregnant women, i.e., just about half of them receive the 4 ANCs. It means that the rest half do not get health checkup that includes measuring and monitoring weight, Blood Pressure, their complexities and anaemia. In the absence of these checkups, the women suffer from acute complications at the time of delivery.

The performance of states on the status of ANCs is very poor. The proportion pertaining to the 4 ANCs being carried out is only 35.7 percent in Madhya Pradesh, 26.4 percent in Uttar Pradesh, 30.9 percent in Uttarakhand, 38.5 percent in Rajasthan, 30.3 percent in Jharkhand and only 14.4 percent in Bihar. It brings out complications occurring to many pregnant women go undetected and thus unattended! Because of this, occurrence of pre-term births (before 40 weeks) would be fraught with the highest risk of death to women and children.

### **Extremely Limited Support to Matrutva Sahyog Scheme**

UNICEF-World Health Organisation released the Global Breastfeeding Scorecard in the first week of August 2017. The Scorecard informs that 1 lakh children die in India every year because they do not get breastfeed from the mother. India’s economy suffers a loss to the tune of \$14 billion equivalent to about Rs. 9100 Crore. Therefore, it was rather necessary that the Government of India and state governments should have kept the Maternity Support/Rights Programme free from any riders of exclusion across the board. However, it was not to be.

When women do not have right to decide about their marriage or reproduction, certain riders in schemes naturally become exclusionary and women-unfriendly. Only the women whose age at pregnancy is 19 years are eligible to receive the benefit of Matrutva Sahyog Scheme under the National Food Security Act and that the benefit will accrue only until the first living child. Further, this benefit has also been tied to institutional delivery. An insight in to the analytics of India’s Census 2011 shows that there are 17.6% women with one living child, 28.1% with two living children, 20.8% with three living children and 33.5% with four or more living children. This brings out that only 30.7% women will be able to receive the Matrutva Sahyog Yojana.

### **Nutrition During Pregnancy**

The Rapid Survey on Children 2013-14 was carried out by the Ministry of Women and Children, Government of India with the support of UNICEF. The survey findings inform that only 45.7 percent pregnant women and 47.8 percent lactating mothers receive supplementary nutrition. Likewise, only 49.2 percent children under 3 years and 44.2 percent children between 3 to 6 years receive supplementary nutrition. It does not augur well for the programme to get weakened, given the special needs of the pregnant women.

### **Anaemia**

Maternal and infant death can also be caused due to anaemia (when mother's blood does not have enough healthy red blood cells to carry oxygen to her tissues and to the baby). In India, 50.3 percent pregnant women suffer from anaemia. The proportions for the states are; 54.6 percent in Madhya Pradesh, 51 percent in Uttar Pradesh, 53.6 percent in West Bengal, 62.6 percent in Jharkhand, 52.9 percent in Andhra Pradesh and 58.3 percent in Bihar.

### **IFA Tablets**

In case of anaemic women, they should receive and consume Iron Folic Acid (IFA) tablets. As per NFHS-4, only 30.3 percent pregnant women consume IFA tablets. Those states which have the highest Neonatal Mortality Rate are also the ones with the lowest IFA consumption level. Bihar has the consumption proportion at only 9.7 percent, Jharkhand has 15.3 percent, Uttar Pradesh has 12.9 percent, Madhya Pradesh has 23.6 percent and Rajasthan has the IFA consumption proportion only at 17.3 percent.

### **Place of Delivery**

Significant emphasis has been given to promote institutional deliveries in India with a view to secure safe motherhood and bring down Child Mortality Rate. The rate of institutional deliveries has doubled over the last decade. At the time of NFHS-3 (2005-06), the rate of institutional deliveries was 38.7 percent. It increased to 78.9 percent at the time of NFHS-4 (2015-16). The State wise increases were from 19.9 percent to 63.8 percent for Bihar, 64.7 percent to 94.7 percent for Madhya Pradesh, 20.6 percent to 67.8 percent for Uttar Pradesh and 29.6 percent to 84 percent for Rajasthan.

In fact, institutional deliveries alone do not comprise the concept of safe motherhood. It is just one of the contributing factors. We need to ask a question on this as to the situation of our institutions. It needs to be seen that only 1292 posts as against the required posts of 5510 Obstetricians and Gynaecologists are filled (23.55%). Likewise, Madhya Pradesh needs 334 Obstetricians and Gynaecologists. However, only 79 posts are in position. In Maharashtra, only 119 out of 360, in Uttar Pradesh, only 115 out of 773, In Gujarat, only 51 out of 322, in Jharkhand, only 39 out of 188 and in Rajasthan, only 87 out of 571 posts of Obstetricians and Gynaecologists are in position.

Whilst the government seeks to promote institutional deliveries, first it lets the architecture of service delivery system to get weakened thereby allowing the services to become deficient. Consequently, it has an impact on the people as they are forced to approach the private hospitals and avail the services at exorbitant prices. It is notable that the private hospitals have a caesarean section delivery rate at as much as 41 percent.

### **First Milk after the Birth**

It is crucial that the newborn is fed mother's breast milk immediately after birth and within one hour of birth. It is referred to as "early initiation of breastfeeding" and ensures that the infant receives the colostrum, or "first milk", which is rich in protective factors. Colostrum is usually thick and yellowish in color. NFHS -4 informs that only 41.6 percent newborns in India receive mother's first milk within one hour of birth. It shows that many infants who are deprived of the colostrum feed are vulnerable to infections and that they are not receiving the life securing nutritious feed.

The proportions are poorly placed in the states. In Uttar Pradesh, only 25.2 percent newborns get the colostrum feed. The figures on colostrum feed to the newborns within 1 hour of birth stand at 34.5 percent for Madhya Pradesh, 30.7 percent for Punjab, 28.4 percent for Rajasthan, 34.9 percent for Bihar, 29.1 percent for Delhi and 32.6 percent for Gujrat.

It clearly establishes that the strategy of institutional deliveries is not fully effective as the figures on feeding the first milk are abysmally low as compared to very high rates of institutional deliveries.

Is the counselling and support for early initiation of breastfeeding missing entirely? Had this been occurring, 79 percent of newborns would have duly received the colostrum feed!

### **Exclusive Breastfeeding Until the Age of 6 Months**

We hear a dozen of messages every day on different occasions regarding the crucial adoption of the practice of exclusive breastfeeding the infant up to 6 months from birth. However, what is the ground reality? In India, only 54.9 percent infants get exclusive breastfeeding up to 6 months from birth. The figures for the states are: 41.6 percent in Uttar Pradesh, 58.2 percent in Rajasthan and Madhya Pradesh, 48.3 percent in Tamil Nadu, 53.5 percent in Bihar, 49.8 percent in Delhi and 50.3 percent in Haryana. Exclusive breastfeeding for first 6 months after birth is crucial from the perspective children's health, nutrition and immunity against infections.

