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RESEARCH ARTICLE

INDIA AND ROADMAP TOWARDS SUSTAINABLE DEVELOPMENT GOAL 3: ACHIEVEMENTS AND CHALLENGES.

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Abstract

India is witnessing high rates of economic growth consistently in past few years and is emerging as a strong contender in the global economy, however despite an impressive economic growth India's public healthcare system is mediocre and this is reflected in the fact that India still ranks 130 out of 188 countries on human development index (HDR 2015). The healthcare infrastructure including modernized hospitals and world-class healthcare facilities though has developed in the past few years but the benefits of expanding healthcare sector are highly skewed in favour of the richer sections of the society while the lower strata of the population which constitute the majority of the population have little or no access to good quality healthcare services.

The prime objective of this paper is to trace historical trends of the key health indicators and review the impact of policy programmes like NHM, JSY etc. in reducing the mortality. Further, this study also focuses upon the burden of out-of-pocket expenditure on health incurred by the population belonging to different stratified groups based on their socioeconomic background despite launching free health services. The study incorporates the pace of progress made under Millennium Development Goals and recommends policies/initiatives and the challenges towards achieving Sustainable Development Goals in the future. The data source includes World Bank dataset, NSSO, SRS, NFHS, DLHS, CES, HMIS and other statistical reports. The data is tabulated and analyzed using statistical packages and graphical tools. Spectrum software has been used for predictions. The results are expected to unveil that although the progress has been made over the years, but the pace has been slow and nearly stagnant and India needs to focus more on strengthening its health infrastructure and expand its human resource in health.

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Introduction:-

India is witnessing high rates of economic growth consistently in past few years and is emerging as a strong contender in the global economy, however despite an impressive economic growth India's public healthcare system is mediocre and this is reflected in the fact that India still ranks 130 out of 188 countries on human development

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index (HDR 2015). The healthcare infrastructure including modernized hospitals and world-class healthcare facilities though has developed in the past few years but the benefits of expanding healthcare sector are highly skewed in favour of the richer sections of the society while the lower strata of population which constitute the majority of population have little or no access to good quality healthcare services.

The health status of a country cannot be defined by studying only few parameters, however key health indicators like maternal mortality ratio, infant and child mortality rates, immunisation coverage, and proportion of births attended by skilled health personnel, among others can help in revealing the tentative picture of health scenario. In India as per the latest estimates, there has been reductions in Infant Mortality rate (IMR) from 80 in 1990 to 40 in 2013, under-five mortality rate (U5MR) reducing from 125 in 1990 to 49 in 2013 and Maternal Mortality ratio (MMR) from 437 in 1990 to 167 in 2013 (SRS, ORGI). Despite having a steep decline in the mortality rates, India still has a long way to go in achieving a decent levels of key health indicators.

Owing to high rates of mortality and morbidity specifically amongst women and young children particularly the ones residing in rural areas facing a lot of difficulties in accessing the healthcare services the Government of India has launched “National Rural Health Mission” which later merged with National Urban Health Mission to form National Health Mission, with a prime focus on improving maternal and child health in India particularly in the rural areas. Despite noting an improvement in the maternal and child health indicators post its launch, more substantial efforts are needed to meet the targets of zero child death from preventable diseases and stark reduction in maternal death by 2030. (United Nations Report, 2015¹)

India missed the Millennium Development Goal (MDG) target for both Child and Maternal Health and thus the question arises “What is beyond MDG?”

What is beyond MDG?

India’s poor healthcare system is reflected in high maternal and child mortality rates, high prevalence of diseases, lack of access to healthcare services, high financial health cost to poor people and inequitable distribution in providing healthcare facilities and services. The focus on reducing child and maternal mortality rates gained significant attention when it became apart of the eight MDGs. MDG 4 is to reduce child mortality specifically the under-five Mortality Rate (U5MR) by two-thirds, between 1990 and 2015 and MDG 5 is to reduce the Maternal Morality Ratio (MMR) by three-quarters between 1990 and 2015. India’s progress towards Child health is moderately on track due to the sharp decline in Child mortality over the years however its progress in improving maternal health has been slow paced. (MDG Report 2015²)

MDGs has faced various constraints at the implementation level such as the goals were not designed for developed countries, no country could be forced to follow the MDGs, level of international aid have been minimum and targets for Overseas Development Assistance (ODA) were not time-bound, among other factors not specified here can pave a way for working towards the post 2015 Development agenda i.e. SDGs.

The important point arises that how should SDGs overcome the shortcomings of MDGs? There is a consensus building among member countries to approach the limitations faced while working towards achieving the MDGs and the way ahead of MDG that is SDG and thus creates a common set of goals.

Unlike MDGs, the SDG agenda includes only one health goal (SDG 3) which is to promote physical and mental health well-being. Universal Health coverage ensuring easy and equal access to quality health care services will eventually reciprocate into increasing life expectancy. Further Universal access to health care includes access to sexual and reproductive health care services such as family planning and other relevant health information as well. SDG 3 also aims to focus on accelerating progress to fight against malaria, HIV/AIDS, tuberculosis, other communicable as well as non-communicable diseases. In order to properly implement these goals, every country must commit to accelerating progress in reducing maternal, newborn and child mortality before the year 2030. (Transforming our world: the 2030 Agenda for Sustainable Development , 2015)

¹ India and the MDGs Towards a sustainable future for all (2015), United Nations Economic and Social Commission for Asia and the Pacific

²http://mospi.nic.in/mospi_new/upload/mdg_26feb15.pdf

Thus beyond MDG stands a paradigm shift to SDGs involving a holistic approach to providing solutions for all global problems such as international migration, climate change, conflict, barriers to development by focussing on people, environment, prosperity and global partnership among developed as well as developing countries and according to Jan Eliasson, U.N Deputy Secretary- General, the globalization will help in implementing the Sustainable Development Goals (SDGs) to improve the lives of citizens of the countries participating in this global partnership to reduce extreme poverty. (VOA, 2016)

In order to experience sustainable development, the main focus should be on strengthening components like social, economic and environmental factors and then integrate these three components in each of the goals schemed in the form of SDGs. Few countries prefer having separate social, economic and environmental goals, others talk about the integration of every goal to be achieved. (TERI Policy Brief).

If the question of the significance of these approaches arises for India, then India should consider adopting the approach of interlinking social, economic and environmental components in each goal for sustainable development. However, it is suggested that SDGs should be aligned with the Five-Year Plan goals. India can move towards pursuing sustainable development in health if it can give high priority to health care which asks for more commitment on the part of ministries by ensuring increased public health expenditure, proper implementation and monitoring of health policies and programmes is essential.

Literature Review:-

According to World Bank factsheet on maternal mortality there is a high risk of women dying during pregnancy and childbirth in the rural areas and poor communities in the developing countries as compared to their developed counterparts.³ This discrepancy is due to the fact that maternal deaths are not uniform across the countries and within its regions owing to specific socioeconomic characteristics of a country and its states as mentioned by Radar & Parasurman (2007) there is a strong linkage between socioeconomic background and maternal deaths, Lower a women ranks in socioeconomic hierarchy more the chance of her dying from maternity related causes. (Radkar & Parasuraman, 2007)

Liu, et al. (2015) estimated the global scenarios for the causes of both neonatal and under-five mortality for the years 2030 and 2035 with the help of vital registration data and verbal autopsy data in a study conducted. For India, authors developed a state-level verbal autopsy data based multi-cause model for children aged under-five years and used the global verbal autopsy model applying multinomial logistic regression framework for neonates. The results showed that the highest number of under-five mortality in 2013 were in India, Nigeria, Pakistan, the Democratic Republic of Congo, and China. Leading causes for the same in India and Pakistan were preterm birth complications, pneumonia, and intrapartum-related complications. During 2000-2013 period, globally, under five mortality reduced at an average Annual Rate of Reduction of 4.1 per cent per year as compared to 4.4 percent rate required to reach MDG 4 by 2015. Under-five Mortality declined more quickly than neonatal mortality. Their projections described that more than one-third of the countries examined in the study will not be able to achieve the 2030 target. Progress at the global level does not necessitate progress at national level implying MDG 4 will not be achieved in most countries in 2015 (Liu, et al., 2015).

Thus the strategies for reducing maternal and child mortality should include availability of affordable and cost-effective health care services. This could be established by targeting premature deaths whose effects will continue even after 2030. For India, estimated premature deaths in year 2030 were 1.49 million and a reduction of 30 percent per decade. (Norheim, et al., 2015).

