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PRESENT SCENARIO OF SAFE MOTHERHOOD IN WEST-BENGAL

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Abstract

Safe motherhood is a new concept in the field of reproductive health, which ensures that the women receive high quality care for achieving the optimum level of health of both the mother as well as the infant. The basic principles of safe motherhood are – Family Planning, Antenatal Care, Obstetric Care, Post Natal Care, Post Abortion Care and STV/HIV/AIDS Control. The present study shows that the picture of safe motherhood in West-Bengal is quite promising, but more steps (like - proper execution of various schemes, more self-awareness among the pregnant women with the help of education etc) should be taken immediately for the betterment of the nation.

Keywords : Reproductive Health, Six Pillars of Safe Motherhood, Safe Motherhood Index, Child Survival Rate, Necessary Steps for Improvement .

1. INTRODUCTION

Safe motherhood is a very relevant concept which ensures that women receive high quality care in order to achieve the optimum level of health of both the mother and the infant. It is designed in such a way that the women are ensured of high-quality gynaecological, family planning, prenatal, delivery and post-partum care. It is considered as an important part of reproductive health that includes various measures, used to protect a mother from pregnancy and delivery related problems.

2. REVIEW OF RELATED LITERATURE

The paper, prepared by State Family Welfare Bureau, Govt. of West-Bengal entitled "*Public Health in West-Bengal – Current Status and On-going Interventions"* describes various aspects of the present health condition in our state

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like – causes behind the present situation, schemes for the improvement of the condition as well as its implications on the public, etc. It elaborately focuses on the constrains and interventions through the National Rural Health Mission (NRHM) as well as other initiatives in this aspect.

- **Ibid** (2014) provided an overview on district level household and family survey in the year 2012-2013. It was published by Ministry Of Health and Family Welfare, Govt of West-Bengal. In this report, various aspects of the present reproductive health like - the present demographic trend, the literacy status, district wise temporal variation of institutional deliveries, maternal mortality rate ,temporal variation in Safe Motherhood Index, Health care facilities, etc have been highlighted.

- **Park** (2009) in this book, entitled "*Preventive and Social Medicine"* described the various schemes and their implication in the district of India. In this book, he discussed the temporal variation of different schemes, regarding maternal health, its implication and at the same time the impact of female literacy on social development.

- A Health related paper, entitled *"Public Health Notes"* , prepared by Ministry of Health and Public Welfare, India describes the various aspects regarding the reproductive health like – aspects of safe motherhood, importance of it and the impact of female literacy on improvement on Safe Motherhood Index, etc.

- A paper, entitled *" Introduction To Maternal & Child Heath – Reproductive Health and Safe Motherhood"*, prepared by Ministry of Health and Public Welfare, India portrays the temporal variation of reproductive health in the states of India.

3. OBJECTIVES

The objectives of the present study are as follows :

1. To know about safe motherhood as one of the important aspects of the reproductive health.
2. To highlight the components of safe motherhood.
3. To show the district wise variation over time in the various aspects of safe motherhood.
4. To find out the causes, behind the present reproductive health status of West-Bengal.
5. To highlight the steps for improvement of the present reproductive health status in West-Bengal.

4. METHODOLOGY

This study was based on the secondary information. To prepare this paper , various articles and journals (like - report from State Family Welfare Bureau, Govt. Of West-Bengal, State Bureau Of Health Intelligence, West-Bengal, West-Bengal Development Report etc) have been collected and studied. Then the relevant data and information has been presented in the form of an article**.**

5.PRINCIPLES OF SAFE MOTHERHOOD

Pillars of safe motherhood can also be considered as the principles of safe motherhood (Fig-1).

The basic principles of safe motherhood are -

5.1. Family Planning

It is an important component of safe motherhood. It is necessary to ensure that individuals and couples have adequate information and services, regarding

5.2. Antenatal Care (ANC)

ANC check-up is necessary to detect complications, regarding pregnancy as early as possible and treat them as much as possible. It is also essential to provide pregnant women with vitamin supplements and iron tablets and vaccinations to have a healthy and strong pregnancy.

5.3. Obstetric Care

It ensures that all the deliveries are done by the skilled birth attendants or the medical professionals,

who have the knowledge, skills, and equipments to perform a clean and safe delivery.

5.3.1 Essential/Emergency Obstetric Care:

It is the term used to describe the elements of obstetric care needed for the management of normal and complicated pregnancy, delivery and the postpartum period. It is differentiated into two levels:

5.3.1.1 Basic Emergency Obstetric Care (BEmOC) includes:

i) Availability of antibiotics,

ii) Availability of oxytocin drugs,

iii)Availability of sedatives for eclampsia

iv) Manual removal of placenta and

v) Manual removal of retained products

5.3.1.2 Comprehensive Emergency Obstetric Care (CEmOC) includes :

i) All basic essential obstetric services,

ii) Surgery,

iii) Anaesthesia and

iv)Blood transfusion.

iv) Manual removal of placenta and

5.4. Postnatal Care (PNC)

This care is provided to both the mother and the baby, which includes :

i) Counselling mothers about child handling, exclusive breast feeding, etc.

