Brief Communication

Child Survival Status in India

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ABSTRACT

The National Health Mission (NHM, previously called National Rural Health Mission) was launched by Government of India in 2005 to make architectural correction of the Health system. One of the primary Goals of the Mission was to reduce Under five Mortality rate (U5MR) vis a vis Global commitment made under Millennium development Goals especially Goal numbering 4. Although, India still contributes to about one fifth of U5MR and Maternal Mortality rate but unfortunately it contributes to one third of Global Neonatal Mortality Rate. In sheer numbers alone, these rates are alarming. However, India has achieved a faster pace of reduction in U5MR by 46.5% in comparison to 41% for the entire world. In this article, data from Sample Registration System of the Registrar General of India which is available for most of the States/UTs has been analyzed for child health indicators in the country. In the next NHM phase, focused efforts need to be made with state specific Goals so as that the desired targets could be achieved.

Key words: *Child mortality rates, India, Millennium Development Goals, National Health Mission*

INTRODUCTION

India contributes to about 19% of global maternal deaths[1] and 20% of under-five mortality[2] and carries the highest share of neonatal deaths in the world with around 30% of the global neonatal deaths.[3] As per latest data from Sample Registration System, released by the Registrar General of India under five mortality rate for India stands at 49, infant mortality rate at 40, neonatal mortality rate at 28 and early neonatal mortality rate (NMR) at 22 per thousand live births.[4] in 2013. In other words, neonatal mortality constitutes about 56% of under-five mortality and early neonatal mortality constituting 77% of NMR.

The major causes of child mortality in India are neonatal causes (52%), pneumonia (15%), diarrheal disease (11%), measles (3%), injuries and other causes (15%). The major causes of neonatal deaths are prematurity (18%), infections (16%) such as pneumonia and septicemia and asphyxia (10%) and congenital causes (5%).[5].

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Around 70% of neonatal deaths could be prevented if proven evidence-based interventions are implemented effectively with high coverage.[6] Also, facility based interventions can decrease neonatal mortality by 23-50% in variable settings. Therefore, facility based newborn care has a significant potential of improving newborn survival in India.

The major thrust areas for reducing under-five mortality in India under National Health Mission (previously called National Rural Health Mission) are reducing Neonatal Mortality, addressing under-nutrition, reducing deaths due to Acute Respiratory Infections (ARI), Diarrhea and Immunization.

Neonatal Care

Home and Facility based newborn care (HBNC/FBNC) programmes are the key initiatives launched by the Ministry of Health and Family Welfare, Government of India under National Rural Health Mission (NRHM) and Reproductive Child Health-II programme. In the year 2011, Operational guidelines both for HBNC and FBNC were released and all State/UTs have incorporated the same for planning purposes in their State Programme Implementation Plans.[7]

Under Facility based newborn care programme, Newborn Care Corners (NBCC) are being established within the delivery room in any health facility to provide essential care to all newborns at birth, Newborn Stabilization Units are being set-up at the level of Community Health Centre/First referral Unit (CHC/FRU) to care for sick and low birth weight babies for short period, and Special Newborn Care Units (SNCUs) are being established at any health facility with more than 3000 deliveries/year (District

Hospital, Medical Colleges and some Sub-district Hospitals) to provide special care for sick newborns, that is, provide all type of care except for ventilator support and major surgeries, the latter being referred to tertiary level facilities.

Addressing under-nutrition: Malnutrition is a contributory factor in about one third to half of the child deaths under five years of age. There has been a slight reduction in wasting levels in 2011 in comparison to the situation during 2005-06.[8] The following actions are being taken in order to reduce malnutrition in the country:

1. Detection of children with Severe Acute Malnutrition (SAM) at community level and then referring to appropriate level of care.
2. Facility based management of children with malnutrition having complications at Nutrition Rehabilitation Centres.[9].
3. Convergence with Women and Child Department for community based management of children with SAM and Moderate acute malnutrition.
4. Early initiation of breastfeeding for newborn delivered at health facilities, counselling and communication for exclusive breastfeeding during home visits
5. Promotion of optimal Infant and Young Child Feeding Practices has been recognised as an important intervention not only for preserving the nutritional status of children but also for child survival. Optimal breastfeeding and complementary feeding practices allow children to reach their full growth potential and prevent irreversible stunting, as well as acute under-nutrition. In addition, these practices can together prevent deaths in children under five years by significantly reducing mortality from infections like diarrhoea and pneumonia. Operational guidelines for Infant Young and Childhood feeding have recently been released and disseminated to all State/UTs.[10]
6. Detection of early growth faltering through community and facility based MCH contacts
7. Iron and Folic acid (IFA) supplementation for children 6 months to 10 years and Vitamin Supplementation for children 6 months to 5 years. A new initiative National Iron plus has been launched aimed to make India anaemic free by iron supplementation across all life stages (6 months – 5 years, 5 to 10 years, 10 to 19 and from 21-45 years of age).[11]