In a projected report towards SDG, assuming if the current trends continue where the progress path will lead to 15 years down the line, it was found that South Asia is likely to have a maternal mortality rate double than the global targets. (Nicolai, Hoy, Berliner, & Aedy, 2015). However in India, births are projected to fall from 27 million in the year 1990 to 24 million in 2015, contributing to a 9 percent fall in maternal deaths. The evidence suggests that 75 per cent reduction in Maternal Mortality Ratio target is achievable within 25 years' time frame (Ronsmans & Graham, 2006)

³<http://www.who.int/mediacentre/factsheets/fs348/en/>

SDGs are expected to be more ambitious than MDGs due to the intertwining of economic, environment and social goals. The implementation of SDGs will require every country to make an efficient use of resources to adopt goals and targets in accordance with the local challenges it faces. The Third International Conference on Financing for Development which was held in July 2015 in Addis Ababa resulted into a consensus among world leaders that countries need to consider setting spending targets for quality based public investments including health, education, energy, water and sanitation consistent with sustainable development strategies (United Nations, 2015).

In order to pursue SDGs, every country requires sound public policies, the mobilization and effective use of national resources along with strong international financial support. Financing SDG is beyond the capacity of any one organisation and demands a strong partnership among governments, private sectors and development organisations. Total investment spending for basic infrastructure, food security, climate change, health and education in developing countries are estimated to be \$3.3 trillion to \$4.5 trillion per year (United Nations Conference on Trade and Development, 2014).

Literature suggests that achievement of the goals for various countries differ from each other. Progress can be felt in India if India is able to remove disparities and inequalities in social, economic and environmental aspects within its states. To ensure this, the active involvement of public and private sector is crucial.

Objectives:-

India has recorded a highly skewed and lagged performance in achieving the Millennium Development Goals related to maternal and child health. While some states were close to achieving the targets of its preceding agenda, others simply missed out on it. The year 2016 is the moment to reflect on the achievements, failures and lessons learnt from the MDG era. An important issue to be raised here is that whether the achieved levels for India are sustainable in the upcoming years or not. Also, what are the probable significant changes to be made in future in order to achieve SDG targets? How faster is the progress needed to deliver the goals?

The study aims to trace both historical trends of health indicators like Maternal Mortality Ratio, Infant and Child mortality rates, immunization coverage and proportions of live births attended by professional health personnel and review the impact of policy programmes like NHM, JSY etc. in reducing the mortality. Further this study focuses upon the burden of out-of pocket expenditure on health incurred by the population belonging to different stratified groups based on their socioeconomic background despite launching free health services. The study incorporates the pace of progress made under Millennium Development Goals and recommends policies/initiatives and the challenges towards achieving Sustainable Development Goals in the future with the help of various statistical tools, theoretical discussions and recommendations

Data and Methods:-

In order to conduct this study, data from various Statistical Reports has been used. Other secondary data source includes Sample Registration System (SRS) reports, NFHS, DLHS, CES and HMIS etc. Data for variables like IMR, U5MR and MMR for time period 1990-2013 was sourced from SRS, NFHS and DLHS reports. Immunisation against measles data for the time period 1990-2009 was sourced from NFHS and CES. Other data was sourced from HMIS portal. Data of Southern and Empowered Actions Group has been used for the analytical purpose to show the prevalence of significant inter and intra-state differences in India. The data has been tabulated, analyzed using Excel and Tableau software.

Results:-

Key Health Indicators and their historical trends:

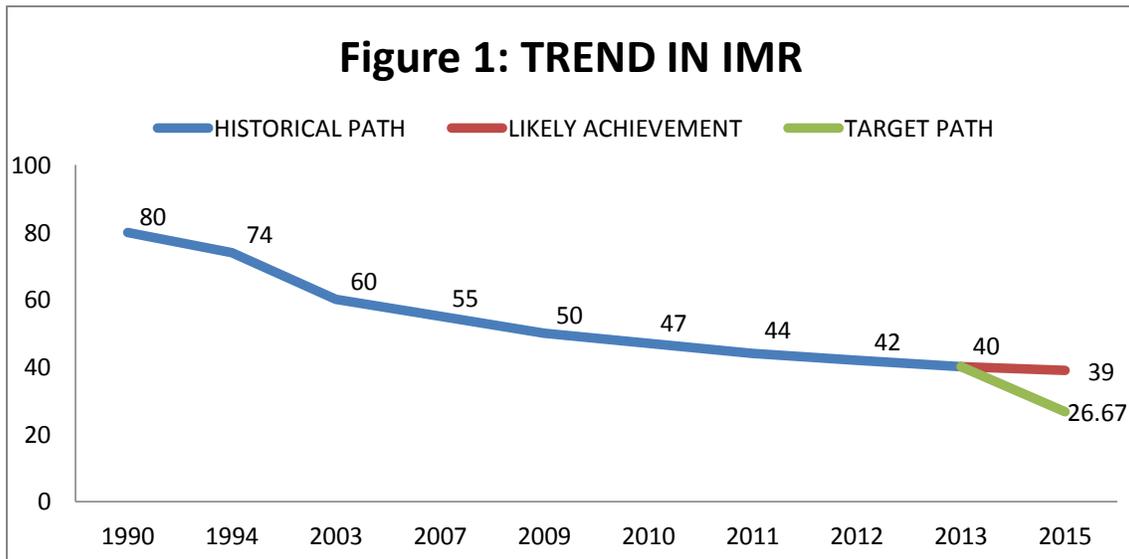
Child Health

India along with Nigeria accounts for 33% of total child deaths in the world (Eric Zuehlke, 2000). Thus in lieu of large numbers of child deaths in India, MDG laid a strong focus upon key indicators related to Child Mortality such as Infant Mortality Rate, Under-Five Mortality Rate and Proportion of one-year-old children immunised against measles.

Infant Mortality rate (IMR): IMR comprises of pre-natal, post-natal and neo-natal child deaths out of which neo-natal deaths were 68% of the total infant deaths in the year 2013. Kumar and Datta (1982) has highlighted in their study that “*cute respiratory infections, acute diarrheal disease, low birth weight, protein energy malnutrition, tetanus neonatorum, and communicable diseases like measles, whooping cough, and typhoid*” are the major reasons

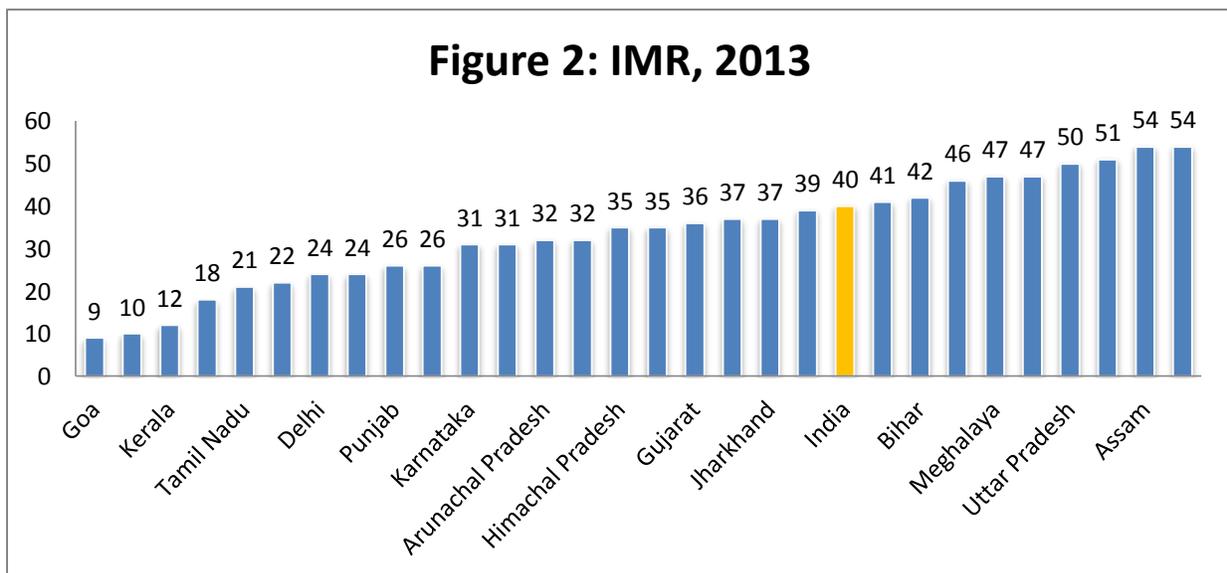
behind infant deaths in India and further the authors added that India needs to design medium term or long term plans focusing upon improvement in female literacy rate and increment in GNP should be adopted to leap indirect benefits in form of better maternal and neo-natal care in the long run.

