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Utilisation of Maternal and Child Health Care Services and Maternal and Child Health Status: A Case Study of the Rural Areas of Barak Valley of Assam

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Abstract

In India there is alarming incidence of morbidity and mortality of mother and child in the rural areas. India announced different programmes to promote the health of mother and child and one such programme is National Rural Health Mission. Now all these efforts of the government for promoting of health of mother and child will be successful only when people really utilise it. Utlisation of maternal and child health care reduces the risk of morbidity and mortality of mother and child. The present paper studies the utilisation mother and child health care services available in the rural areas of Barak Valley, the remotest area of India, grasped with poor social and economic infrastructure. It is found that with the increasing availability of mother and child health care services, the health practice of people has changed and is providing positive changes on maternal and infant mortality.

Keywords: Maternal mortality, Infant mortality, Health care services, Health Status, Utilisation of health care services.

Introduction

Human development paradigm considers human being as the real capital of the nation, and accordingly gives priority in the development of human resource. Until a country has a strong human capital its development dream is impossible. One of the vital ingredients to create a strong base for human capital is 'health'. It is a means and end of human development. It plays a very important role in the improvement of socio-economic condition of an economy, which is economic development of a country. Improved health enhances the formation of human capabilities. Better health for the masses improves their living conditions, ability and efficiency to work, which in turn contributes to general improvement of productivity and stimulates economic growth.

But most of the underdeveloped and developing nations are facing the problem of poor health status of its masses and thus having a poor source of human capital and poor rate of economic development. It is a known fact that the health condition of the rural people is always poor and are suffering and dying from preventable diseases, living with acute malnutrition etc. These populations are trapped in poverty, low level of literacy, and are facing high rate of infant and maternal mortality rate with low expectancy of life at birth etc. Taking together rural and urban areas, India's position on health status is very low compared to the developed countries and also very low even compared to the other Asian countries. For instance, as per the World Bank (2010) the maternal mortality rate (MMR) per lakh live births, is 230 in India, whereas it is only 37 in China, even in Sri Lanka it is 35 and 05 in Japan in the year 2010. Infant mortality rate (IMR) per thousand live births, for the year 2010 is 47.1 in India, 13.7 in China, 8.9 in Sri Lanka, 2.4 in Japan, and in Bangladesh the IMR is also low compared to India as it is 37.5. Comparing MMR and IMR it can be seen that the health scenario of India is not quite satisfactory. If we consider the picture of rural areas of India, the condition is even more acute. Infant mortality rate is 51(per1000 live births) compared to 31 in urban areas.

Thus, it can be said that the condition of mother and child is really in threat. There is alarming incidence of morbidity and mortality of mother and child in the rural areas. Poor health of a mother not only affects her livelihood but also her child. Bad health condition of child makes him to lead a life with poor physical ability and restricted capability expansion.

This stands in the way of giving nation a healthy generation as well enhanced human capital. Apart of other factors lying necessarily to improve child's health, better mother's health is of course the cause and effect of giving better health to a child. According to the World Bank, 'Investing in better maternal health not only improves a mother's health and that of her family, but also increases the number of women in the workforce and promotes the economic well-being of communities and countries. Thus, better health of mother is an important element in increasing both economic and social wellbeing of a family in particular and the economy in general. Mother is vested with the role of care and nurture. Now if mother's health is not good, how can she provide care and nurture and absence of these two services reduces wellbeing of the family from the social point of view. Good health of a mother is not only an enhancing factor for her active participation in workforce of the country but at the same time offering a child with sound health with increased life expectancy becoming ready to participate in the economic activities of the country. Good health of a mother is one of the crucial factors in creating human resource for the nation. Maternal and infant death is thus a serious problem and this high rate of mortality results in great human capital loss for the nation which directly puts impact on the economic development of a country.