### **Complementary Feeding and Continued Breastfeeding**

In India, only 42.7 percent infants start receiving complementary feed during the age of 6 to 8 months. It means that 57 percent children grow with hunger! The proportions on initiation of complementary feeding with continued breastfeed for states are: 30.7 percent in Bihar, 30.1 percent in Rajasthan, 49.4 percent in Gujrat, 38.1 percent in Madhya Pradesh, 67.5 percent in Tamil Nadu and 32.6 percent in Uttar Pradesh.

The second point pertaining to complementary feed is about its completeness. It is believed that from 6 months onwards after the birth, the child needs complementary food for his growth in addition to the breastfeed of the mother. This complementary feed needs to be consistent with child's needs across the dimensions of nutrition, digestion and safety.

It is a shame that in India, only 8.7 percent children receive the full and appropriate complementary feed with continued breastfeeding from the age of 6 months to 2 years. The figures for the states stand at 5.3 percent for Uttar Pradesh, 3.4 percent for Rajasthan, 5.7 percent for Punjab, 5.3 percent in Maharashtra, 6.9 percent in Madhya Pradesh, 7.2 percent in Jharkhand, 5.8 percent in Gujrat, 4.8 percent in Delhi and 7.3 percent in Bihar.

## **Health Checkup of Newborn**

It is necessary that appropriate health checkup is done for the newborn immediately after the birth. As per NFHS-4, in India, health checkup within two days of birth is done by a doctor or a nurse only for 24.3 percent infants. In Bihar, it is done only for 10.8 percent infants. The figure stands at 34.2 percent for Chhattisgarh, 15.8 percent for Gujrat, 21.7 percent for Jharkhand, 17.5 percent for Madhya Pradesh, 30.5 percent for Maharashtra, 22.6 percent for Rajasthan, 24.4 percent for Uttar Pradesh and 26.7 percent for West Bengal.

Those children who are born at home are entirely outside the net of medical protection. Only 2.5 percent children born at home received health checkup by a doctor or a nurse.

## **Immunisation**

The immunisation programme helps to protect children against some serious diseases. Immunization is the process whereby the child is made immune or resistant to an infectious disease. It also prevents the spread of infections. The latest situation is that only 62 percent children are getting their right to immunisation met with. Likewise, the status in different states is quite poor.

In Uttar Pradesh, only 51.1 percent children are immunized. The figures stand at 53.6 percent for Madhya Pradesh, 56.3 percent for Maharashtra, 54.8 percent for Rajasthan, 61.9 percent for Jharkhand, 50.4 percent for Gujrat and 61.7 percent for Bihar. When children are not protected against diseases, their survival is also adversely affected.

## **Conclusion**

We need to examine this issue in the context of social practices by going deeper in to the realm of social policy and insight about the same. Essentially however, the crisis of death of newborns and children is because of factors including livelihood, access to natural resources, socio-economic equality, violence, food security and cultural practices. It is not a problem by itself. Rather, it is the manifestation of the outcome of various problems. Therefore, it is necessary that we have an insight in to those aspects which lead to the 'outcome of death'.

Scrupulously addressing the tenets of interventions under the 1000 Days Cycle is replete with promise for course correction. Shall we?

## Important Factors for 1000 Days

India and States	Neonatal Deaths 2008 to 2015 in Lakh	Stunting (%)	Anemia among Children (%)	Neonatal Mortality Rate	Institutional Deliveries (%)	Breastfeeding within 1 Hr of Birth (%)	Exclusive Breastfeeding upto 6 Months (%)	Children age 6-8 months receiving solid or semi solid food and breast milk (%)	Breastfeeding children age 6-23 months receiving an adequate diet (%)	Full Immunization (%)	4 ANC (%)	IFA consumption for 100 days (%)	Children who received a health check up after birth from a doctor/nurse etc within 2 days of birth (%)	Anemia among Preg. Women (%)	Marriage before 18 years (%)	Women who were already mother or pregnant at the age of 15-19 years (%)
Andhra Pradesh	3.35	31.4	58.6	24	70.6	40.1	70.2	49.9	8.7	65.3	76.3	32	28.5	52.9	32.7	11.8
Bihar	6.54	48.3	63.5	28	63.8	34.9	53.5	30.7	7.3	61.7	14.4	9.7	10.8	58.3	39.1	12.2
Chhattisgarh	1.62	37.6	41.6	27	70.2	47.1	77.2	53.8	11.1	76.4	59.1	30.3	34.2	41.5	21.3	4.8
Gujarat	2.95	38.5	62.6	23	88.7	50	55.8	49.4	5.8	50.4	70.6	36.8	15.8	51.3	24.9	6.5
J&K	0.53	27.4	43.3	20	85.7	46	65.4	50	21.8	75.1	81.4	30.2	20.3	38.1	8.7	2.9
Jharkhand	1.70	45.3	69.9	23	61.9	33.2	64.8	47.2	7.2	61.9	30.3	15.3	21.7	62.6	38	12
Madhya Pradesh	6.18	42	68.9	34	80.8	34.5	58.2	38.1	6.9	53.6	35.7	23.6	17.5	54.6	30	7.3
Maharashtra	2.92	34.4	53.8	15	90.3	57.5	56.6	43.3	5.3	56.3	72.2	40.6	30.5	49.3	25.1	8.3
Rajasthan	5.12	39.1	60.3	30	84	28.4	58.2	30.1	3.4	54.8	38.5	17.3	22.6	46.6	35.4	6.3
Uttar Pradesh	16.84	46.3	63.2	31	67.8	25.2	41.6	32.6	5.3	51.1	26.4	12.9	24.4	51	21.2	3.8
West Bengal	2.62	32.5	54.2	18	75.2	47.5	52.3	52	19.1	84.4	76.5	28.1	26.7	53.6	40.7	18.3
India	62.40	38.4	58.4	25	78.9	41.6	54.9	42.7	8.7	62	51.2	30.3	24.3	50.3	26.8	7.9

## Maternity Right is No Burden on State Exchequer

In India, there has been no practical procedure in place for securing the maternity rights of 93% women. The provisions pertaining to maternity support enshrined under the National Food Security Act too have been very much diluted.