The national level figures stood at 28 and 40 per 1000 live births for neo-natal and infant mortality rate respectively in 2013. Since 1990, IMR has declined from 80 to 40 per 1000 live births in 2013. Despite a steep reduction since 1990 India was not able to reach MDG target of 27 infant deaths per 1000 live births. However owing to steep decline in the recent years, the gap between the likely achievement and the target was expected to be narrowed.

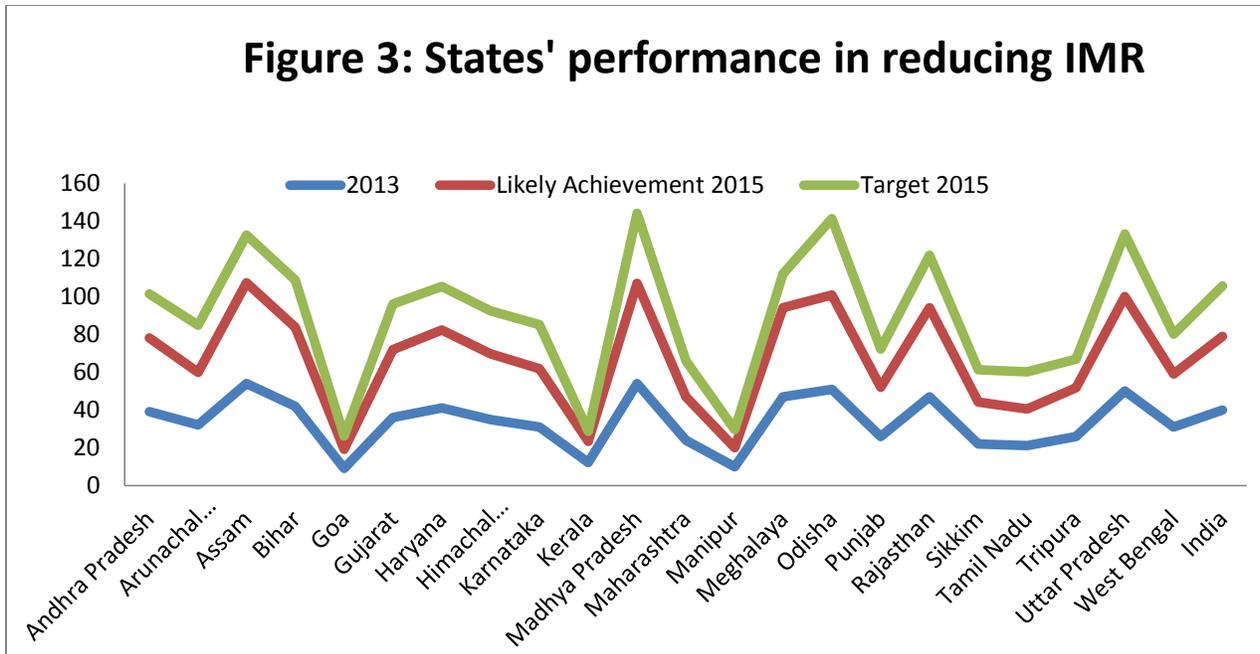


Source: SRS-Office of Registrar General of India, MDG Report 2015

Figure 2 shows the sharp variations in IMR across States. While Madhya Pradesh and Assam have the highest IMR of 54 deaths per 1000 live births, states like Kerala have reached the IMR of 12 per 1000 live births. States such as Delhi, Goa, Kerala, Maharashtra, Manipur, Nagaland, Punjab, Sikkim, Tamil Nadu and Tripura were able to achieve IMR national MDG target of 26.67 infant deaths per 1000 live births. Out of these, only Tamil Nadu and Manipur could reach their respective state level targets for IMR. Assam and Meghalaya lagged behind reaching their respective state MDG target by a huge margin as shown in Figure 3.

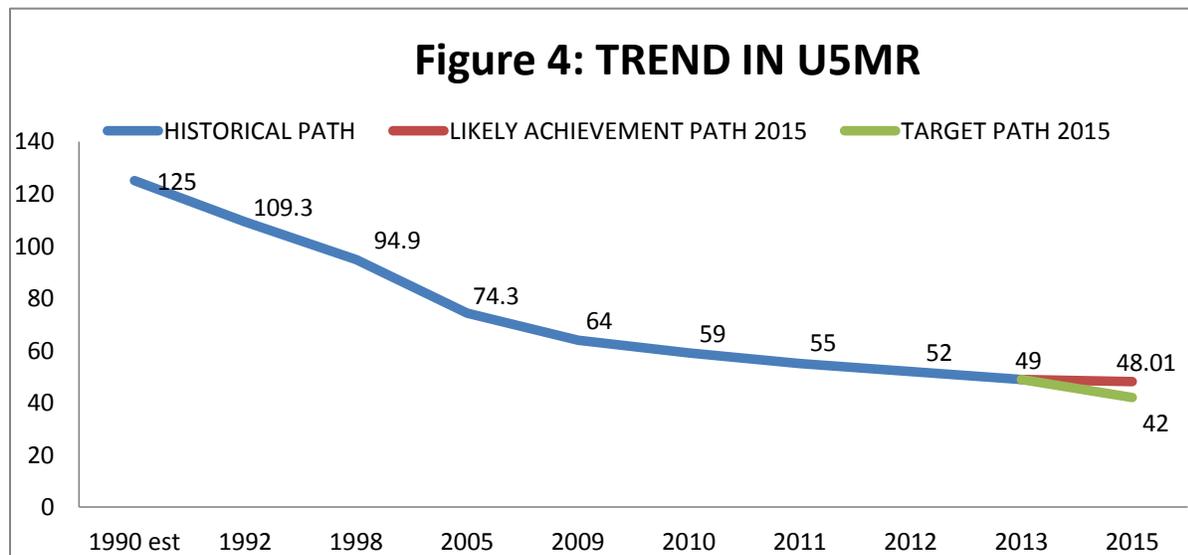


Source: SRS-Office of Registrar General of India, MDG Report 2015



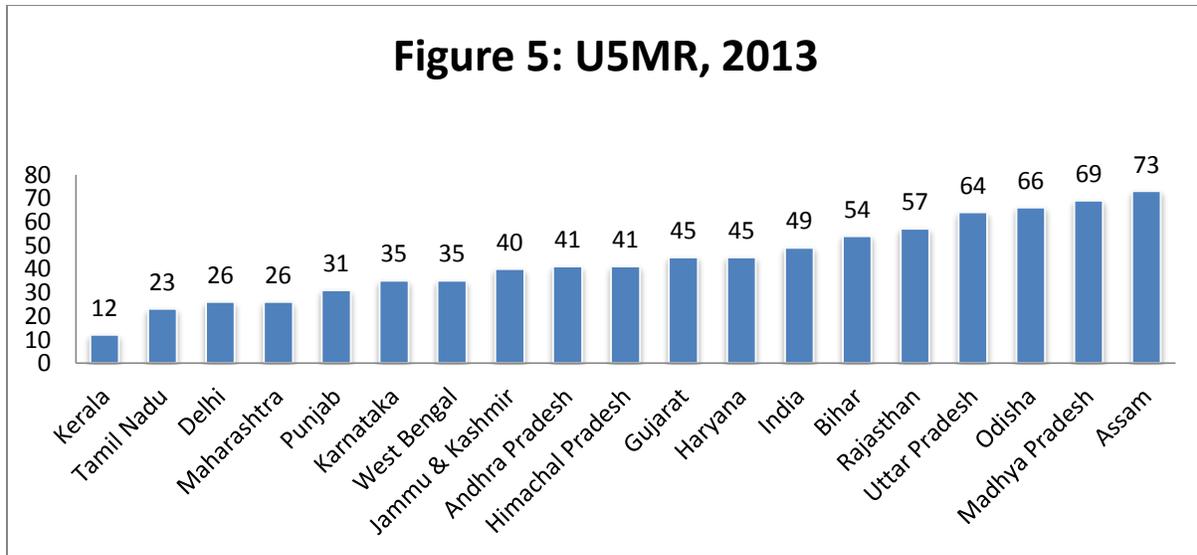
Source: SRS- Office of Registrar General of India, MDG Report 2015

Under five Mortality Rate: Majority of the under- Five Mortality Rate consists of neonatal deaths which arise due to complications and infections during birth. There has been an overall reduction in U5MR of approximately 60% during the period 1990-2013 (World Bank). SRS reported U5MR to be 49 in the year 2013. If the decline in U5MR could have been sustained, India was likely to achieve its 2015 target of 42 deaths per 1000 live births but this did not happen and India missed its MDG U5MR target by a small margin as shown in Figure 4.