The existence of poor health of mother and child and their high rate of mortality is due to the existing unfavorable situations surrounding the mother and child like weak health infrastructure, absence of proper utilization of health care services, old customs and conventions giving unhealthy and nonscientific health services etc. World Health Organisation argues that unsafe motherhood is associated with suffering, ill-health and even death of mother. The major direct causes of maternal morbidity and mortality include haemorrhage, infection, high blood pressure, unsafe abortion, and obstructed labour. Untreated pregnancy and birth complications mean that 10-20 million women become disabled every year, undermining their ability to support their families'. According to the World Bank report, nearly 800 women die across the world due to the complications arising from pregnancy and of this 99 percent are from developing countries. Inaccessibility and unavailability of health care services lies as the reason of increasing mortality rate. Another reason behind such death is also the absence of taking proper medical care.

The announcement of 'health for all by 2000' to promote the health of the people through community participation by the World Health Organisation (WHO) in 1978 at Alma-Ata, made a remarkable changes in the decision of promoting health of the people in all the countries under the banner of WHO. India committed to promote health of its people as it being a signatory member of WHO. Accordingly, India announced different programmes in its different plans specially after eight plan onwards. National Rural Health Mission is considered as the landmark approach towards the betterment of health of people. Efforts were being taken to promote the health of child and mother. Different programmes are taken into action to enhance mother and child health care. According to World Health Organisation, maternal health refers to the health of women during pregnancy, childbirth and the postpartum period. The steps taken for maternal health care are- provision of institutional delivery with financial assistance, antennal check up , pregnancy registration, providing IFA tabltes, etc. the steps taken for child care include provision of child immunization, organizing polio day etc.

Now all these efforts of the government for promoting of health of mother and child will be successful only when people really utilize it. Mere availability of health care facilities does not always ensure existence of better health, there must be full utilization from the part of people. Utilization of maternal and child health care services or any other health care services depends upon some factors which are both exogenous and endogenous to people. The availability health care services, health infrastructures, how far these services are accessible are the exogenous factors and literacy rate, health education, awareness of the people regarding the available health care services or how far the people are informative regarding the available health care services, need of practicing healthy life, their way of practicing better health are the endogenous factors influencing the utilization of existing health care services.

Several studies have shown that, uitlisation of maternal and child health care reduces the risk of morbidity and mortality of mother and child. According to Kilpatrick (2002), high rate of utilization of antenatal healthcare reduces the incidence of maternal mortality. Maternal mortality arises due to the complications arising from the period of pregnancy, during child birth and after the delivery. If mother can be cared from the very beginning of pregnancy then the complications can be avoided and giving a safe motherhood. The rural people do not give much attention to women when they are pregnant. They do not go for regular check up, nor give necessary nutrition to the mother. If a mother is not safe and healthy throughout her pregnancy period then either she will not survive till childbirth, or she cannot give birth to a healthy child or if survive will suffer from pregnancy related injuries, infections and disabilities which may become a lifelong consequences (Rejoice and Ravishankar, 2011). Unsafe motherhood not only makes the life of mother in threat but also the child and becomes the reason for maternal mortality and infant mortality or still birth. Non utilization of maternal health care that is antenatal check up makes both mother and child to bear a very poor health condition.

In this respect it ***necessitates*** in the present paper to study utilization of the maternal and child health care services and the changes in maternal and infant mortality rate in the rural areas of Barak Valley.

Background of the Study Area:

Assam is one of the northeastern states of India having wide disparities with respect to