Reducing deaths due to Diarrhoea and ARI: Percentage of Children with diarrhoea received ORS: 34 %[12] Children with ARI/fever sought treatment/advice is 82.6 %[13]

The following actions are being undertaken to reduce deaths due to diarrhoea and ARI are increasing availability of ORS and Zinc and promoting its use, behavioural interventions to improve hygiene and care seeking practices, training of health care providers in integrated management of Neonatal & Child hood Illnesses and around five lakh health workers have been trained[14]

Immunization: All children under the age of 5 years are protected for seven vaccine preventable diseases viz. Tuberculosis, Diphtheria, Pertussis, Tetanus, Poliomyelitis, Measles and Hepatitis B. Full immunization coverage in India has increased from 35.5[15] to 61% and is showing upward trend[16]. Around 26 million newborns are targeted for vaccination each year and 9 million immunization sessions are held annually. There are around 25,000 cold chain points in the country. NIDs and SNIDs for polio are conducted every year vaccinating 800 million children and Catch-up campaigns for measles targeting 130 million children have been initiated. Additionally, JE vaccination campaigns have been conducted in 112 endemic districts covering 78 million children. Further, Hib containing Pentavalent vaccine has been introduced in two states and is being expanded to other states. No polio case has been reported for more than 2 years and Neonatal Tetanus has been eliminated from 15 states in India.

In addition, a District Early Intervention Centre (DEIC) would be operationalized with a dedicated team of Medical Professionals (Pediatrician, Medical Officer and a Dental doctor), Physiotherapist, Audiologist & Speech Therapist, Psychologist, Optometrist, Early Interventionist cum Special Educator cum social worker, lab technician, dental technician, manager and a data entry operator.

Analysis of trends and progress made under NRHM:

Since, NRHM was envisaged with a focus on improving rural health, therefore a key comparison of available data under NRHM for rural-urban mortality decline is shown in Table 1.

It can be inferred from the given tables [Table 1 and 2] that there has been an appreciable decline in U5MR (reduced by 36%), however the decline in NMR remains slower at 20%. Across urban and, there is no significant difference in rural rates although NRHM aimed to focus on rural areas.

Table1: Decline in urban & rural mortality (SRS), Point &%age decline for U5MR (2008-13)

			2008	2009	2010	2011	2012	2013	Point decline	% decline
India	Early Neonatal Mortality Rate	Total	27	27	25	24	23	22	5	10
		Rural	31	31	28	27	25	25	6	19
		Urban	16	15	15	13	12	11	5	31
	Neonatal Mortality Rate	Total	35	34	33	31	29	28	7	20
		Rural	39	38	36	34	33	31	8	21
		Urban	21	21	19	17	16	15	6	29
	Infant Mortality Rate	Total	53	50	47	44	42	40	13	25
		Rural	58	55	51	48	46	44	14	24
		Urban	36	34	31	29	28	27	9	25
	Under 5 Mortality Rate	Total	76	71	66	61	52	49	27	36
		Rural	69	64	59	55	58	55	14	20
		Urban	43	41	38	35	32	29	14	33

Table 2: Decline in under-five and Infant mortality male & female mortality rates, 2008-13

Variables	2008	2009	2010	2011	2012	2013	Point decline	Percent decline (%)
Under-5 Mortality Rate (Female)	73	69	64	59	34	53	20	27
Under-5 Mortality Rate (Male)	64	60	55	51	31	47	17	27
Infant Mortality Rate (Female)	55	52	49	46	44	42	13	24
Infant Mortality Rate (Male)	52	49	46	43	41	39	13	25

CONCLUSION

Although, under NHM child survival has improved however, this analysis of key indicator shows a differential decline wherein slower rate of decline is observed during the early neonatal period. This is crucial in terms of higher rate of mortality during the early days of life.

The rural mortality rates have shown higher point decline, however percentage decline is almost similar indicating health delivery systems still have a long way to go especially at the level of primary care and linking it with fully functional First Referral Units in each district of the country.

Way forward:

In order to hasten reduction of under-five mortality in the country, it is essential that State/UTs must focus on the following:

1. Strengthening of infrastructure and rolling out Facility Based Newborn Care as key strategic intervention and prioritizing the same in high focus districts.
2. Recruitment of human resources and rational deployment along with Capacity building of the health workers for various trainings. The trained should be retained for a minimum period of 2-3 years and by then the trainings should be completed.
3. As sepsis is one of the biggest killers in the neonatal period, it is essential to observe strict clinical management protocols and observe Infection control practices.
4. Quality of care should be prioritized facilities be regularly monitored for service utilization.
5. Improving access to medicine for diarrhoea, ARI and other childhood diseases and training health workers in NSSK, IMNCI and F-IMNCI.
6. Promotion of Infant Young and Childhood Practices for reducing incidence of malnutrition and improve child survival. These IYCF practices include the well-known practices of (1) initiating breastfeeding within one hour of birth, (2) exclusive breastfeeding for the first six months of life and (3) appropriate complementary feeding starting on completion of 6 months of age and (4) continued breastfeeding for first two years of life or beyond.