Even while being at work, women's role and contribution have not been measured and acknowledged. This has led to continuing rise in risk to their lives. Keeping the perspective of socio-economic situation of women and alarming level of Neonatal Mortality Rate in view, need for according priority to universalized and maternity rights programming without any riders has always been felt. Maternity Right means that the pregnant women and lactating mothers have right to economic benefits/wages with paid leave so that they can take adequate rest and that the foetus may fully develop. Also, the newborn should be able to realise her/his right to breastfeed at least till 6 months after the birth. This requires that the mother should not be required to go for wage work or labour immediately after the delivery. Breastfeed is crucial for securing newborn's intellectual development, prevention of infections like diarrhoea and protection from leukaemia.

UNICEF-World Health Organisation released the Global Breastfeeding Scorecard in the first week of August 2017. The Scorecard informs that 1 lakh children die in India every year because they do not get breastfeed from the mother. India's economy suffers a loss to the tune of \$14 billion equivalent to about Rs. 9100 Crore.

As per Ning Xiang, researcher from the Institute for Social Science Research, Queensland University (Australia), there is a 45% probability that breastfeeding ceases after 6 months for those women who take to work for 20 to 34 hours per week. This probability rises to 60% in case of those lactating mothers who work for more than 35 hours a week.

Keeping these findings in view, it was rather expected that the Government of India and state governments would implement the Maternity Rights Programme that is free from any riders of exclusion across the board. However, it was not to be.

India's highest constitutional body, the Parliament had passed the National Food Security Act in year 2013 with a provision that every pregnant woman and lactating mother will be entitled to receive a financial assistance of Rs. 6000/-. The Act describes it as 'Maternity Benefit'. The Act stipulates that this benefit will not be applicable to the pregnant women and lactating mothers who are in regular employment with the Central Government or State Governments or Public-Sector Undertakings or those who are in receipt of similar benefits under any law for the time being in force. It is notable that the Act does not mention any other condition or norm of eligibility.

This was a significant move that sought to secure the life of women and the younger children. In the context of existing situation wherein India with the highest Maternal Mortality Ratio and Neonatal Mortality Rate in the world, it was a welcome mandatory endeavour to institute a Maternity Rights Programme (in government's parlance, it is known

as Prasooti Prasuvidha Karyakram). However, the government itself has gone about defeating this initiative.

An insight in to the analytics of India's Census 2011 shows that there are 17.6% women with one living child, 28.1% with two living children, 20.8% with three living children and 33.5% with four or more living children. This brings out that only 30.7% women will be able to receive the Matrutva Sahyog Yojana. If abortion and stillbirth cases are added, the number of women suffering the sting of exclusion will go up very high. The government tried to argue that the age limit for the scheme is 19 years because it does not want to promote child marriage and that it wants to discourage women becoming pregnant repeatedly which has an adverse effect on their health. However, the government also needs to recognise that in our orthodox dominant society, even now, it is the parents or the guardians who decide as to when the girl will get married and that her husband and the patriarchal system would decide as to the number of children that she will bear. In both these situations, life of the woman is at risk. With the rider of Matrutva Sahyog Yojana<sup>4</sup>, deprivation of the benefit triples the risk to woman's life.

It is regrettable that even when the Parliament had not provided any rider on exclusion in the National Food Security Act regarding women's rights, the government has included such conditions in the scheme that result in the exclusion of 69.3% pregnancies out of the purview of maternity rights.

This government took up a far-reaching step on the last day of year 2016. In his address to the nation on 31<sup>st</sup> December 2016, the Prime Minister said, "We are introducing a nationwide scheme (Pradhan Mantri Matrutva Vandana Yojana (PMMVY), previously Indira Gandhi Matrutva Sahyog Yojana (IGMSY), for financial assistance to pregnant women (scaling up to cover all 650 districts). 6000 rupees will be transferred directly to the bank accounts of pregnant women who undergo institutional delivery and vaccinate their children. This scheme will help reduce the maternal mortality rate, in a big way. This will help ensure nutrition before and after delivery, and improve the health of mother and child. So far, pregnant women in 53 districts were being given financial assistance of 4000 rupees, under a pilot project". He did not mention that the scheme was an integral part of the National Food Security Act, 2013!

Subsequently on 1<sup>st</sup> February 2017, whilst presenting the General Budget, India's Finance Minister said, "The Honorable Prime Minister has already announced the nationwide scheme for the pregnant women on 31<sup>st</sup> December 2016. Under the scheme, Rs. 6000/- would be directly transferred in to the bank accounts of those pregnant women who deliver at a health institution and get their child immunized".

The announced scheme necessitated an outlay of Rs. 16.44 Thousand Crore for its comprehensive implementation. However, the Finance Minister allocated only an amount of

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<sup>4</sup> It is a conditional cash transfer scheme for pregnant and lactating women of 19 years of age or above for first two live births. It provides a partial wage compensation to women for wage-loss during childbirth and childcare and to provide conditions for safe delivery and good nutrition and feeding practices.

Rs. 2700 Crore. The previous year's allocation was at Rs. 634 Crore. The kind of policy commitment that is needed to keep gender disparity at bay is not borne out by both the existing perspective as well as the budgetary allocation.

## **And, the Net of Conditions and Riders is again Knitted**

An official release titled "Pan-India expansion of Maternity Benefit Programme (MBP) to benefit pregnant and lactating mothers across the country" was issued by the Press Information Bureau on behalf of the Ministry of Women and Child Development on 3<sup>rd</sup> January 2017. It said, "Government of India is committed to ensure that every woman attains optimal nutritional status – especially from the most vulnerable communities as nutrition constitutes the foundation for human development. This is all the more important during the period of pregnancy and lactation coupled with wage loss. A woman's nutritional status has important implications for her health as well as the health and development of her children. An under-nourished mother almost inevitably gives birth to a low birth weight baby. When poor nutrition starts in-utero, it extends throughout the life cycle, particularly in women. Owing to economic and social distress many women continue to work to earn a living for their family right up to the last days of their pregnancy. Furthermore, they resume working soon after childbirth, even though their bodies might not permit it, thus preventing their bodies from fully recovering on one hand, and also impeding their ability to exclusively breastfeed their young infant in the first six months".

The moot question is that if it is a matter of life of woman and child, then is it not a reflection of insensitivity of the government when clauses of exclusions are made part of the scheme's implementation architecture?

The release goes on to state, "To address the above issues, Ministry of Women and Child Development, in accordance with the provisions of Section 4(b) of National Food Security Act, formulated a scheme for pregnant and lactating mothers called Maternity Benefit Programme – a conditional cash transfer scheme. The Scheme provides cash incentives to pregnant and lactating women (i) for the wage loss so that the woman can take adequate rest before and after delivery; (ii) to improve her health and nutrition during the period of pregnancy and lactation; and (iii) to breastfeed the child during the first six months of the birth, which is very vital for the development of the child. Under the scheme, all Pregnant Women and Lactating Mothers (PW&LM), excluding the Pregnant Women and Lactating Mothers who are in regular employment with the Central Government or State Governments or Public-Sector Undertakings or those who are in receipt of similar benefits under any law for the time being are eligible. The cash incentive of Rs. 6,000/- is payable in three instalments for the first two live births".