geographical, cultural, languages and customs. It has two main rivers- one the Brahmaputra and the other the Barak River and thus there are two valleys in Assam- the Brahmaputra valley and the Barak Valley. The Barak Valley region is situated in the southernmost part of Assam and comprises of three districts- Cachar, Karimganj and Hailakandi. Of the three districts of the valley, Hailakandi is the smallest district with total geographical area of 1327 sq. km and Cachar is the largest district with 3786 sq. km. The second largest district Karimganj covers 1809 sq. km of the total geographical area of the Valley. In Cachar district there are 5 revenue circles, 15 development blocks, 163 gaon panchayat, in Karimganj district there are 7 development blocks 93 gaon panchayat whereas Hailakandi district has 5 development blocks and 63 gaon panchayats. Total number of villages of Barak Valley is 2407 and the total number of gaon panchyats is 321. As per 2011 census of the total population 86.87 percent of population comes from rural areas. Thus, it can be said that the rural area dominates the Barak Valley. The sex ratio of the valley is 957 females per thousand of males. The literacy rate of the three districts of Barak Valley is better than the state level as per 2011 census. The literacy rate of Cachar district is 80.36 percent, of Karimganj district is 79.72 percent and of Hailakandi district is 75.26 percent, while for the state of Assam the literacy rate is 73.18 percent in 2011. Female literacy rate of Karimganj, Cachar and Hailakandi is 74.62, 73.49, 68.54 respectively. The male literacy rate is 85.85 for Karimganj, 85.70 for Cachar and 81.61 for Hailakandi district. Thus, female literacy rate is lower than the male literacy rate.

Of the total population the workforce participation in Barak Valley is found to be 33.70 percent and the non workforce is 66.30 percent. The total workforce in the Barak Valley is divided into main workers and marginal workers. Among the female workforce, the rate of marginal workers is 47.71 percent and main worker is 52.29 percent. The percentage of male main workers is 82.61 percent and that of marginal workers is 17.39 percent. Compared to the male workers, the marginal workers among the female workforce is high both in rural and urban areas of the Barak Valley.

Thus, it is found that of the total population, Barak Valley has a good number of female population, but regarding literacy rate and economic condition (with respect to main and marginal workforce participation) the situation of female is lower than the male.

Objectives of the Study

In this paper attempt is made to study the utilization of maternal and child health care services in the rural areas of Barak Valley with respect of available health care delivery services and awareness of the people regarding the available health care delivery services. An attempt is also made to draw the differences in utilization of health care services in early part of the announcement of rural health care programme (NRHM) and the mid part of the programme and the changes in maternal and infant mortality rate. Thus the specific objectives of the study are

1. Available health care delivery services in Barak Valley.
2. Awareness of the rural people regarding health services.
3. Utilisation of maternal and child health care services in the early and mid period of announcement of NRHM and the changes in maternal and infant mortality rate in Barak Valley.

Data Source

The data sources are both primary and secondary. The main sources of secondary data are the official publications of government agencies of both State and Central Governments, like Directorate of Economics and Statistics- Government of Assam and Government of India, Directorate of Health Services- Government of Assam, Ministry of Health and Family Welfare-Government of India.

Primary data is collected on basis of multistage sampling. There are 27 community development blocks in Barak Valley (Cachar-15, Karimganj – 7 and Hailakandi – 5). In the first stage of sample selection 6 Community Blocks (Cachar-3 Karimganj-2 and Hailakandi-1) has been selected at random. From the selected 6 (six) Community Blocks 1 Gaon Panchayat from each Blocks is selected on the basis of simple random sampling. From each of 6 selected Gaon Panchayat 2 villages have been selected by using simple random sampling. From each village 20% of total household is surveyed. The respondent of the households were the mother of age group 15-49.

Methodology

As we know National Rural Health Mission (NRHM) was launched for the period of 2005-12, therefore two periods -one early part of the launch of NRHM and second the later part of the mission is considered to find the maternal and child status in terms of maternal and infant mortality. To find the utilization of maternal and health care services, the data from District Level Household Survey (DLHS) II (2002-04) and DLHS III (2007-08) is used.

To find the awareness of the people regarding maternal and child health care services, specifically mothers of the age group of 15-49 is interviewed on the available maternal and child health care services like- polio immunization, complete child immunization, institutional delivery, financial assistance for institutional delivery, ASHA workers, health institutions, complete antenatal check up.

