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Research Paper

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JANANI SURAKSHA YOJANA AND ITS IMPACT ON MATERNAL HEALTH CONDITION: AN ANALYSIS IN ASSAM

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ABSTRACT

Janani Suraksha Yojana (JSY) is a cash incentive safe motherhood scheme launched in 2005 under National Rural Health Mission with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery among the poor pregnant women, with special focus on low performing states. JSY, which is a 100% centrally sponsored scheme, is being implemented in all states and UTs in India. The scheme has identified ASHA (Accredited Social Health Activist) as an effective link between the Government and poor pregnant women in 10 low performing states, namely the 8 Empowered Action Group (EAG) states and Assam and Jammu & Kashmir. Under this scheme the states have been stratified in Low Performing States (LPS) and High Performing States (HPS) for proving cash incentives. Again, a woman from LPS category receives a cash incentive of Rs. 1000-1400 per institutional delivery whereas a woman from HPS category gets Rs. 600-700 per institutional delivery. Furthermore, there is separate provision of Rs. 250/- for transport in case of emergency with another provision of Rs. 1500/- for the management of obstetric complications in caesarian delivery if needed. Besides this, if a BPL pregnant woman above age 19 years wants to deliver at home, she will be given a cash incentive of Rs. 500/- per delivery, up to two live births to meet the on delivery and post delivery expenses.

KEYWORDS: *Janani Suraksha Yojana, health condition, illiteracy, poverty*

INTRODUCTION

India's position in maternal and child health has been remaining poor compared to other Asian countries. The Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) of the country are much higher than other Asian countries. Again, among all Indian states, the performance of Assam in maternal and child health care is relatively week due to which the state belongs to Low Performing States in respect to health care. As per SRS, 2012-13, the IMR and MMR of the state are 49 and 301 respectively. Interestingly, the MMR of the state is highest among all Indian states. Since, Janani Suraksha Yojana is an initiative developed by Government of India to reduce maternal and neo-natal deaths by encouraging institutional delivery; therefore, this study makes an attempt to study the role of JSY in improving maternal health condition in Assam from 2005 onwards.

OBJECTIVES

The main objectives of this study are-

1. To study the prevailing health status of mothers and children in Assam.
2. To study the implementation and effectiveness JSY in the state with the help of various indicators.

METHODOLOGY

The study is based on secondary data collected from different sources like NRHM Annual Reports, DLHS Reports, Census Report, SRS Reports, Ministry of Health and Family Welfare Statistical report, various publications of government health related materials etc.

FINDINGS

One of the biggest challenges faced by Assam is its high rate of Maternal Mortality. High level of illiteracy, poverty and cultural background has been attributed to increase in the number of maternal mortality in the state. Besides this, the major part of the population of the state lives in rural areas. The poor infrastructure of the rural health care services, poor sanitation and drinking water facilities, low living standard, lack of awareness about various government provided health care schemes and facilities etc. are the main reasons for higher MMR in the state.

1.The existing Maternal and child health indicators in Assam

The maternal health indicators comprise of Maternal Mortality Rate (MMR), Ante Natal and Post Natal Care, percentage of anemia affected women etc. The current scenario of maternal health indicators of the state are discussed below-

Table 1: Maternal Mortality Rate in Assam and India (per lakh)

	Assam	India
SRS, 2004-06	480	254
SRS, 2007-09	390	212
SRS, 2010-12	328	178
SRS, 2011-13	300	167

Source: Registrar General of India- SRS.

Assam's position in Maternal Mortality Rate (MMR) is worst among all Indian states over the years. It is observed from table 17 that MMR in Assam has been lower than national level over the years. Although there observed a decreasing trend of MMR from 480 in 2004-06 to 300 in 2011-13 in Assam but this can't reach the target level of 100 set under Millennium Development Goal. As per SRS report, 2011-13, the Maternal Mortality Rate is highest in Assam among all states in India.