It is notable that the National Food Security Act, 2013 did not stipulate a 'conditional scheme' as the Government of India appears to be going about. Until January 2017, the Government of India has been saying that excepting those women who are accessing

maternity benefits from other institutions/bodies, cash incentive of Rs. 6000/- is payable to all pregnant women and lactating mothers for the first two live births.

However, the Ministry of Women and Child Development took a U-turn In May 2017. Two new conditions were added to the administrative sanction letter for the Maternity Benefit Scheme. These are:

**One-** The women will only get Rs. 5000/- and the balance Rs.1000/- will be given only to those women who go for institutional delivery. It is notable that there has already been a provision for Rs. 1400/- for being given to the rural women and Rs. 1000/- for those from the urban areas under the Janani Suraksha Yojana. Thus, that benefit has been linked with this provision. The Government of Madhya Pradesh, whilst acting on this new condition introduced one more tough rider. The rider stipulates that Rs. 1500/- would be paid under the Maternity Sahyog Scheme only when the delivery has taken place in a hospital approved by the Department of Public Health & Family Welfare.

**Two-** Under the scheme, the eligible women will get the benefit only up to one living child. It disregards the fact that the erstwhile Indira Gandhi Matrutva Sahyog Yojana had the provision for entitlement until two living children.

Therefore, it needs to be appreciated that maternity right is not merely a scheme of financial assistance. It is also a mode to affront gender inequality and limit the associated lethal risks. It not only protects human rights but also can secure and safeguard political and economic resources. It is rather incumbent upon the policy makers and programme implementers that they bring about reform in their perspective.

## Neonatal Mortality, Infant Mortality and U5 Mortality

State and Estimated Live Births	Year	Neonatal Mortality Rates (NMR)			IMR			Under-five Mortality Rates (U5MR)			Proportion - U5 to IMR	Proportion - IMR to NMR	Proportion - NMR to U5	Neo Death	Infant Deaths	U5 Deaths	NMR R/U	IM R/U	U5 Mort R/U
		T	R	U	T	R	U	T	R	U									
<b>INDIA</b>																			
26300000	2008	35	39	21	53	58	36	69	76	43	76.8	66.23	50.9	923130	1393900	1814700	1.9	1.6	1.8
26300000	2009	34	38	20.5	50	55	43	64	71	41	78.1	68.40	53.4	899460	1315000	1683200	1.9	1.3	1.7
25536000	2010	33	36	19.3	47	51	31	59	66	38	79.7	70.21	55.9	842688	1200192	1506624	1.9	1.6	1.7
25656000	2011	31	34	17	44	48	29	55	61	35	80.0	70.45	56.4	795336	1128864	1411080	2.0	1.7	1.7
25421000	2012	29	33	16	42	46	28	52	58	32	80.8	69.05	55.8	737209	1067682	1321892	2.0	1.6	1.8
25760000	2013	28	31	15	40	44	27	49	55	29	81.6	70.00	57.1	721280	1030400	1262240	2.1	1.6	1.9
25925900	2014	26	30	15	39	43	26	45	51	28	86.7	66.67	57.8	674073	1011110	1168666	2.0	1.7	1.8
25871100	2015	25	29	15	37	41	25	43	48	28	86.0	67.57	58.1	646778	957231	1112457	1.9	1.6	1.7
206770000														6239953.9	9104379	11278859			
<b>MADHYA PRADESH</b>																			
		T	R	U	T	R	U	T	R	U									
1940000	2008	48	52	31	70	75	48	92	98	62	76.1	69.00	52.5	93702	135800	178480	1.7	1.6	1.6
1960000	2009	47	49	33	67	72	45	89	95	58	75.3	70.15	52.8	92120	131320	174440	1.5	1.6	1.6
1867000	2010	44	47	30.2	62	67	42	82	88	54	75.6	71.29	53.9	82521	115754	153094	1.6	1.6	1.6
1873000	2011	41	44	24.3	59	63	39	77	82	50	76.6	69.49	53.2	76793	110507	144221	1.8	1.6	1.6
1866000	2012	39	42	23	56	60	37	73	79	46	76.7	69.64	53.4	72774	104496	136218	1.8	1.6	1.7
1896000	2013	36.4	39	23	54	57	37	69	75	40	78.3	67.41	52.8	69014	102384	130824	1.7	1.5	1.9
1906600	2014	35	39	22	52	57	35	65	72	37	80.0	67.31	53.8	66731	99143	123929	1.8	1.6	1.9
1897100	2015	34	37	21	50	54	34	62	67	43	80.6	68.00	54.8	64501	94855	117620	1.8	1.6	1.6
15205700														618157	894259	1158826			
<b>UTTAR PRADESH</b>																			
		T	R	U	T	R	U	T	R	U									
5610000	2008	45	48	29.1	67	70	49	91	97	63	73.6	67.16	49.5	252450	375870	510510	1.6	1.4	1.5
5650000	2009	45	48	29.4	63	66	47	85	89	63	74.1	71.43	52.9	254250	355950	480250	1.6	1.4	1.4
5412000	2010	42	45	27	61	64	44	79	82	60	77.2	69.34	53.5	228928	330132	427548	1.7	1.5	1.4
5349000	2011	40	43	22.5	57	60	41	73	77	54	78.1	70.18	54.8	213960	304893	390477	1.9	1.5	1.4
5318000	2012	37	40	21	53	56	39	68	72	49	77.9	69.81	54.4	196766	281854	361624	1.9	1.4	1.5
5407000	2013	35	38	20.4	50	53	38	64	68	44	78.1	70.40	55.0	190326	270350	346048	1.9	1.4	1.5
5476400	2014	32	36	19	48	51	37	57	62	40	84.2	66.67	56.1	175245	262867	312155	1.9	1.4	1.6
5544000	2015	31	34	20	46	48	36	51	54	40	90.2	67.39	60.8	171864	255024	282744	1.7	1.3	1.4
43766400														1683788.8	2436940	3111356			
<b>RAJASTHAN</b>																			
		T	R	U	T	R	U	T	R	U									
1810000	2008	43	48	23	63	69	38	80	88	49	78.8	68.25	53.8	77830	114030	144800	2.1	1.8	1.8
1820000	2009	41	45	24	59	65	35	74	82	46	79.7	69.49	55.4	74620	107380	134680	1.9	1.9	1.8
1737000	2010	40	45	23	55	61	31	69	76	42	79.7	72.91	58.1	69654	95535	119853	2.0	2.0	1.8
1744000	2011	37	41	19	52	57	32	64	70	38	81.3	71.15	57.8	64528	90688	111616	2.2	1.8	1.8
1728000	2012	35	39	18	49	54	31	59	65	36	83.1	71.43	59.3	60480	84672	101952	2.2	1.7	1.8
1754000	2013	32	36	17	47	51	30	57	63	32	82.5	68.30	56.3	56303	82438	99978	2.1	1.7	2.0
1762100	2014	32	37	16	46	52	27	51	58	28	90.2	69.57	62.7	56387	81057	89867	2.3	1.9	2.1
1749100	2015	30	34	15	43	48	27	50	55	31	86.0	69.77	60.0	52473	75211.3	87455	2.3	1.8	1.8
14104200														512275	731011	890201			
<b>BIHAR</b>																			
		T	R	U	T	R	U	T	R	U									
2800000	2008	32	34	14	56	57	42	75	77	56	74.7	57.14	42.7	89600	156800	210000	2.4	1.4	1.4
2820000	2009	31	33	12	52	53	40	70	71	49	74.3	59.62	44.3	87420	146640	197400	2.7	1.3	1.4
2652000	2010	31	32	13.3	48	49	38	64	65	47	75.0	64.58	48.4	82212	127296	169728	2.4	1.3	1.4
2795000	2011	29	31	12.2	44	45	34	59	61	41	74.6	66.36	49.5	81614	122980	164905	2.5	1.3	1.5
2814000	2012	28	29	12	43	44	34	57	58	39	75.4	65.12	49.1	78792	121002	160398	2.4	1.3	1.5
2849000	2013	28	29	11	42	42	33	54	56	37	77.8	66.67	51.9	79772	119658	153846	2.6	1.3	1.5
2876700	2014	27	29	13	42	43	37	53	54	43	79.2	64.29	50.9	77671	120821	152465	2.2	1.2	1.3
2734200	2015	28	29	20	42	42	44	48	48	47	87.5	66.67	58.3	76558	114836	131242	1.5	1.0	1.0
22340900														653639	1030034	1339984			
<b>JHARKHAND</b>																			
		T	R	U	T	R	U	T	R	U									
791000	2008	25	27	14.4	46	49	32	65	69	44	70.8	54.78	38.8	19933	36386	51415	1.9	1.5	1.6
799000	2009	28	31	13.2	44	46	30	62	66	38	71.0	64.32	45.6	22612	35156	49538	2.3	1.5	1.7
770000	2010	29	32	14	42	44	30	59	63	35	71.2	69.76	49.7	22561	32340	45430	2.3	1.5	1.8
805000	2011	29	31	13.1	37	38	27	54	57	32	68.5	77.03	52.8	22943	29785	43470	2.4	1.4	1.8
799,000	2012	27	30	12	38	39	27	50	53	31	76.0	71.84	54.6	21813	30362	39950	2.5	1.4	1.7
811000	2013	26	28	12.3	37	38	27	48	51	27	77.1	70.27	54.2	21086	30007	38928	2.3	1.4	1.9
819000	2014	25	27	15	34	37	22	44	49	24	77.3	73.53	56.8	20475	27846	36036	1.8	1.7	2.0
806400	2015	23	25	15	32	35	22	39	43	26	82.1	71.88	59.0	18547	25805	31450	1.7	1.6	1.7
6400400														169969	247687	336217			