To measure the awareness level of selected sample data, mean awareness score on each of the above mentioned factors is taken on 0 to 1 scale. '0' indicates complete unawareness and '1' indicates complete awareness level on the health influencing factors

The Mean $\text{Awarness score of individual(AW)} = \sum_{i=1}^{7}(\text{aw}_i)/7$

Where,

aw_1= Polio immunization; aw_2= Complete child immunization; aw_3= Institutional delivery; aw_4= ASHA; aw_5= Health Institutuions; aw_6= Financial Assistance

for institutional delivery, aw_7= Complete Antenatal check up.

Taking the awareness score of the individual the average awareness score of the sample data collected from three districts of Barak Valley that is Karimganj, Cachar and Hailakandi is constructed. The awareness score of the sample data of Barak Valley is constructed by taking composite mean awareness score of the people of three districts.

The composite mean awareness score of sample data of Barak Valley:

$$(AW_B) = \frac{(NkAWK+NhAWH+NcAWC)}{(Nk+Nh+Nc)}$$

Where, **Nk, Nh** and **Nc** are the total number of sample households of Karimganj, Hailakandi and Cachar district respectively.

And,

AWK, AWH, AWC is the awareness score of the sample data of Karimganj District , Hailakandi District and Cachar District respectively.

Findings

Available Health Care Delivery Services in the Rural Areas of Barak Valley

The health care delivery services in the rural areas of Barak Valley are mainly based on public sector health. The network of private health services is not wide in Barak Valley as there are a few numbers of nursing homes, clinic, polyclinic, private diagnostic centres as the source of private health services. The delivery of public health care services in the rural area is provided by the three tire system of health care services and accordingly in Barak Valley there exist a three tire system of health delivery services. As per the norms of NRHM there must be one CHC for every 1lakh 20 thousand population, one PHC for every 30,000 of population and for 5000 of population one SC, but the existing health centres in Barak Valley is lagging behind as per the norms. There are only 9 CHC, 69 PHC and 591 SC in Barak Valley covering the total population of 3138041 of the Valley. However the required number of CHC is 25, PHC are 104 and SC is 627.Taking together CHC, PHC and SC, the total required health institutions are 42 for Cachar and Karimganj and 26 for Hailakandi.

Availability of man power and availability of bed per population are the other two important elements for the smooth delivery of health care services. In Barak Valley the doctor- population ratio and nurse – population ratio in Barak Valley is 0.78, and 3.75 respectively. This doctor population ratio of Barak Valley is very much insufficient to cover the entire population and puts heavy burden on the physicians to carry forward the health services. Again total number beds in civil hospital are 250, in the rural health centres that is BPHC, MPHC and CHC is 440. For the ill people the total 690 beds are available in the hospital and other health institutions in the entire Barak Valley. Taking per ten thousand of population these available beds covers only 1.92 percent of the total population. But for the state the bed population ratio is 3.24 and for the country as a whole is 7. Delivery of health care services becomes smooth when the basic infrastructure of health is very strong. But the available health infrastructure in terms of health centres, doctor population ratio, bed population ratio is not enough to cover the entire population. In such a situation to provide smooth service for the patients becomes very difficult. All these puts impact on the health status of the people.

Health Status of Barak Valley

Let us have a look on the health status of the Barak Valley considered on infant mortality rate, maternal mortality rate, death and birth rate. In the year 2010, the infant mortality rate per thousand is 60 in Cachar, 71 in Karimganj and 56 in Hailakandi district whereas in the state it is 64 and for the nation it is 50 per thousand of live births. The maternal mortality ratio (per lakh live births) for the entire Barak Valley is 384, whereas for the state level it is 381 and for the country it is 230. The birth rate is 27.4 in Cachar district, 26.4 in Karimganj and 34.2 in Hailakandi district for the state is 23.6 and for the country level it is 21.8 per thousand of population. However, the birth rate of the three districts of Barak Valley is higher than the state level as well the country level. Death rate is highest in Cachar District as it is 7.8 and lowest is in Karimganj District i.e 6.7 and in Hailakandi district it is 7.1 per thousand of population. The death rate of the state is 8.4 and for the country as whole it is 7.1 per thousand of population. The death rate of the three districts is less than the state level (refer table 1)