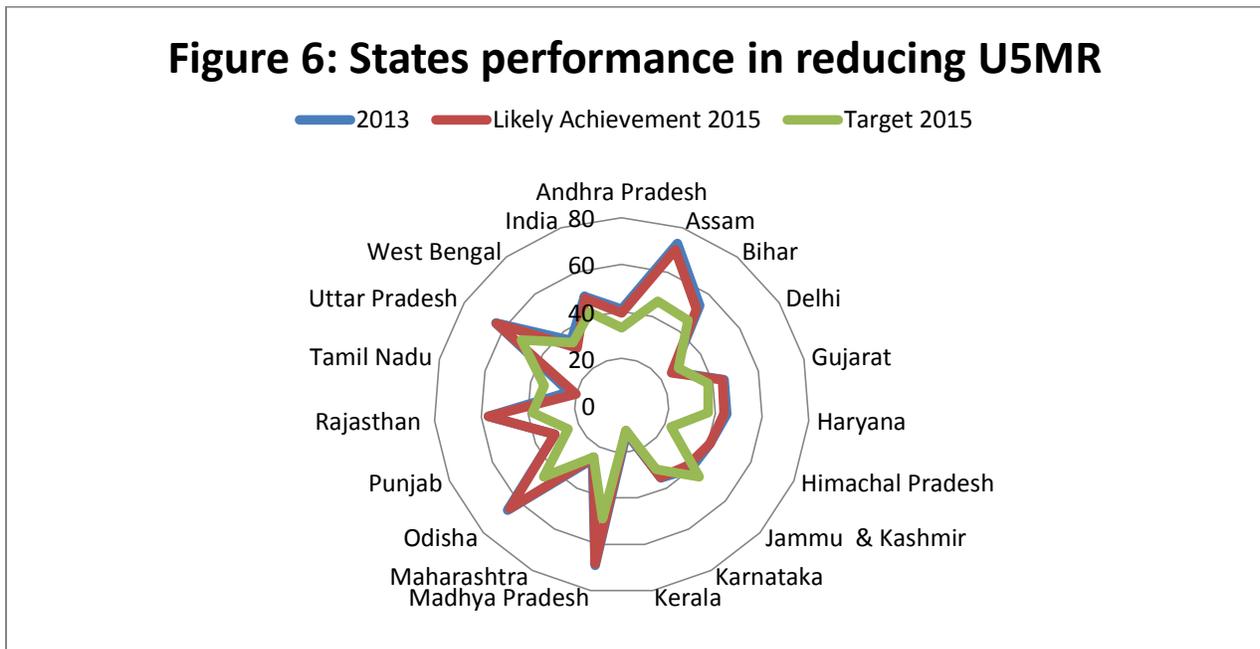
Source: SRS- Office of Registrar General of India, MDG Report 2015

The interstate disparities are persistent even in U5MR as well. As per MDG India report, States such as Andhra Pradesh, Delhi, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Punjab, Tamil Nadu and West Bengal have achieved and have recorded significant lower rates of U5MR than the national level MDG target of 42 deaths per 1000 live births for under five mortality rates.



Source: Sample Registration System, MDG Report, 2015

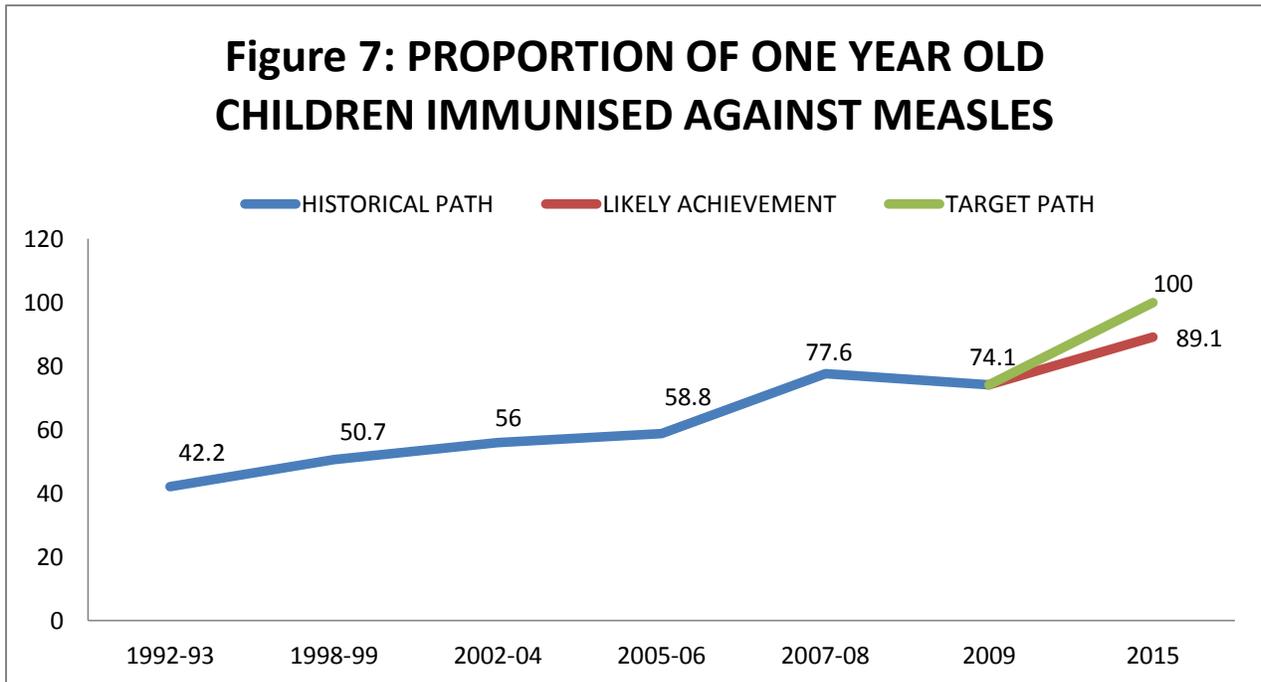
As far as respective State level targets are concerned, States which missed their targets by a significant gap included Uttar Pradesh, Himachal Pradesh, Rajasthan, Madhya Pradesh, Odisha and Assam. While Southern states like Kerala and Tamil Nadu has not only met their respective state level targets as shown in Figure 6 but also were successful in keeping the rate of reduction sustained. Kerala has recorded the lowest rate of U5MR while EAG states like Bihar, Rajasthan, UP, MP etc. have more than four times Under 5 mortality rate than Kerala.



Source: NFHS – M/o Health and Family Welfare, SRS – Office of Registrar General of India

Proportion of one year old children immunised against measles: India has a very large cohort of unvaccinated and unimmunized children and combined with malnutrition this is one of the major reason of child deaths. Measles is proxied to be an indicator of full immunization and hence this indicator provides a measure of the coverage and quality of the child healthcare system given the fact that measles is the leading cause of child mortality. To achieve

MDG target for reducing child mortality, it requires having 100% coverage of one year children getting immunised against measles.