7. Behaviour Change Communication aiming at better health and hygiene practices including improving hand washing practices.
8. Existing strategies should be realigned using equity based approach to address inequity due to gender, wealth, geographic, caste and disability.
9. The newly launched national programme Rashtriya Bal Swasthya Karyakram (RBSK) that is aimed at screening and treatment for Defects at birth, diseases, deficiencies, developmental delays including disabilities also need to have adequate focus on preventive approaches thus resulting in reduction in incidence of birth defects could yield rich dividends.[17]
10. The Government of India has brought NMR reduction as the top priority of the mission by launching India Newborn Action Plan (INAP) in 2014 with an aim to reduce Neonatal Mortality rate to less than 10 by 2030 provides adequate platform for convergence of various interventions.[18]

REFERENCES

1. Maternal Mortality Estimation Inter-agency group. [cited 2015 March 11]; Available from http://whqlibdoc.who.int/publications/2012/9789241503631_eng.pdf.
2. UN interagency group on mortality estimation 2013. [cited 2015 March 11]; Available from http://www.childinfo.org/files/Child_Mortality_Report_2013.pdf.
3. World Health Organization, Global Health Observatory, 2013. [cited 2015 March 11]; Available from http://www.who.int/gho/publications/world_health_statistics/2013/en/.
4. SRS 2013, Office of Registrar General of India, Ministry of Home Affairs, Government of India. [cited 2015 March 11]; Available from http://www.censusindia.gov.in/vital_statistics/SRS_Reports_2013.html.
5. WHO-CHERG 2013 estimates [cited 2015 March 16]; Available from http://www.who.int/healthinfo/global_burden_disease/ChildCOD_method_2000_2013.pdf.
6. Lancet: Newborn series, 2005. [cited 2015 March 16]; Available from http://www.thelancet.com/series/neonatal-survival.
7. FBNC operational guidelines, 2011 and HBNC operational guidelines, 2011. [cited 2015 March 16]; Available from http://www.nihfw.org/Doc/NCHRC-Publications/Operational%20Guidelines%20on%20Home%20Based%20Newborn%20Care%20%28HBNC%29.pdf.
8. NFHS 3 (2005-06) and HUNGaMA Survey 2011. [cited 2015 March 16]; Available from http://www.rchiips.org/nfhs/NFHS-3%20Data/VOL-1/India_volume_I_corrected_17oct08.pdf.
9. Operational guidelines, Facility Based Management of Children with Sever Acute Malnutrition, MOHFW 2011. [cited 2015 March 16]; Available from http://www.cmamforum.org/Pool/Resources/Operational-guidelines-on-facility-based-management-of-children-with-severe-acute-malnutrition-India-2011.pdf.
10. Maternal and Newborn Health Toolkit, MOHFW 2013. [cited 2015 March 11]; Available from http://www.unicef.org/india/2._Maternal_Newborn_Health_Toolkit.pdf.
11. National Iron Plus Initiative, MOHFW 2013. [cited 2015 March 11]; Available from http://www.unicef.org/india/10._National_Iron_Plus_Initiative_Guidelines_for_Control_of_IDA.pdf.
12. DLHS 3 (2007-08). [cited 2015 March 11]; Available at http://www.rchiips.org/pdf/rch3/state/india.pdf.
13. Coverage Evaluation Survey, 2009. (UNICEF). [cited 2015 March 11]; Available from http://unicef.in/.
14. NRHM Newsletter Aug 2012. [cited 2015 March 11]; Available from http://www.mohfw.nic.in/NRHM/Newsletter/English_NRHM%20News%20Letter%20-07-08-2012.pdf.
15. NFHS 1 (1992-93). [cited 2015 March 16]; Available from http://www.rchiips.org/nfhs/nfhs1.shtml.
16. CES, 2009 and Annual Health Survey (AHS, 2010). [cited 2015 March 16]; Available from www.censusindia.gov.in/vital_statistics/AHSBulletins/Factsheets.html.
17. Khurmi MS, Gupta M, Chaudhari G. Addressing the public health challenge of birth defects in India. Indian J Child Health. 2014;1(3):95-8.
18. Khurmi MS, Karpe V, Kaur P. India launches India newborn action plan. Indian J Child Health. 2015;2(1):43-44.

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