## Neonatal Mortality, Infant Mortality and U5 Mortality

State and Estimated Live Births	Year	Neonatal Mortality Rates (NMR)			IMR			Under-five Mortality Rates (U5MR)			Proportion - U5 to IMR	Proportion - IMR to NMR	Proportion - NMR to U5	Neo Death	Infant Deaths	U5 Deaths	NMR R/U	IM R R/U	U5 Mort R/U.
		T	R	U	T	R	U	T	R	U									
<b>JAMMU &amp; KASHMIR</b>	Year	T	R	U	T	R	U	T	R	U									
209000	2008	39	41	29.4	49	51	37	55	58	41	89.1	80.20	71.5	8214	10241	11495	1.4	1.4	1.4
209000	2009	37	40	25.3	45	48	34	50	52	39	90.0	83.11	74.8	7817	9405	10450	1.6	1.4	1.3
208000	2010	35	37	35	43	45	32	48	51	33	89.6	81.63	73.1	7301	8944	9984	1.1	1.4	1.5
221000	2011	32	34	19	41	43	28	45	47	30	91.1	78.05	71.1	7072	9061	9945	1.8	1.5	1.6
216,000	2012	30	32	19	39	41	28	43	46	30	90.7	76.92	69.8	6480	8424	9288	1.7	1.5	1.5
219000	2013	29	31	18.4	37	39	28	40	42	29	92.5	78.38	72.5	6351	8103	8760	1.7	1.4	1.4
220400	2014	26	28	19	34	36	29	35	36	30	97.1	76.47	74.3	5730	7494	7714	1.5	1.2	1.2
214800	2015	20	21	16	26	27	24	28	28	24	92.9	76.92	71.4	4296	5585	6014	1.3	1.1	1.2
<b>1717200</b>													<b>53261</b>	<b>122207</b>	<b>138904</b>				
<b>MAHARASHTRA</b>	Year	T	R	U	T	R	U	T	R	U									
1890000	2008	24	28	18	33	40	23	41	49	28	80.5	72.73	58.5	45360	62370	77490	1.6	1.7	1.8
1880000	2009	24	27	19	31	37	22	36	43	26	86.1	77.42	66.7	45120	58280	67680	1.4	1.7	1.7
1940000	2010	22	27	14.5	28	34	20	33	39	23	84.8	78.57	66.7	42680	54320	64020	1.9	1.7	1.7
1880000	2011	18	22	13	25	30	17	28	33	19	89.3	72.80	65.0	34216	47000	52640	1.7	1.8	1.7
1855000	2012	18	22	12	25	30	17	28	33	20	89.3	72.00	64.3	33390	46375	51940	1.8	1.8	1.7
1880000	2013	17	21	11	24	29	16	26	32	18	92.3	70.83	65.4	31960	45120	48880	1.9	1.8	1.8
1894100	2014	16	20	10	22	27	14	23	28	15	95.7	72.73	69.6	30306	41670	43564	2.0	1.9	1.9
1923700	2015	15	19	10	21	26	14	24	29	15	87.5	71.43	62.5	28856	40398	46169	1.9	1.9	1.9
<b>15142800</b>													<b>291887</b>	<b>395533</b>	<b>452383</b>				
<b>ANDHRA PRADESH</b>	Year	T	R	U	T	R	U	T	R	U									
1520000	2008	34	42	11	52	58	36	58	64	40	89.7	65.38	58.6	51680	79040	88160	3.8	1.6	1.6
1530000	2009	33	40	13	49	54	35	52	58	39	94.2	67.35	63.5	50490	74970	79560	3.1	1.5	1.5
1472000	2010	30	36	13.5	46	51	33	48	53	36	95.8	65.22	62.5	44160	67712	70656	2.7	1.5	1.5
1452000	2011	28	34	13	43	47	31	45	49	34	95.6	65.12	62.2	40656	62436	65340	2.6	1.5	1.4
1439000	2012	27	33	12	41	46	30	43	48	31	95.3	65.85	62.8	38853	58999	61877	2.8	1.5	1.5
1450000	2013	25	31	10	39	44	29	41	46	29	95.1	64.10	61.0	36250	56550	59450	3.1	1.5	1.6
1457300	2014	26	30	13	39	43	28	40	44	29	97.5	66.67	65.0	37890	56835	58292	2.3	1.5	1.5
1474200	2015	24	29	12	37	41	26	39	43	29	94.9	64.86	61.5	35381	54545	57494	2.4	1.6	1.5
<b>11794500</b>													<b>335360</b>	<b>511087</b>	<b>540829</b>				
<b>KERALA</b>	Year	T	R	U	T	R	U	T	R	U									
495000	2008	7	9	3.2	12	12	10	14	14	12	85.7	61.67	52.9	3663	5940	6930	2.8	1.2	1.2
502000	2009	7	8	6.4	12	12	11	14	14	13	85.7	60.00	51.4	3614	6024	7028	1.2	1.1	1.1
497000	2010	7	8	5.2	13	14	10	15	16	12	86.7	54.62	47.3	3529	6461	7455	1.5	1.4	1.3
490000	2011	7	8	3.2	12	13	9	13	14	10	92.3	58.33	53.8	3430	5880	6370	2.5	1.4	1.4