Table 2: Percentage of anemia affected women in Assam (in %)

	NEHS-4 (2015-16)			NFHS-3 (2005-06)
	Urban	Rural	Total	
All women age 15-49	50.8	54.2	53.0	55.3
Pregnant women age 15-49	45.7	52.1	50.3	57.9
Non-pregnant women age 15-49	50.9	54.3	53.1	55.2

Source: National Family Health Survey (NFHS) 3 and 4.

The percentage of anemia affected women is also high in Assam. It is observed from table 20 that more than 50% of women in the state are affected by anemia. In the last 10 years, the percentage of anemia affected women was reduced by only 2%. Similarly, more than 50% pregnant women in 2015-16 are anemia affected instead of 57.9% in 2005-06. For reducing MMR and IMR, elimination of anemia is highly required.

Child Health Indicators

Child health indicators include Infant Mortality Rate (IMR), Under 5 Mortality Rate (U5MR), Neo Natal Mortality Rate, percentage of anemia affected children, rate of malnutrition among children etc. The existing statistics of child health indicators in Assam are discussed below-

Table 3: Infant Mortality Rates in Assam and India (per lakh)

	Assam			India		
	Rural	Urban	Total	Rural	Urban	Total
2005	71	39	68	64	40	58
2009	64	37	61	55	34	50
2014	52	27	49	43	26	39
NFHS 2015-16	50	28	48	46	29	41

Source: Registrar General of India- Sample Registration System Statistical Reports; National Family Health Survey 4.

Infant Mortality Rate is a remarkable indicator of health status of a nation. Table 3 reveals poor health status of Assam compared to all India level. It is evident from table 4 that although IMR of the state has fallen from 68 in 2005 to 48 in 2015-16 but it is much higher (7%) than national level in 2014. Again, the IMR is higher in rural areas than urban areas in case of both state and national level. This obviously requires more health care attention to rural population.

Table 4: Neo Natal Mortality Rates in Assam and India (per lakh)

Year	Assam			India		
	Total	Rural	Urban	Total	Rural	Urban
2008	34	36	14	35	39	21
2010	33	36	13	33	36	19
2013	27	29	10	28	31	15

Source: Directorate of Economics and Statistics, Assam, 2014-15

Table 5: Percentage of Neo Natal Deaths to Infant Deaths in Assam and India

Year	Assam			India		
	Total	Rural	Urban	Total	Rural	Urban
2008	52.7	53.7	37.0	65.7	65.7	57.7
2010	57.7	59.1	36.0	69.3	70.6	61.9
2013	50.3	51.5	30.4	68.0	69.9	56.4

Source: Directorate of Economics and Statistics, Assam, 2014-15

From table 4 and 5, it is observed that in case of neo natal deaths Assam's position is better than all India's position. The Neo natal Mortality Rate of the state has constantly decreased from 34 in 2008 to 27 in 2013. However, the notable thing is that there is considerable gap in Neo natal Mortality Rate in rural and urban areas. In 2013, the Neo Natal Mortality Rate in rural Assam was 29 whereas in urban areas it was only 10. The rural population is still backward in access to better health care provision.

Table 6: Under-5 Mortality Rate in Assam and India (per lakh)

Year		Assam	India
2005		84	74
2009		87	64
2012		75	52
NFHS 2015-16	Total	56	50
	Rural	58	56
	Urban	40	34

Source: Registrar General of India; National Family Health Survey 3 and 4- National and State Fact Sheet.

Table 6 also shows the similar poor picture of child's health of Assam. It is observed that there exists a huge gap in U5MR between Assam and India over the years. However, the U5MR of the state has fallen drastically from 84 in 2005 to 56 in 2015-16 which may result from various government efforts like immunization etc. But the figure is still high than national level i.e. 50. Again, it is seen from table 7 that the U5MR in rural area of the state is not only higher than that of urban area but it also cross the total average of Assam. Thus, health status of children in rural part of Assam is comparatively poorer than that of urban area.

Table 7: Malnutrition among children in Assam (in %)

	Assam		India	
	Malnourished	Severely malnourished	Malnourished	Severely malnourished
2005-06 (NFHS-3)	36.4	11.4	42.5	15.8
2007	40.12	1.40	50.10	0.55
2011	31.32	0.46	41.16	3.33

Source: Comptroller and Auditor General (CAG) Report, India and National family Health Survey (NFHS) - 3 Report.