Awareness of the Rural People on the Existing Maternal and Child Health Care Delivery Services

Practicing healthy life depends on number of factors, of which awareness is the important one. When someone is aware of the existing different practices of maintaining good health of mother and child, and then only he/she can apply it successfully. Mother and child care are the two important wings of promotion of health status of any society. Mother's health care is most important for having a healthy child. In most of the cases in rural areas a child takes birth at home in unhealthy environment without having any medication. Mothers go without any regular antenatal check up. This makes either the risk of infant and maternal mortality very high or the health situation of the baby and mother becomes serious or suffers from some incurable diseases throughout their life. In such a situation giving birth to a child in a hospital or some health institutions with skilled and efficient health attendant and having complete antenatal check up, the above said risk reduces a lot. Thus the awareness of the people for institutional delivery, antenatal check up, available health institutions etc are of the utmost need. The calculated mean awareness score on available mothers' health care (Institutional delivery, ASHA, Health Institutuions, Financial Assistance for institutional delivery, Complete Antenatal check up) is shown in table 2.The awareness score of the people on institutional delivery of the Karimganj district is 0.57, Hailakandi is 0.68 and Cachar district is 0.63. The awareness score of the sample data on ASHA workers is found to be the highest of 0.92 in the entire Barak Valley. Regarding available public health centres with the facility of maternal health care services specially

institutional delivery is found to be 0.59. The awareness score of the sample data of Barak Valley in complete antenatal check up for pregnant mother is found to be 0.59 for Karimganj District, 0.55 for Hailakandi District and 0.61 in Cachar District. The awareness score of the sample data of the rural areas of Barak Valley has the awareness score of 0.64 for the facility of financial assistance for institutional delivery (refer table 2).

Child care is another significant sphere. Giving immunization to the child brings down the rate of suffering of the child from some deadly, incurable diseases. In this regard the awareness score of the rural masses of the Barak valley is found to be quite satisfactory. The calculated mean awareness score on available child health care (Polio immunization, Complete child immunization) is shown in table 2.The awareness of the rural people of Karimganj, Hailakandi and Cachar district on polio immunization is 0.89, 0.85, 0.85 respectively. This high score of awareness for polio immunization is due to the wide spread of the information provided for the benefit of giving polio immunization to the child. At the same time the ASHA workers are also playing a very important role in this respect. While interviewing the respondent it was found that they remember the polio vaccination day organized in their nearby areas and assures their presence with their child on the said day. While it was also found that in some cases though they know the benefits about giving polio to their child, they don't go to the polio boot, as the ASHA or the ANM workers come to their home to give polio immunization. In case of complete immunization of the child it was found that unlikely polio immunization, they have less idea. The awareness score on complete immunization of the child was found 0.56, 0.53, and 0.45 in the three districts, Karimganj, Hailakandi and Cachar respectively. The complete awareness score of mother and child health care of the sample data of Barak Valley is found to be 0.64 of which in Karimganj district it is 0.68, for in Cachar is 0.63 and in Hailakandi is 0.59.

Utilisation of Health Services and Health Status of Mother and Child in Barak Valley

The awareness of the people of Barak Valley regarding mother and child health care is found to be almost in moderate level and accordingly this awareness of the people on mother and child health care is reflected in the utilization of the mother and child health care services. The present rural health mission has given stress on mother and child health care with respect to immunization and antenatal care and it is found that there is a considerable change in the practices of the people. Regarding utilization of maternal and child health care services; institutional delivery, antenatal care, complete immunization of child is taken into consideration. During the period before the launch of NRHM, the percentage of child immunization was only 2.4 percent in Karimganj district, 1.5 percent in Cachar and 3.5 percent in Hailakandi district. But after the programme started there occurred a significant changes, the child immunization has increased to 32.7 percent in Karimganj, 46.8 percent in Cachar and 33.7 percent in Hailakandi district. Also in the state level, the percentage of child immunization during these periods also increased from 14.4 percent to 50.0 percent. In the year though 2007-08, it can be seen from table 3 that compared to the state level the three districts of Barak Valley is running behind. But if we consider the differences of changes from 2004 to 2008, then in Cachar district the difference is of 45.3 percent which implies that condition of Cachar is better not only compared to Barak Valley but also to the state level (refer table 3).