497000	2012	7	8	3.2	12	13	9	13	13	10	92.3	58.33	53.8	3479	5964	6461	2.5	1.4	1.3
500000	2013	6	8	3	12	13	9	12	13	9	100.0	53.33	53.3	3200	6000	6000	2.5	1.4	1.4
496500	2014	6	8	4	12	14	10	13	14	12	92.3	50.00	46.2	2979	5958	6454.5	2.0	1.4	1.2
503100	2015	6	8	4	12	13	10	13	14	11	92.3	50.00	46.2	3019	6037	6540	2.0	1.3	1.3
<b>3980600</b>													<b>26913</b>	<b>72148</b>	<b>81103</b>				
<b>GUJARAT</b>	Year	T	R	U	T	R	U	T	R	U									
1280000	2008	37	43	28	50	58	35	60	72	38	83.3	74.80	62.3	47872	64000	76800	1.5	1.7	1.9
1290000	2009	34	40	22.5	48	55	33	61	71	42	78.7	71.04	55.9	43989	61920	78690	1.8	1.7	1.7
1261000	2010	31	36	19.5	44	51	30	56	65	39	78.6	69.32	54.5	38461	55484	70616	1.9	1.7	1.7
1267000	2011	30	35	19	41	48	27	52	60	35	78.8	73.17	57.7	38010	51947	65884	1.8	1.8	1.7
1251000	2012	28	33	17.1	38	45	24	48	56	32	79.2	72.37	57.3	34403	47538	60048	1.9	1.9	1.8
1267000	2013	26	31	16	36	43	22	45	53	28	80.0	72.22	57.8	32942	45612	57015	1.9	2.0	1.9
1267100	2014	24	30	16	35	43	23	41	51	27	85.4	68.57	58.5	30410	44349	51951	1.9	1.9	1.9
1272800	2015	23	29	15	33	41	21	39	47	26	84.6	69.70	59.0	29274	42002	49639	1.9	2.0	1.8
<b>10155900</b>													<b>295361</b>	<b>412852</b>	<b>510643</b>				
<b>WEST BENGAL</b>	Year	T	R	U	T	R	U	T	R	U									
1530000	2008	26	28	19	35	37	29	42	45	32	83.3	74.29	61.9	39780	53550	64260	1.5	1.3	1.4
1520000	2009	25	27	19	33	34	27	40	42	30	82.5	76.36	63.0	38304	50160	60800	1.4	1.3	1.4
1505000	2010	23	24	19	31	32	25	37	40	28	83.8	74.19	62.2	34615	46655	55685	1.2	1.3	1.4
1494000	2011	22	23	17	32	33	26	38	41	29	84.2	69.38	58.4	33167	47808	56772	1.4	1.3	1.4
1442000	2012	22	23	16	32	33	26	38	40	29	84.2	68.75	57.9	31724	46144	54796	1.4	1.3	1.4
1455000	2013	21	22	15	31	32	26	35	37	26	88.6	67.74	60.0	30555	45105	50925	1.5	1.2	1.4
1459800	2014	19	20	15	28	30	24	30	32	25	93.3	67.86	63.3	27736	40874	43794	1.3	1.3	1.3
1441300	2015	18	18	15	26	27	24	30	31	26	86.7	69.23	60.0	25943	37474	43239	1.2	1.1	1.2
<b>11847100</b>													<b>261824</b>	<b>367770</b>	<b>430271</b>				
<b>CHHATTISGARH</b>	Year	T	R	U	T	R	U	T	R	U									
617000	2008	39	40	33.7	57	59	48	71	74	56	80.3	68.25	54.8	24001	35169	43807	1.2	1.2	1.3
618000	2009	38	38	36.5	54	55	47	67	69	54	80.6	70.19	56.6	23422	33372	41406	1.0	1.2	1.3

## Neonatal Mortality, Infant Mortality and U5 Mortality

State and Estimated Live Births	Year	Neonatal Mortality Rates (NMR)			IMR			Under-five Mortality Rates (U5MR)			Proportion - U5 to IMR	Proportion - IMR to NMR	Proportion - NMR to U5	Neo Death	Infant Deaths	U5 Deaths	NMR R/U	IM R/U	U5 Mort R/U.
		T	R	U	T	R	U	T	R	U									
594000	2010	37	38	32.3	51	52	44	61	63	48	83.6	73.14	61.1	22156	30294	36234	1.2	1.2	1.3
617000	2011	34	34	31.2	48	49	41	57	59	46	84.2	70.21	59.1	20793	29616	35169	1.1	1.2	1.3
608000	2012	32	32	28.1	47	48	39	55	57	40	85.5	67.02	57.3	19152	28576	33440	1.1	1.2	1.4
617000	2013	31	31	26	46	47	38	53	56	38	86.8	67.39	58.5	19127	28382	32701	1.2	1.2	1.5
622500	2014	28	29	23	43	45	34	49	52	37	87.8	65.12	57.1	17430	26768	30503	1.3	1.3	1.4
607100	2015	27	28	21	41	43	32	48	51	35	85.4	65.85	56.3	16392	24891	29141	1.3	1.3	1.5
<b>4900600</b>														<b>162473</b>	<b>237068</b>	<b>282400</b>			