Table 7 shows nutritional status of children in Assam and India. It is seen that about 36% children were malnourished in Assam in 2005-06 against 42.5% in India. The percentage has however fallen to 31.32% in 2011 in Assam which was lower than national average i.e. 41.16%.

Table 8: Percentage of anemia affected children (6-59 months) in Assam and India (in %)

	Assam			India		
	Urban	Rural	Total	Urban	Rural	Total
2005-06	na	na	69.4	na	na	69.4
2015-16	27.6	36.5	35.7	55.9	59.4	58.4

Source: National Family Health Survey (NFHS) 3 and 4.

Table 8 shows that the percentage of anemia affected children reduced from 69.4% in 2005-06 to 35.7% in 2015-16 in Assam. Another impressive fact is that this percentage is much below than national level (58.4%). This however depicts a good picture of child health in Assam towards anemia elimination.

1. Janani Suraksha Yojana and its implementation in Assam

Under the circumstances of increasing mortality rate, the Government of India had launched Janani Suraksha Yojana (JSY) as a part of National Rural Health Mission on 12th April, 2005 in order to reduce maternal mortality rate and infant mortality rate by encouraging institutional deliveries and focusing on institutional care among women, particularly those who belong to Below Poverty Line. More than 80% of maternal deaths could be prevented or avoided through either increasing the institutional deliveries or by improving the quality of care provided to the women (Gupta et. al., 2012). The major pregnancy related risk-factors among women have been identified as eclampsia, pre-eclampsia, severe anaemia, antepartum haemorrhage (APH), postpartum haemorrhage etc. In case of institutional deliveries, under the observation of health personnel, safe deliveries could be undertaken by overcoming these problems. This will in turn reduce maternal morbidity and mortality, improve child survival and ensure equity in maternal health care. To avail the facilities provided under the scheme, the pregnant woman should be registered under JSY for ante natal care and for receiving cash incentives. The ASHA/ ANM/AWW is responsible to identify and register the beneficiaries at least 20-24 weeks before delivery. It is the first step of expectant mother to access the benefit of health service provided by government. After the registration, she is provided with a Maternal and Child Health Card. She is also informed about date of three Ante natal visits and TT injection, the expected date of delivery, the health center for all referral etc.

In this study, the effectiveness of the scheme in Assam will be analysed with the help of various indicators like-a) percentage of institutional delivery, b) Ante natal and post natal care, c) Receipt of financial assistance under JSY, and finally, d) the Maternal Mortality Rate of the state.

a) Number of institutional delivery in Assam:

The basic objective of the scheme was to increase the rate of institutional delivery to reduce maternal and neo-natal death. Table 10gives the trend of institutional delivery in Assam. From table 9, it is observed that the number of institutional deliveries has increased significantly in the state from 107137 in 2001-02 to 149003 in 2005-06 and then drastically to 529279 in 2013-14.

Table 9: Number of Institutional Delivery in Assam

Year	Assam
2001-02	107137
2005-06	149003
2006-07	191869
2007-08	322557
2008-09	356620
2009-10	397711
2010-11	420432
2011-12	464581
2012-13	498567
2013-14	513859
2014-15	529279

Table 10: Percentage of institutional and home delivery in Assam

Year	Institutional delivery	Home delivery	Safe delivery
2002-04	23.2	71.9	33.2
2007-08	35.3	63.6	40.9
2012-13	65.9	33.6	71.6
2015-16	70.6	NA	NA

Source: District Level Health Survey- 2 and 3; Annual Health Survey Assam 2012-13; National Family Health Survey Assam- 4.