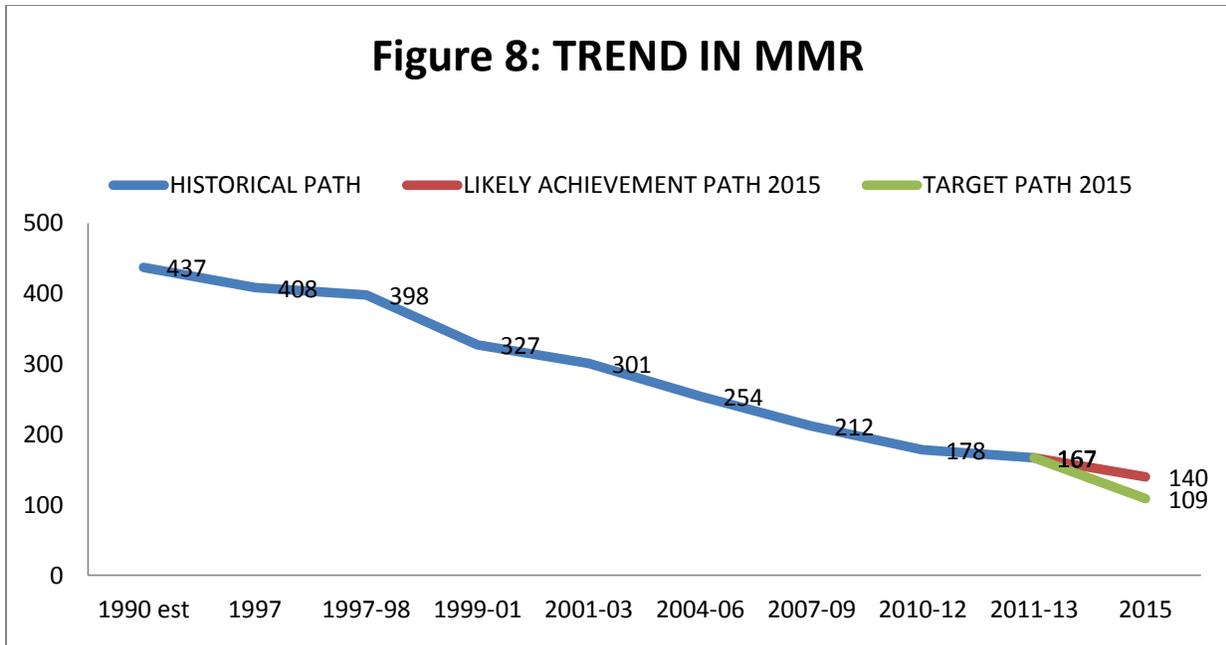
Source: NFHS, DLHS, Coverage Evaluation Survey, M/o Health & family, MDG Report, 2015

Again, interstate and intra-state variations are present in immunisation coverage. Uttar Pradesh, Mizoram, Chhattisgarh and Haryana are likely to miss the MDG target by a large margin. States such as Andhra Pradesh, Maharashtra, Goa and Himachal Pradesh performed very well with more than 90 per cent children getting vaccinated against measles. (MDG Report, 2015)

Maternal Health:-

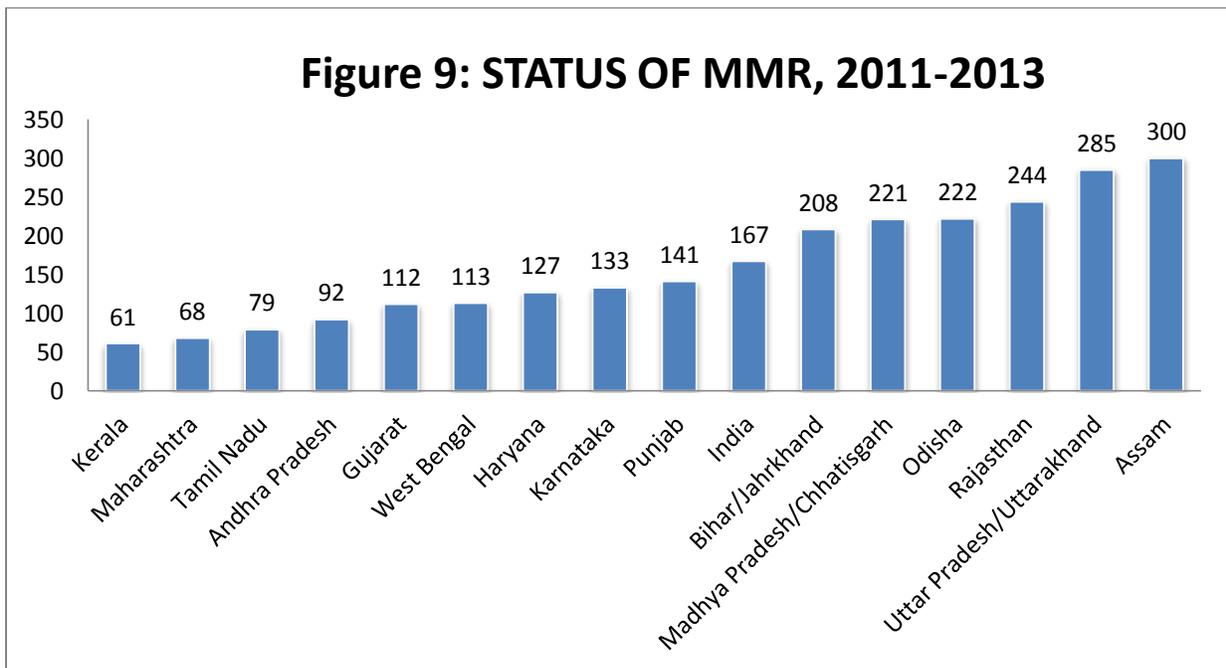
India has progressed moderately with regards to maternal health. The major reasons that can be traced in the literature for such poor status of maternal health are Low Female Literacy Rate, High Total Fertility Rate, Social and Institution factor etc. MDG 4 laid a strong focus upon maternal health especially for developing countries like India where the subordinate position of women reciprocates itself into poor health and low access to basic health amenities and facilities.

Maternal Mortality Ratio: Maternal Mortality Ratio has improved over last few years. However there are still large number of maternal deaths in India and the major causes of maternal death are sepsis and hemorrhage which can be prevented by providing health care services like antenatal check-ups, proper nutritious diet, timely identification of complications related to pregnancy. MDG 5 target is to reduce MMR by three-fourths between 1990 and 2015. The MMR of India stands at 167 in 2011-13 and in order to meet the MDG target, MMR should have been reduced to 109 per 100,000 live births by 2015. India missed its MDG target of 109 maternal deaths per 100,000 live births as shown in Figure 8.

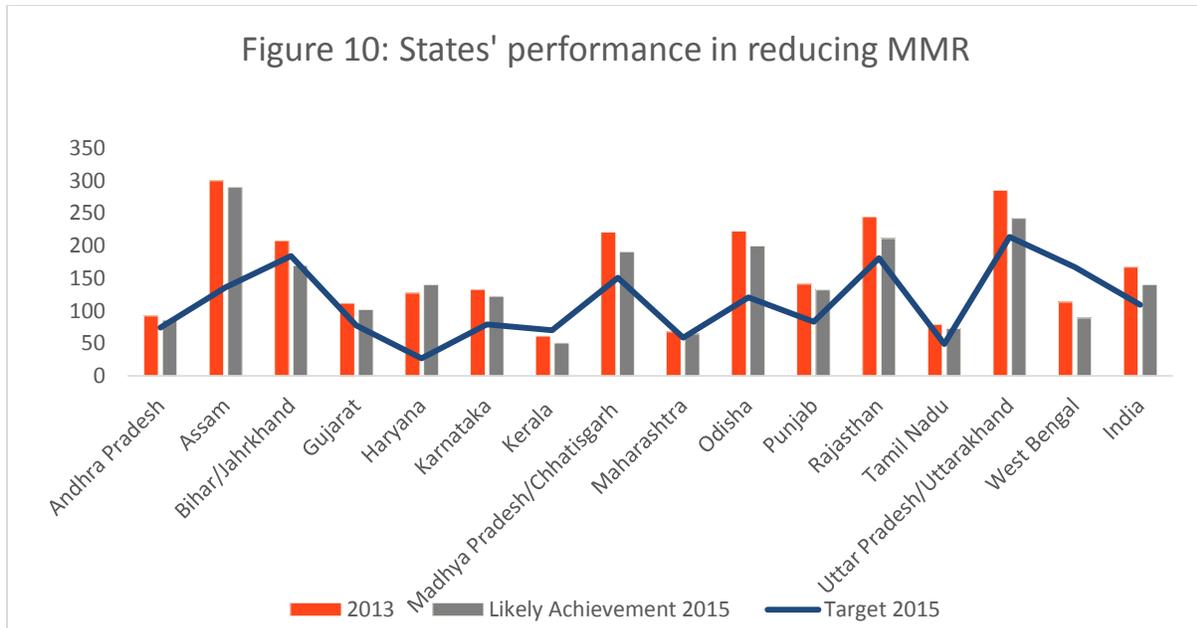


Source: SRS-Office of Registrar General of India, MDG Report 2015

Figure 9 and 10 shows the remarkable performance of Kerala, Maharashtra and Tamil Nadu who has achieved the national MDG target of 109 maternal deaths per 100,000 live births. Whereas states like Assam, Haryana and Odisha missed their state level targets with a huge margin