Source of Data - Year 2008-09 and 2009-10: <http://www.johnstonsarchive.net/policy/abortion/india/ab-indias.html>

Source of Data - Year 2010-11 to 2015-16: <https://nrhm-mis.nic.in/hmisreports/analyticalreports.aspx>

Source of Data- Sample Registration System Statistical Report 2015, Office of Registrar General & Census Commissioner (Field Work Period: 2016) (IMR and NNR 2015)

Source of Data - [http://www.censusindia.gov.in/vital\\_statistics/Compendium/Srs\\_data.html](http://www.censusindia.gov.in/vital_statistics/Compendium/Srs_data.html)

Calculations - By calculating NNM, IMR and UR Mortality with Estimated Live Births

# SOME KEY INDICATORS AND CAUSAL FACTORS FOR CHILD SURVIVAL – NFHS 4 & SRS Factsheet

Sr. No	India and All States	Under weight (%)	Stunted (%)	Wasting (%)	Severe Wasting (%)	Anemia in children (%)	IMR	U5MR	NMR SRS
1	A & N island	21.6	23.3	18.9	7.5	49	10	13	NA
2	Andhra Pradesh	31.9	31.4	17.2	4.5	58.6	35	41	24
3	Arunachal Pradesh	19.5	29.4	17.3	8	50.7	23	33	NA
4	Assam	29.8	36.4	17.2	6.2	35.7	48	56	25
5	Bihar	43.9	48.3	20.8	7	63.5	48	58	28
6	Chandigarh	24.5	28.7	10.9	3.9	73.1	NA	NA	NA
7	Chhattisgarh	37.7	37.6	23.1	8.4	41.6	54	64	27
8	Dadar & Nagar Haveli	38.9	41.7	27.6	11.6	84.6	33	42	NA
9	Daman & Diu	26.7	23.4	24.1	11.9	73.8	34	34	NA
10	Delhi	27	32.3	17.1	5	62.6	35	47	14
11	Goa	23.8	20.1	21.9	9.5	48.3	NA	13	NA
12	Gujrat	39.3	38.5	26.4	9.5	62.6	34	43	23
13	Haryana	29.4	34	21.2	9	71.7	33	41	24
14	Himachal Pradesh	21.2	26.3	13.7	3.9	53.7	34	38	19
15	Jammu & Kashmir	16.6	27.4	12.1	5.6	43.3	32	38	20
16	Jharkhand	47.8	45.3	29	11.4	69.9	44	54	23
17	Karnataka	35.2	36.2	26.1	10.5	60.9	28	32	19
18	Kerala	16.1	19.7	15.7	6.5	35.6	6	7	6
19	Lakshwadeep	23.4	27	13.8	8.3	51.9	19	23	NA
23	Madhya Pradesh	42.8	42	25.8	9.2	68.9	51	65	34
20	Maharashtra	36	34.4	25.6	9.4	53.8	24	29	15
21	Manipur	13.8	28.9	6.8	2.2	23.9	22	26	NA
22	Meghalaya	29	43.8	15.3	6.5	48	30	40	NA
24	Mizoram	11.9	28	6.1	2.3	17.7	40	46	NA
25	Nagaland	16.8	28.6	13.3	5.2	21.6	29	37	NA
26	Odisha	34.4	34.1	20.4	6.4	44.6	40	49	35
28	Pudduchery	22	23.7	23.7	7.8	44.9	16	16	NA
27	Punjab	21.6	25.7	15.6	5.6	56.6	29	33	13
29	Rajasthan	36.7	39.1	23	8.6	60.3	41	51	30
30	Sikkim	14.2	29.6	14.2	5.9	55.1	29	32	NA
32	Tamilnadu	23.8	27.1	19.7	7.9	50.7	10.1	27	14
31	Telangana	28.5	28.1	18.4	4.8	60.7	28	32	23
33	Tripura	24.1	24.3	16.8	6.3	48.3	27	33	NA
34	Uttar Pradesh	39.5	46.3	17.9	6	63.2	64	78	31
35	Uttrakhand	26.6	33.5	19.5	9	59.8	40	47	28
36	West Bengal	31.5	32.5	20.3	6.5	54.2	27	32	18
	INDIA	35.7	38.4	21	7.5	58.4	41	50	25