Table 10 shows that the percentage of institutional deliveries in Assam was very low i.e. only 23.2 in 2002-04. On the contrary, the percentage of home delivery was 71.9. The low rate of institutional delivery was the main reason of low rate of safe delivery (33.2%) in 2002-04. But after implementing JSY scheme in 2005, the percentage of institutional delivery and safe delivery has been rising continuously whereas the percentage of home delivery shows a negative trend. In 2012-13, the rate of institutional delivery was 65.9 against 33.6% home delivery and 71.6% safe delivery respectively. Thus, in case of institutional delivery, the scheme is able to show a positive trend in Assam.

b) Ante Natal and Post Natal care:

Regarding minimum maternal health services, Sub-Centres/PHCs should provide pregnancy registration in the first trimester; at least four antenatal checkups (ANCs); minimum laboratory services; identification and prompt referral of high-risk pregnancies; iron folic acid (IFA) tablets and other services to combat anameia; vaccinations (including TT); malaria prophylaxis in malaria epidemic zones, counseling and referral for Reproductive Tract and Sexually Transmitted Infections (RTI/STIs); provision of a range of contraceptives; and information about government incentive schemes, such as NMBS, JSY, and JSSK. Minimum child health services should include essential newborn care; immunizations; Vitamin Aprophylaxis; and prevention and treatment of malnutrition, anameia, infections, diarrhoea, and other common childhood health problems (NRHM 2005-12).

Thus, the provision of ante natal care and post natal care to the mothers is must essential to reduce MMR and IMR.

Table 11: Percentage of Mothers who had ANC and PNC in Assam

	NFHS-4 (2015-16)	NFHS-3 (2005-06)
ANC (Ante Natal Check up) of Mothers		
Registered pregnancies for which mother received Mother and Child Protection (MCP) card	89.3%	na
Mothers who had ante natal check-up in the first trimester	58.6%	43.9%
Mothers who had at least 4 ANC check-ups	51.2%	37.0%
Mothers who had full ante natal care*	21.0%	11.6%
Mothers who received 100 Iron and Folic Acid (IFA) Tablets	30.3%	15.2%
Post Natal Check up		
Mothers who received post natal care within 48 hours of delivery	62.4%	34.6%
Mothers who received financial assistance under JSY Scheme for births delivered in an institution	36.4%	NA

*Full Ante natal care is at least 4 ante natal visits, at least 1 TT injection and IFA tablets or syrup taken for 100 or more days.

Source: National Family Health Survey (NFHS) 3 and 4.

Table 11 gives some information about Ante Natal Checkup (ANC) and Post Natal Checkup (PNC) of mothers. It is observed that about 89% pregnant women were registered in 2015-16. Again the percentage of mothers who had ante natal checkup in the first trimester increased from 43.9% in 2005-06 to 58.6% in 2015-16. Again, 51.2% pregnant women visited health centers at least 4 times for ante natal checkups. But it is observed that only 21% mothers received full ante natal care in 2015-16 against 11.6% in 2005-06. The percentage of mothers who received 100 IFA tablets is also low i.e., 30.3%. These poor figures are in turn responsible for high rate of maternal and infant deaths in Assam. In

case of post natal care, it is observed that the percentage of mothers who received post natal care within 48 hours of delivery is 62.4% against 34.6% in 2005-06. Thus, nearly 40% mothers are still deprived from receiving post natal care. Since babies overall growth depend on mothers' health, thus post natal care of mothers is most vital.

c) Receipt of Financial Assistance under JSY:

As per norms, a pregnant women belongs to BPL category in rural area is entitled to Rs.1400 for institutional delivery. Also, there is provision for BPL pregnant women aged 19 years and above preferring to deliver at home by a Trained Traditional Birth Attended or Skilled Attended is entitled to cash assistance of Rs 500 per delivery. Such cash delivery is available only for two live births and the disbursement would be done at the time of delivery or around four days before the delivery. Moreover, there is separate provision of Rs. 250/- for transport in case of emergency with another provision of Rs. 1500/- for the management of obstetric complications in caesarian delivery if needed. The new mother should receive her financial entitlement at the hospital's cash counter at the time of discharge or access her cash from the ASHA, ANM, or other health worker within seven days of delivery. But as per NFHS report for the year 2015-16, only 36.4% (refer table 11) mothers received financial assistance under JSY which is very negligible. This may be either due to lack of awareness or anomalies within the department or both.

d) Maternal Mortality Rate in Assam after JSY:

Maternal Mortality rate is a very sensitive indicator of health status of a population. One of the prime objectives of JSY was to reduce MMR by increasing institutional deliveries. But in case of India, especially in Assam, this scheme is not effective in this respect. As per Assam Health Survey Report 2012-13, the MMR of Assam is 301 which is the highest among all Indian states. An increase in institutional deliveries will imply a reduction in the MMR if pregnant women with life-threatening complications are able to reach facilities with adequate Emergency Obstetric Care (EOC) in time and if the level of the MMR among those who reach these facilities does not increase with the increased workload (Jain, 2010). The Eleventh Five Year Plan recognizes that encouraging women to go to health facilities for delivery alone cannot reduce maternal mortality to zero. It accepts that the country does not have adequate institutional capacity to receive all women giving birth each year and that half of the maternal deaths occur outside delivery, i.e., during pregnancy, abortions and postpartum complications. The problem is mixed up with several issues such as lack of concern for women's health, malnutrition, lack of proper transport facilities, lack of awareness of danger signs, lack of full ANC, and lack of stress management (Sarma, 2009). Table 12 depicts the picture of district-wise MMR in Assam after implementation of JSY.

Table 12: Maternal Mortality Rate (per lakh)

Districts	2006-2009	2010-11	2011-12	2012-13
Barpeta	254	366	325	254
Baksa	208	NA	NA	325
Bongaigaon	95	366	325	254
Cachar	221	342	288	281
Chirrang	183	NA	NA	325
Darang	270	366	325	254
Dhemaji	416	367	314	251
Dhubri	590	366	325	254
Dibrugarh	252	430	436	404
Goalpara	398	366	325	254
Golaghat	342	430	436	404
Hailakandi	375	342	288	281
Jorhat	264	430	436	404
Kamrup (metro)	269	366	325	254
Kamrup ®	137	366	325	325
Karbi Anglong	NA	342	288	281
Karimganj	474	342	288	281
Kokrajhar	263	366	325	254
Lakhimpur	104	367	314	251
Morigaon	579	367	314	251
Nagaon	440	367	314	251
Nalbari	178	366	325	254
N.C.Hills	NA	342	288	281
Sivasagar	306	430	436	404
Sonitpur	484	367	314	251
Tinsukia	205	430	436	404
Udalguri	595	Na	NA	325
Assam	333	381	347	301

Source: MMR and IMR survey Report, Assam, 2009, MOHFW, GOI; AHS 2010-11, 2011-12, 2012-13

From table 12, it is observed that although the MMR of the state as a whole decreased from 333 in 2006-09 to 301 in 2012-13, but it cannot fulfill the target of 100 set under Millennium Development Goal. From the table, it is clear that the upper Assam districts have higher MMR followed by lower Assam, then middle Assam and hilly areas at the last. Lack of health infrastructure, high rate of anaemia among women, unhygienic environment of rural livelihood etc. are identified as main factors responsible for high MMR in Assam.

CONCLUSION

In conclusion, it can be said that Janani Suraksha Yojana is a desired and good health programme launched in India under NRHM. But this scheme is not free from limitations. The scheme is concentrated only on institutional delivery; rather it should give focus on all aspects of ante natal, post natal and quality of care. Focus should be given on at least 3 ante natal check-ups of pregnant women so that high risk pregnancies can be identified and accordingly treatment can be provided. The infrastructure of health facilities should be improved. In Assam, a large number of health centres do not have adequate number of beds, functional labor rooms, new born babies corner, medicines, medicalequipments and machineries, proper electricity, water and sanitation facilities. Even it is found that many of SCs are used as cow shed. The condition of hospital connecting roads is also found pathetic. The manpower engaged in the health centers is not adequate. Thus, to attain a positive result, effort should be given to strengthen and equip the Sub-centres and Primary Health Centres with the facilities for delivery. Again, it is seen that in Assam, only 36.4 % mothers received cash assistance under JSY in 2015-16 which is very low. This requires effective evaluation of the existing system of cash transfer under JSY. At last but not the least along with Government effort, people should be aware to grab the maximum benefit from the scheme.

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