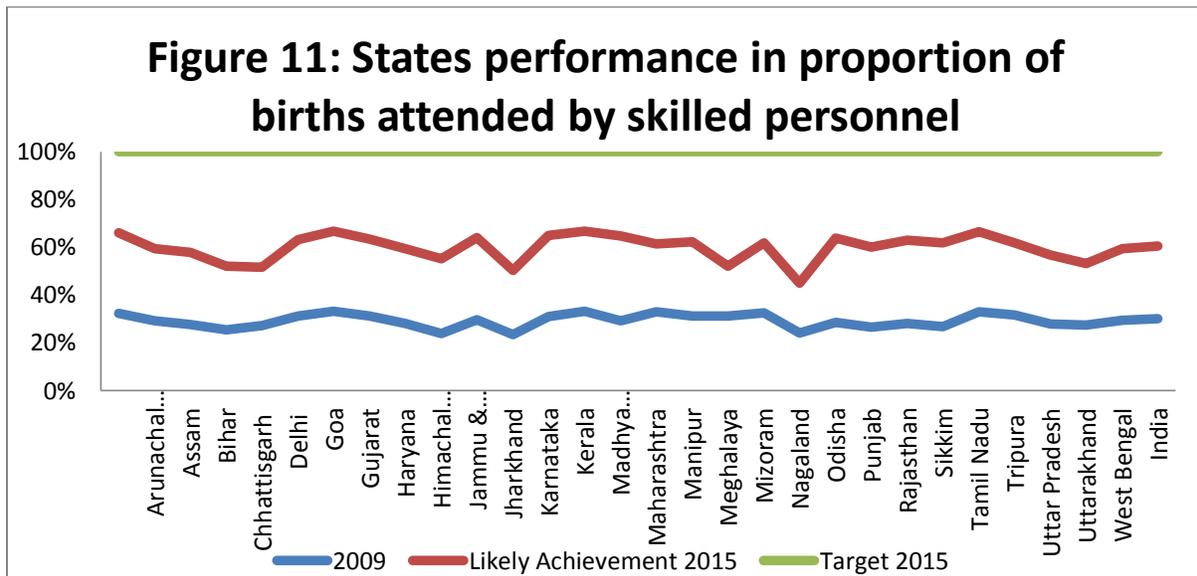
Source: SRS-Office of Registrar General of India, MDG Report 2015



Source: Office of Registrar General of India

Proportion of births attended by skilled health personnel:

Deliveries with the help of skilled birth attendants can help in preventing both maternal and neonatal deaths. Most women in Rural areas choose deliveries at home due to poor or lack of access to healthcare system, low quality of maternity centres, lack of health personnel, barriers due to financial, social and cultural factors. MDG target is to achieve 100% coverage. As per the data of SRS, 2013, percentage of live births attended by skilled health personnel (Government hospitals, Private hospital, qualified professional) is 87.1%. Kerala, Goa and Tamil Nadu have already achieved nearly 100 per cent coverage of births attended by skilled health personnel. States which are likely to reach the target include Jammu & Kashmir, Karnataka, Odisha, Rajasthan and Sikkim as illustrated in Figure 11.



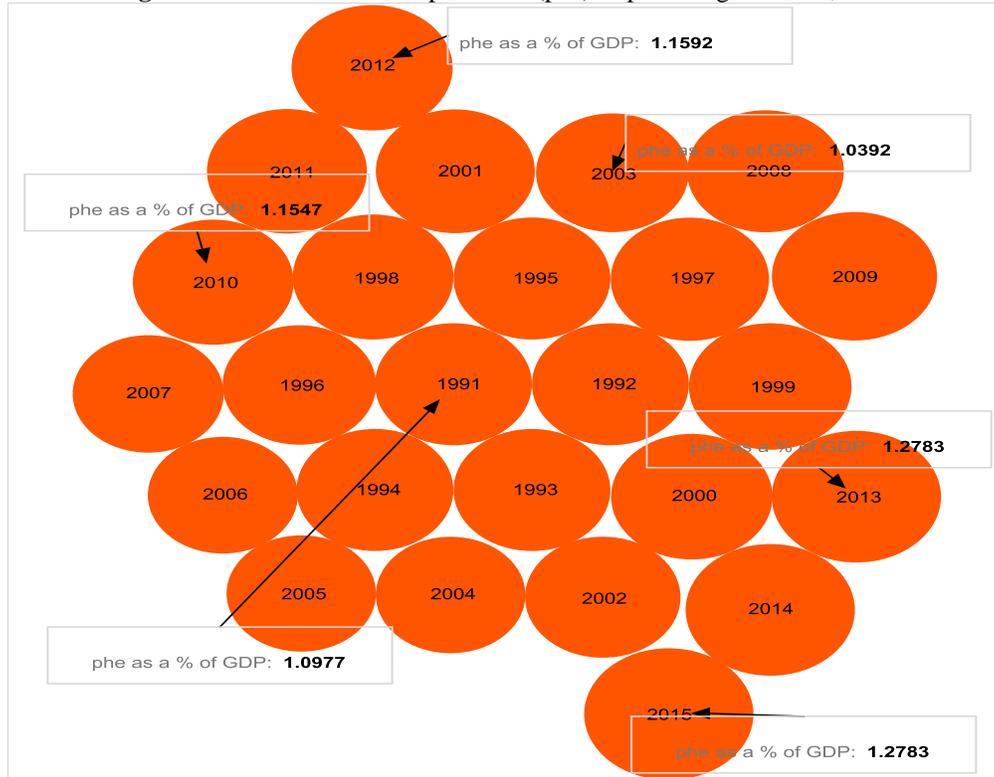
Source: Office of Registrar General of India

SDG related schemes and interventions:-

A national coordinating agency is essential for effective implementation of SDGs given the interlinked objectives and targets. In India, for achieving SDG 3 the nodal agency is Ministry of Health and Family Welfare which has

adopted centrally sponsored schemes such as National Health Mission including NRHM, Human Resource in Health and Medical Education, National Mission on Ayush including Mission on Medical Plants, National AIDS & STD Control Programme, Integrated Child Development Service (ICDS) and its related intervention includes Pradhan Mantri Swasthya Suraksha Yojana (2006) (About Us: NITI Ayog, 2016). There has been a gradual increase in Public Health Expenditure as a % of GDP in India from 1.09 in the year 1991 to 1.28 in the year 2015 as shown in Figure 12 and with increased GDP the funds allotted under Health has increased manifold.

Figure 12:- Public Health Expenditure (phe) as percentage of GDP, India



Source: World Bank

National Health Mission:-

National Rural Health Mission (NRHM) in India was launched in the year 2005 with a prime focus upon addressing the health problems faced by citizens of India specifically on residents of 18 states comprising of Empowered Action Group states, north eastern states and other states which were identified to be having a weak public health system. It was later renamed as National Health Mission (NHM) integrating two submissions National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM)⁴.

NRHM focussed upon issues related to health such as Sanitation, Nutrition and Safe Drinking Water. NRHM covered national health programmes like Reproductive and Child health II project (RCH II), the National Disease Control Programmes (NDCP) and the Integrated Disease Surveillance Project (IDSP). (Programme Evaluation Organisation Planning Commission, 2011)

The principal strategies included “decentralized village and district level health planning and management, appointment of Accredited Social Health Activist (ASHA) to facilitate access to health services, strengthening the public health service delivery infrastructure, particularly at village, primary and secondary levels, mainstreaming AYUSH, improved management capacity to organize health systems and services in public health, emphasizing evidence based planning and implementation through improved capacity and infrastructure, promoting the non-

⁴<http://nrhm.gov.in/nhm.html>

profit sector to increase social participation and community empowerment, promoting healthy behaviours and improving inter-sectional convergence.”(Medical, Health and Family Welfare Department, 2016)