# SOME KEY INDICATORS AND CAUSAL FACTORS FOR CHILD SURVIVAL – NFHS 4 & SRS Factsheet

Sr. No	India and All States	Institutional Birth (%)	Institutional births in public facility (%)	Breastfed within 1 hour (%)	Exclusively breastfed up to 6 months (%)	Children age 6-8 months receiving solid or semi solid food and breast milk (%)	Breastfeeding children age 6-23 months receiving an adequate diet (%)	Total children age 6-23 months receiving an adequate diet (%)
1	A & N island	96.6	92.3	41.9	66.8	45.1	13.5	14.2
2	Andhra Pradesh	70.6	60	40.1	70.2	49.9	8.7	8.9
3	Arunachal Pradesh	52.3	42.7	58.7	56.5	53.6	12.3	13.9
4	Assam	70.6	60	64.4	63.5	49.9	8.7	8.9
5	Bihar	63.8	47.7	34.9	53.5	30.7	7.3	7.5
6	Chandigarh	91.6	72.4	33.5	NA	NA	0	0
7	Chhattisgarh	70.2	55.9	47.1	77.2	53.8	11.1	10.9
8	Dadar & Nagar Haveli	88	66.4	47.8	72.7	NA	0	NA
9	Daman & Diu	90.1	43	55.8	52.3	NA	11.8	6.5
10	Delhi	84.4	56.9	29.1	49.8	45	4.8	5.8
11	Goa	96.9	58.2	73.3	60.9	NA	9.1	10.4
12	Gujarat	88.7	32.6	50	55.8	49.4	5.8	5.2
13	Haryana	80.5	52	42.4	50.3	35.9	7	7.5
14	Himachal Pradesh	76.4	61.6	41.1	67.2	52.7	11.2	10.9
15	Jammu & Kashmir	85.7	78.1	46	65.4	50	21.8	23.5
16	Jharkhand	61.9	41.8	33.2	64.8	47.2	7.2	7.2
17	Karnataka	94.3	61.4	56.4	54.2	46	5.8	8.2
18	Kerala	99.9	38.4	64.3	53.3	63.1	21.3	21.4
19	Lakshwadeep	99.9	63.3	54.3	55	NA	12.2	11.3
23	Madhya Pradesh	80.8	69.5	34.5	58.2	38.1	6.9	6.6
20	Maharashtra	90.3	48.9	57.5	56.6	43.3	5.3	6.5
21	Manipur	69.1	45.7	65.4	73.6	78.8	19.3	18.8
22	Meghalaya	51.4	39.4	60.6	35.8	67.4	24.2	23.6
24	Mizoram	80.1	63.8	70.2	46.1	67.9	14.7	14.6
25	Nagaland	32.8	25.1	53.2	44.5	70.7	17.5	18.6
26	Odisha	85.4	75.9	68.6	65.6	54.9	8.9	8.5
28	Pudduchery	99.9	52	65.3	45.5	76.8	21.8	31.1
27	Punjab	90.5	51.7	30.7	53	41.1	5.7	5.9
29	Rajasthan	84	63.5	28.4	58.2	30.1	3.4	3.4
30	Sikkim	94.7	82.7	65.5	54.6	61.8	23.1	23.1
32	Tamilnadu	99	66.7	54.7	48.3	67.5	21.4	30.7
31	Telangana	91.5	31	37.1	67.3	57.1	9.6	9.9
33	Tripura	79.9	69.1	44.4	70.7	13.6	5.3	5.9
34	Uttar Pradesh	67.8	44.5	25.2	41.6	32.6	5.3	5.3
35	Uttrakhand	68.6	43.8	27.8	51	46.7	8.6	7.9
36	West Bengal	75.2	56.6	47.5	52.3	52	19.1	19.6
	INDIA	78.9	52.1	41.6	54.9	42.7	8.7	9.6

# SOME KEY INDICATORS AND CAUSAL FACTORS FOR CHILD SURVIVAL – NFHS 4 & SRS Factsheet

Sr. No	India and All States	Full immunization (%)	4 ANC (%)	IFA consumption for 100 days (%)	Mothers who received postnatal care from a doctor/nurse etc within two days of delivery (%)	Children born at home who were taken to a health facility within 24 hours (%)	Children who received a health check up after birth from a doctor/nurse etc within 2 days of birth (%) 1	Anemia in preg. Women (%)	Marriage before 18 years (%)	Women who were already mother or pregnant at the age of 15-19 years (%)
1	A & N island	73.2	92.1	58.4	75	NA	23.1	61.4	17.1	4.7
2	Andhra Pradesh	65.3	76.3	32	79.7	9.3	28.5	52.9	32.7	11.8
3	Arunachal Pradesh	38.2	26.8	8.3	28.9	0.6	8.1	33.8	23.5	10.5
4	Assam	47.1	46.5	32	54	1.9	22.9	44.8	32.6	13.6
5	Bihar	61.7	14.4	9.7	42.3	1.8	10.8	58.3	39.1	12.2
6	Chandigarh	79.5	64.5	44.9	89	NA	50.5	NA	12.7	2.1
7	Chhattisgarh	76.4	59.1	30.3	63.6	4.7	34.2	41.5	21.3	4.8
8	Dadar & Nagar Haveli	43.2	75.6	43.9	66.7	7.7	20.7	67.9	27.5	10.3
9	Daman & Diu	66.3	62.7	38.3	60.1	1.2	19.4	NA	25.4	4.5
10	Delhi	66.4	68.6	49.9	62.6	2.7	19.6	45.1	13	2.3
11	Goa	88.4	89	67.4	92.1	NA	49.5	26.7	9.8	2.9
12	Gujrat	50.4	70.6	36.8	63.4	3.7	15.8	51.3	24.9	6.5
13	Haryana	62.2	45.1	32.5	67.3	1.4	21.4	55	18.5	5.9
14	Himachal Pradesh	69.5	69.1	49.4	70.2	1.5	29	50.2	8.6	2.6
15	Jammu & Kashmir	75.1	81.4	30.2	74.9	0.9	20.3	38.1	8.7	2.9
16	Jharkhand	61.9	30.3	15.3	44.4	2.2	21.7	62.6	38	12
17	Karnataka	62.6	70.3	45.3	65.6	5.6	22.3	45.4	23.2	7.8
18	Kerala	82.1	90.2	67.1	88.7	NA	49.1	22.6	7.6	3
19	Lakshwadeep	86.9	82.8	82.1	92.6	NA	56.6	36.5	0.9	0
23	Madhya Pradesh	53.6	35.7	23.6	55	2.5	17.5	54.6	30	7.3
20	Maharashtra	56.3	72.2	40.6	78.5	6.4	30.5	49.3	25.1	8.3
21	Manipur	65.9	69	39.2	64.6	0.4	10.7	26	13.1	7.4
22	Meghalaya	61.5	50	36.2	47.5	1.4	9	53.1	16.5	8.6
24	Mizoram	50.5	61.7	53.8	64.7	2.4	11.1	24.5	10.8	7.2
25	Nagaland	35.7	15	4.4	22.3	0.1	1.6	28.9	13.3	5.7
26	Odisha	78.6	62	36.5	73.3	6.9	29.5	47.6	21.3	7.6
28	Pudduchery	91.3	87.7	66.3	84.9	NA	36	26	10.7	3.5
27	Punjab	89.1	68.5		87.2	2.8	47.2	42	7.6	2.6
29	Rajasthan	54.8	38.5	17.3	63.7	1.2	22.6	46.6	35.4	6.3
30	Sikkim	83	74.7	52.8	74.2	NA	12.8	23.6	14.5	2.8
32	Tamilnadu	69.7	81.2	64	74.1	11.3	35.4	44.4	15.7	5
31	Telangana	68.1	75	52.8	81.8	9	25.3	49.8	25.7	10.6
33	Tripura	54.5	64.3	13.4	62.1	NA	8.4	54.4	32.2	18.8
34	Uttar Pradesh	51.1	26.4	12.9	54	0.8	24.4	51	21.2	3.8
35	Uttrakhand	57.7	30.9	24.9	54.8	2.4	19.3	46.5	13.9	2.9
36	West Bengal	84.4	76.5	28.1	61.1	4.6	26.7	53.6	40.7	18.3
	INDIA	62	51.2	30.3	62.4	2.5	24.3	50.3	26.8	7.9

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