Similarly the rate of institutional delivery has also shown an increasing rate. The institutional delivery which was 6.3 percent in 2004 increased to 19.6 percent in 2008 in Karimganj, in Cachar district it became 30.5 percent in 2008 from 17.2 percent in 2004 and in Hailakandi district 7.5 percent to 19.4 percent during the same periods. Compared to the state level the condition of Cachar district was almost the same. Thus from table 4, it can be seen that the preference of the people for institutional delivery has been increasing from 2007-08 to 2009-10 with 1.43 percent for the entire Barak Valley.

Regarding utilization of mother's health care specially on antenatal care it is found that mothers registered in the first trimester when they were pregnant with last live birth or still birth is 36.2 percent in Karimganj District, 38.8 percent in Cachar District and 42.3 percent in Hailakandi district. Another significant factor helping in reduction of maternal and infant mortality is mothers having all the antenatal care visits. With the increase in the awareness of the rural people about the significance of mother's health care, and with the launch of NRHM, there has been a positive changes in the utilization of mother's health care facilities. It is found that in the year 2002-04 that is before the launch of NRHM, 31.8 percent of mothers in Karimganj district, 29.5 percent of mothers in Cachar district and 21.5 percent of mothers in Hailakandi district had at least three antenatal care visits which increased to 42.8 percent for Karimganj, 51.1 for Cachar and 52.3 for Hailakandi district in 2007-08 that is after the three years of the launch of NRHM. Hailakandi and Cachar district has shown a greater increase in the utilization of antenatal care visits during pregnancy. Mothers who got at least one TT injection when they were pregnant is recorded as 80.2 percent in Karimganj, 84.7 percent in Cachar and 86.2 percent in Hailakandi district in 2007-08 which was only 41.0 percent in Karimganj, 54.0 percent in Cachar and 53.2 percent in Hailakandi district in 2002-04. Delivery at home assisted by unskilled person like dhai, senior female family member and others often is the cause of the maternal mortality, infant mortality and the complications arising after pregnancy. But with the launch of NRHM with its different strategy to fetch the women for institutional delivery or home delivery assisted with skilled attendant has improved the scenario. It can be seen from the table 5 that in Hailakandi district during the period 2002-04, home delivery assisted with skilled attendant was only 0.5 percent which increased to 6.0

percent in 2007-08 and the institutional delivery which was only 7.5 percent in 2002-04 increased to 19.4 percent in 2007-08(refer table 4). Similarly, mothers received post natal care within 48 hours of the delivery of child is 24.7 percent in Karimganj district, 29.2 percent in Cachar district and 21.2 percent in Hailakandi district in 2007-08.

Thus, it can be seen that there have been a positive changes regarding the utilization of maternal and child health care services. The reason behind the use of such facilities is firstly, of course the increasing awareness of the people regarding the benefit of practicing healthy habits, increased literacy among the female who become now conscious of their own health and realized the need of living a healthy life. The attitude of the rural people towards mother has now changed a lot. People could realize now to a large extent that until and unless a mother is safe and healthy, a child cannot be safe and healthy and overall the family will be the sufferer. People now also reaslised the right of women and accordingly all these has led to the changes in the practices of the people and their treatment towards mother and child.

Secondly, the launch of different programmes toward the National Rural Health Mission for the benefit of mother and child like appointing ASHA workers as the first contact for primary health care specially for mother and child, provision for institutional delivery, all facilities for antenatal care for mother, child immunization, financial assistance for institutional delivery and other facilities also put affect on the practice of the people towards mother and child health.