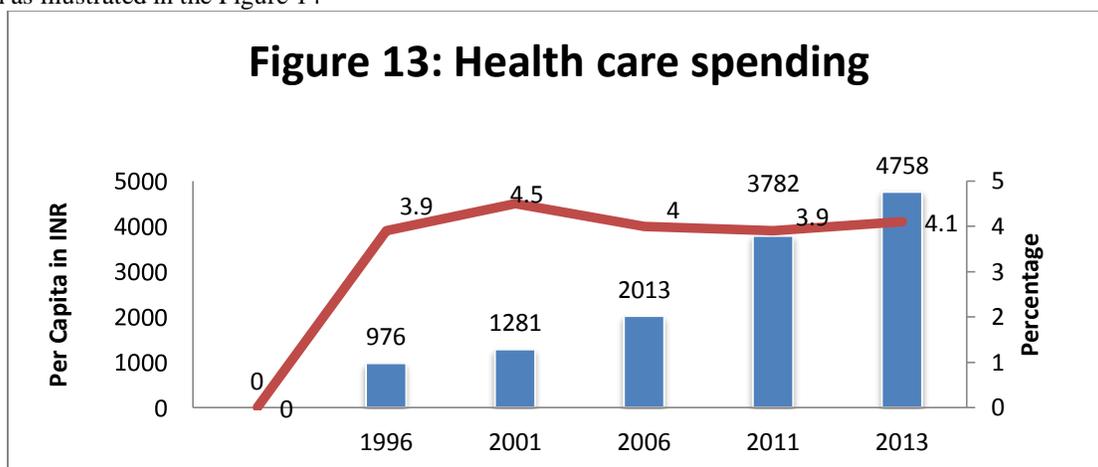
NHM also aimed at reconstruction of the Indian health system by augmenting public health expenditure, promoting innovative policies to strengthen public health management and service delivery, increasing human resources, decentralizing health programmes and action planning, popularizing AYUSH into the public health system, among others. It is expected that such efforts could help in achieving the core goal of “*improving access of rural people, especially poor women and children, to equitable, affordable, accountable and effective primary healthcare.*” (NRHM Mission Document , 2005-2012)

Poverty and limited reach to health facilities is not only the prevalent scenario of rural areas. Urban areas too face such problems mainly due to increase in the slum population as a result of migration, natural increase in urban poor population, low health awareness, poor sanitation, among others. Keeping in mind the need for an equitable, affordable and quality primary health care service for the urban population including vulnerable sections of the society, National Urban Health Mission (NUHM) was approved by the Union cabinet on May 1, 2013 as a sub-mission under National Health Mission (NHM). (Ministry of Health and Family Welfare, Government of India, 2013). In order to improve the urban health care system, public private partnerships can be formed through various NGOs, Railways hospitals, ESIC, Public sector companies’ hospitals. The NUHM proposed to strengthen Urban Primary Health Centre (U-PHC) with outreach and referral facilities.

To promote community participation in improving access to health care at household level, thus MahilaArogyaSamiti (MAS) came into being. MAS is a group of around 50-100 households, who are responsible for promoting behavioural change towards health and hygiene and facilitate community risk pooling mechanism in their coverage area. This encouragement among MASs for saving to meet emergency health needs was proposed to bring down high out-of-pocket expenditure which often leading to indebtedness among urban poor.

Under National Health Mission, two major policy initiatives JSY and JSSK were introduced with an objective to reduce the number of maternal deaths and ensure provision of cashless services with monetary incentives to pregnant women to opt for institutional deliveries where she is regular monitored from first ANC till 48 hours of PNC.

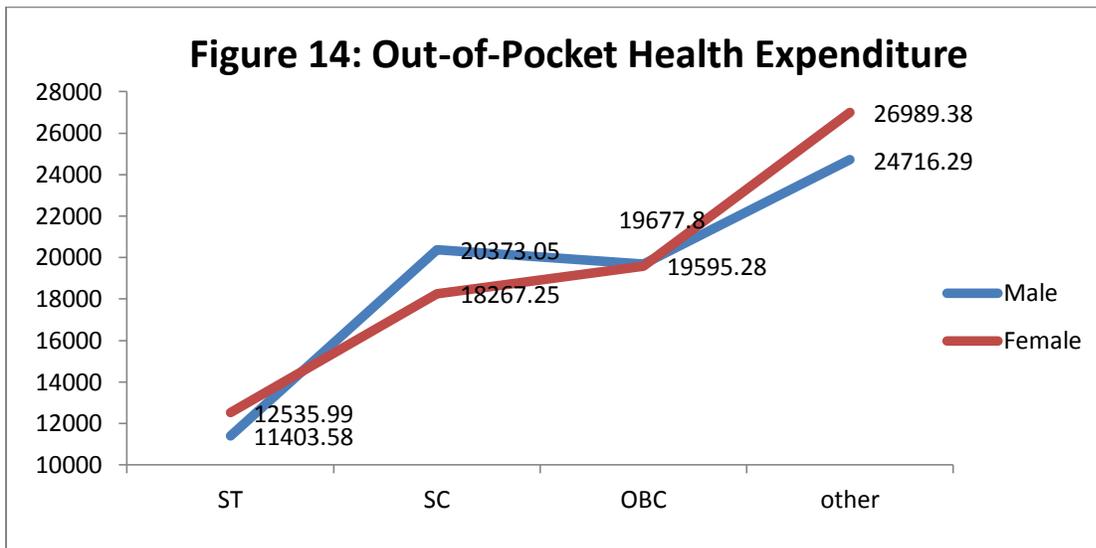
Despite that, India alone accounted for 17 per cent of total maternal deaths in the year 2013⁵ and is classified as one of the country with highest cohorts of unvaccinated children.⁶ thus in light of such sorry performance on indicators relating to maternal and child health, National Health Mission (NHM) has become one of the integral parts for providing health services in the country however despite launching free services under NHM and increase in health care spending as shown in the Figure 13 people are still incurring large amount of out-of-pocket expenditure on health as illustrated in the Figure 14



⁵ Trends in maternal mortality: 1990 to 2013, Estimates by WHO, UNICEF, UNFPA, The World Bank and the United Nations Population Division

⁶ Progress and Challenges with Achieving Universal Immunization Coverage: 2015 Estimates of Immunization Coverage.

Source: KPMG in India analysis, IBEF 2013 report and World Bank data



Source: NSSO 71st Round

Overall there has been an enhancement of the health outcomes post the introduction of the scheme but the gaps and constraints of ineffective health infrastructure and the degrading role of other socio-economic factors like patriarchy, low female literacy rate, early marriage higher total fertility rate, lack of awareness etc. remains and thus constraints the effectiveness of the scheme.

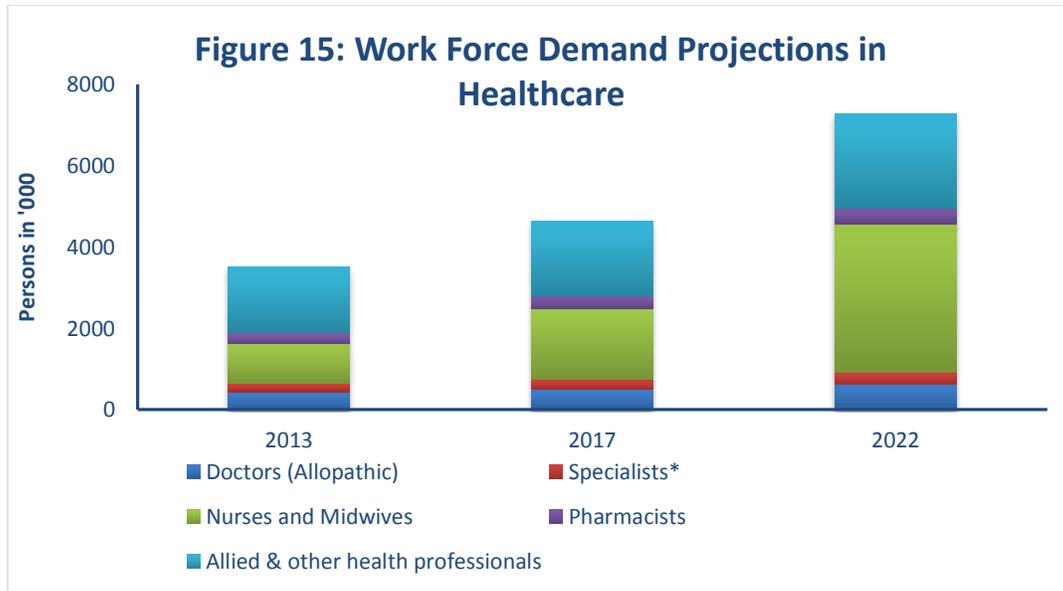
The two major determinants of effectiveness of Health Delivery Services are Human Resources and Infrastructure in Health Sector:

Human Resource in the Health Sector:

Human Resource is the most significant part of building a strong foundation for public health. Availability of adequate number of skilled health personnel at different tiers of health care system are needed for providing efficient health care services to people in need of. It is also important to emphasize that information related to human resource in Health sector is usually incomplete and at times unreliable as well.