All these increased utilisation of mother and child health care put affect on the maternal and infant morbidity and mortality. The infant mortality rate (per thousand of live births) of Karimganj, Cachar and Hailakandi district in 2007-08 was 87.1, 60.5 and 75.1 respectively and has decreased to 69 in Karimganj, 57 in Cachar and 55 in Hailakandi in 2010-11. Similarly maternal mortality rate (per lakh of live birth) which was 407 in 2000 has declined to 342 in 2010 thus, shown a steady decline in this one decade in the entire Barak Valley.

Conclusion

In the conclusion it can be said that though still complete coverage regarding the development of basic infrastructure like health institutions, bed and man power is required yet it is true that the health practices of the people has changed now. The attitude of the rural people towards maintaining maternal and child health has is quite different and better than decades ago. They are now more aware regarding maintaining healthy life. With the increased health care services, health became really accessible for the rural people. This has increased utilization of maternal and child health care services and thus the risk of mortality and morbidity of both mother and child have reduced. But to achieve complete change towards a healthy society stronger infrastructural base with strong monitoring of proper implementing the health schemes is required.

Table 1
Health Status of Barak Valley

Health Status Indicators	Cachar	Karimganj	Hailakand	Barak Valley	Assam	India
Birth rate	27.4	26.4	34.2	-	23.6	21.8
Death rate	7.8	6.7	7.1	-	8.4	7.1
Infant mortality rate (per thousand live births)	57 (60)	69 (71)	55 (56)	-	60 (64)	47.1 (51)
Maternal mortality ratio (per lakh	-	-	-	342	381	230

Heads	Districts			Total
	Karimganj	Hailakandi	Cachar	Barak Valley
Polio Immunization	0.89	0.80	0.82	0.84
Complete Immunization	0.57	0.46	0.45	0.49
Institutional Delivery	0.58	0.50	0.63	0.59
ASHA	0.97	0.94	0.89	0.92
Health Institutions	0.56	0.48	0.64	0.59
Financial Assistance for Institutional Delivery	0.66	0.67	0.60	0.64
Complete Antenatal Check up	0.59	0.55	0.61	0.60
Mother and Child Care(Total)	0.68	0.59	0.63	0.64
Source: Sample Survey				

Table 3
Child Immunization in Barak Valley

Districts/State	Children fully immunized (BCG, 3 doses each of DPT, and Polio and Measles) (%)	
	2007-08	2002-04
Karimganj	32.7	2.4
Cachar	46.8	1.5
Hailakandi	33.7	3.5
Assam	50.00	14.4
Source: Joint Director of Health Services, 2010		

Table 4: Institutional Delivery of Child

Districts/State	Institutional Delivery(in percentage)	
	2007-08	2002-04
Karimganj	19.6	6.3
Cachar	30.5	17.2
Hailakandi	19.4	7.5
Assam	32.0	17.1

Source: Joint Director of Health Services, 2010

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Table 5: Utlisation of Mothers' Health Care

Heads	2007-08			2002-04		
	Karimganj	Cachar	Hailakandi	Karimganj	Cachar	Haialakandi
Mothers registered in the first trimester when they were pregnant with last live birth/still birth	36.2	38.8	42.3	NA	NA	NA
Mothers who had at least 3 Ante-Natal care visits during the last pregnancy	42.8	51.1	52.3	31.8	29.5	21.5
Mothers who got at least one TT injection when they were pregnant with their last live birth / still birth	80.2	84.7	86.2	41.0	54.0	53.2
Delivery at home assisted by a doctor/nurse /LHV/ANM	6.6	6.4	5.0	6.0	1.9	0.5
Mothers who received post natal care within 48 hours of delivery of their last child	24.7	29.2	21.2	NA	NA	NA

Source: DLHS-II and DLHS-III