There is an increase in the availability of Allopathic medical practitioners, AYUSH doctors and nurses per lakh population over the years. There are a total of 7, 86,061 Auxiliary Nurse Midwife (ANM) serving in India. Number of registered allopathic doctors possessing recognized medical qualifications (under MCI Act) for the years 2013 and 2014 were 32,461 and 15,976 respectively. The average population served by government allopathic doctor is 11528 persons per allopathic doctor. (Central Bureau of Health Intelligence, 2015)

It is a matter of concern that there are shortages in human resources in government health institutions that serve poor sections of the society living in urban slums, rural and tribal areas. To ensure the availability of health professionals in rural areas on a regular basis, a large number of health professionals need to be trained to meet health care needs of people. "Provision of doctors with adequate incentives, both monetary as well as non-monetary benefits, such as improved infrastructure facilities of health care institutions, suitable accommodation, preferential school admissions for their children, increase in the age of retirement from 60 to 65 years, permission for private practice/pay clinics/evening clinics, posting spouses at same place etc. are certain important issues to be considered". (Nandan, Nair, & Datta, 2007)



Source: KPMG Advisory Services Pvt Ltd (KASPL), (2013-17, 2017-22)

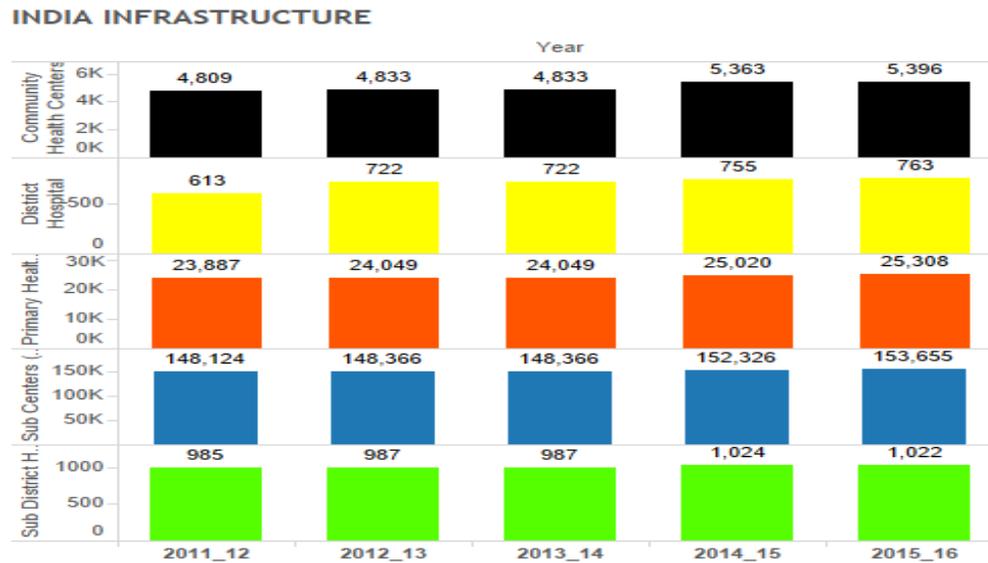
Over the next few years, changing trends like increase in phenomenon of insurance services, increase in awareness among people regarding health and changing demographics will result in more health spending. Healthcare spending in India stands at a less than 5 percent of GDP and a major share of these spending is private. In India, private healthcare comprises of about 75 percent of the country's total healthcare expenditure and thus raising the issue of affordability of health care services. Further there is a large gap between requirement and availability of workforce and as per KPMG projections presently there is only half of health personnel's working than their expected demand in the year 2022 as shown in Figure 15(KPMG Advisory Services Pvt Ltd (KASPL), (2013-17, 2017-22))

To promote the practice of medical staff serving in difficult areas, certain monetary incentives such as hard areas allowances and special packages and Non-Monetary incentives such as preferential admission in post graduate courses for staff serving in difficult areas and improving accommodation arrangements in rural areas have now been initiated. This move might blur the demand-supply gap of specialists in difficult areas.

Infrastructure in the Health Sector:-

To serve the underserved population, 2062 Mobile Medical Units (MMUs) have been approved for 424 districts. The total number of ambulance services has increased significantly from about 5000 to over 20,000 and people can dial 102 or 108 for calling an ambulance.(Ministry of Health & Family Welfare, Government of India, 2014)

Since inception of NHM, there has been a significant improvement in terms of assistance released to States/UTs to increase public health spending, health infrastructure, human resources, streamlining AYUSH and ASHAs into the public health system, free drugs, Mobile Medical Units (MMUs), Emergency services, patient transport system, community participation, among others.

Figure 16:- Five year Trend of Health Infrastructure in India

Source: NHM website

Figure 16 illustrates that there has been a substantial increase in the health infrastructure comprising of District Hospitals, Primary Health Centres, Community Health Centres and Sub Centres in India over the past five years but despite that there is a gap in the effective functioning of health infrastructure owing to lack of sufficient space, maintenance and other specific factors thus India needs to focus upon technological advancement and design a health infrastructure which is able to meet the requirements of general public.

Conclusions and Recommendations:-

The results of the study clearly indicate that India was not able to achieve the predefined goals for achievement of targets related to specific indicators under MDG. Therefore, there is a need for SDGs to take forward what MDGs could not achieve. SDGs must be able to look beyond the path build by MDGs. In order to successfully implement SDGs, the support of Developed countries is much required. Assistance such as time-bound targets, quantitative benchmarks for all the targets, sound economic and trade policies, technological advancement and other resources are needed by developing countries like India. Further the inter-state and intra-state differentials are highly prevalent in case of India thus India needs to devise specific policy initiatives depending upon the specificities of a state to fill the vacuum.

The process of scheming SDGs should include participation of government, non-government organisations and the society as a whole especially the marginalised groups. Nicolai et al. in their Country level analysis found that faster growth is significant if governments and the civil society contribute their efforts to achieving the goals and targets thus health initiatives like NHM, JSY, JSSK and Mission Indradhanush has a key role in improving the health indicators. The focus should be upon having good governance that ensures equality and justice. Further other factors like transportation systems, agricultural system, migration, urbanisation etc. should be considered as priority areas by the policy makers

Development progress is beneficial for all and hence there is a need to blur the line between national and international. SDGs will not only affect an individual's wellbeing in form of poverty eradication, health and energy but also for the society as a whole in form of better living conditions, food and water security.

Pregnant women remain at the highest risk of dying between the third trimester and the first week after the end of pregnancy. Hemorrhage is the major cause of maternal mortality and this can be prevented by ensuring timely access to obstetric health care. The difficulty in capturing of maternal deaths owe to factors such as under-reporting of maternal deaths, misclassification of causes of maternal death, lack of large samples to produce current estimates, lack of reliable data. Liu et l. Suggested that Maternal and child nutrition need to be focused upon. Maternal

micronutrient supplementation reduces fetal growth restriction, preterm births, and neonatal mortality. Improved breastfeeding practices and nutrition interventions in early childhood would contribute in reducing child mortality.

As suggested by Nicloai et al. Better and reliable data is required to monitor progress over the upcoming years. It is important for countries to learn from each other's experiences because their initial points of progress are different and its pace varies across the globe.

Achieving SDGs require investment contributions from both public and private sectors. However, an annual financial gap persists in SDG-related sectors and in sectors such as education and health care, the potential for increasing private sector participation is challenging because these are public services responsibilities which are sensitive to private sector's business goals. For India to achieve SDG 3, it will firstly have to achieve Health Index, comprising of health status of population, quality of healthcare institutions and financial instruments for access to healthcare of 0.9. India will need approximately INR 55 lakh crores (USD 880 billion) till 2030 to achieve this value of health Index. A financial gap of around INR 19 lakh crores (USD 305 billion) is projected for public health expenditures (Technology and Action for Rural Advancement A Social Enterprise of Development Alternatives Group, 2015).

In the presence of gaps in healthcare infrastructure and inadequate skilled human resource apart from presence of wide-ranging inter and intra state disparities India has a long way to go to achieve a decent standard of health and healthcare which in turn depends upon the institutional interventions and innovations focusing upon health service delivery since These discrepancies in turn pose a huge challenge ahead of achieving MDG 5 and require an approach depending upon the specificities of a region. And as the MDG era ends and India heads towards adopting Sustainable Development Goals, a shift in the policy paradigm involving more focus up on implementation along with continuous monitoring and evaluation of existing programmes is essential and further policy paradigm involves a shift to interventions which ensures horizontal and vertical equity in health care. The government must focus upon the targeted groups and ensure that they get access to not only an effective healthcare system but also to basic education and nutrition and these factors in turn would ensure greater effectiveness of the National Health Mission as a scheme and would facilitate India to reach and sustain its health related goals.

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