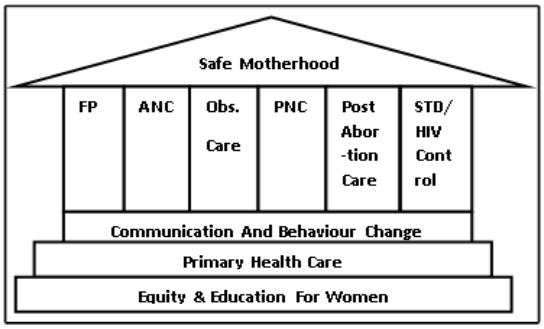


Fig-1:"Six Pillars" of Safe Motherhood

5.5. Post Abortion Care

It is necessary to prevent the complications of abortion, which is helpful to

i)Refer other reproductive health problems, when necessary.

ii) Provide counselling and awareness about differen family planning methods.

5.6. STD/HIV/AIDS Control

To prevent and manage HIV as well as AIDS transmission to the body,

i) To prevent and manage HIV as well as AIDS transmission to the body,

ii) To assess risk for future infection and

iii) To provide voluntary counselling and testing.

6. PRESENT SCENARIO OF SAFE MOTHERHOOD IN WEST-BENGAL

The following scenario in case of motherhood is found in our state West-Bengal :

6.1 Pregnancy

The period of Pregnancy, characterized by increased requirement of nutrients and energy as the food supplements for both the mother and the baby, is indeed critical in a woman's life. The ante-natal care is essential at this stage like - regular health check-up and medication is important to ensure the proper growth of the fetus, the diet must contain fair quantity of iron and protein along with other vitamins and minerals, etc.

The ante-natal care has been relatively improved in the State of West- Bengal among major eastern States of India. This kind of care is more profound among urban families than their rural counterparts, which is mainly linked with the inadequacy of health care infrastructure in the districts like Maldah and Uttar Dinajpur under Jalpaiguri administrative division, Birbhum and Bankura under Barddhaman administrative division and lastly Murshidabad and South 24 Parganas under Presidency administrative division. This situation has been somewhat improved in the year 2013-2014.

6.1.1 Complexities In Pregnancy And Its Resultant Impact :

Pregnancy related causes of deaths are many such as abortion, toxaemia, anaemia, bleeding during pregnancy and puerperium, mal-position of child leading to death of mother, puerperal sepsis and several other unclassified infections etc.

In West Bengal, the maternal mortality rate was very high previously, which has been declined in recent years. One of the major causes of maternal death has been found to be toxaemia, which is defined as an abnormal condition of pregnancy characterized by hypertension and expulsion of protein in urine. The number of toxemia related deaths were recorded to be only 13 in 2010-2011. The next major cause of maternal death is hemorrhage. The number of the maternal deaths due to hemorrhage was recorded to be 16 in 2010-2011. Hemorrhage is followed by the most widespread cause i.e. anemia which is the physical condition occurring due to deficiency of iron in the body. The number of metarnal death due to severe anemia has been recorded to be 13 in 2010-2011. The other pregnancy related complications resulting to maternal deaths include sepsis and obstructed labour, physical and mental trauma of the pregnant women, unsafe abortions, etc.

6.2 Lactation

During the post-partum period, the most crucial phase that follows the child delivery process is the lactation, which continues until weaning. It refers to the production and secre-

tion of milk by the mammary glands. The post-partum check up is essential to monitor the proper function of a mother's body, so that she can provide neonatal care to her child.

Previously, 74.12 per cent of the women received post-partum check up within 48 hours of delivery as part of their post-natal care in our state West-Bengal. The percentage has been risen to 74.56 in 2013-2014. The remarkable achievements in case of post-natal care have been recorded to be very high in Purulia district (99.15 per cent of the mothers receive post-partum check up within 48 hours of child birth), whereas this percentage has however been low in the districts of Darjiling and South 24 Parganas.

In West-Bengal, 71.46 percent of the neonates were breast-fed within one hour of birth in 2011-2012. This percentage has however been improved to 84.5 in the year 2013-2014. The districts with fairly high percentage of breast feeding practices (2013-2014) include Koch Bihar (91.3), Jalpaiguri (87.9), Maldah (92.4) and Dakshin Dinajpur (90.6) under Jalpaiguri administrative division; Murshidabad (85.7), North 24 Parganas (82.6) and Haora (93.3) under Presidency administrative division and Hugli (94.0), Barddhaman (93.7), Bankura (85.5), Birbhum (92.8), Purulia (97.3) and Paschim Medinipur (95.2) districts under

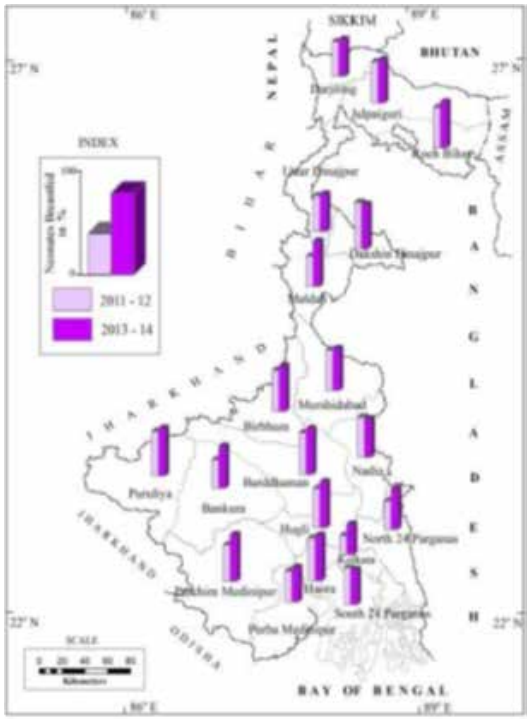


Fig-2 : Neonates Breast-fed within One Hour of Birth in Districts of West Bengal

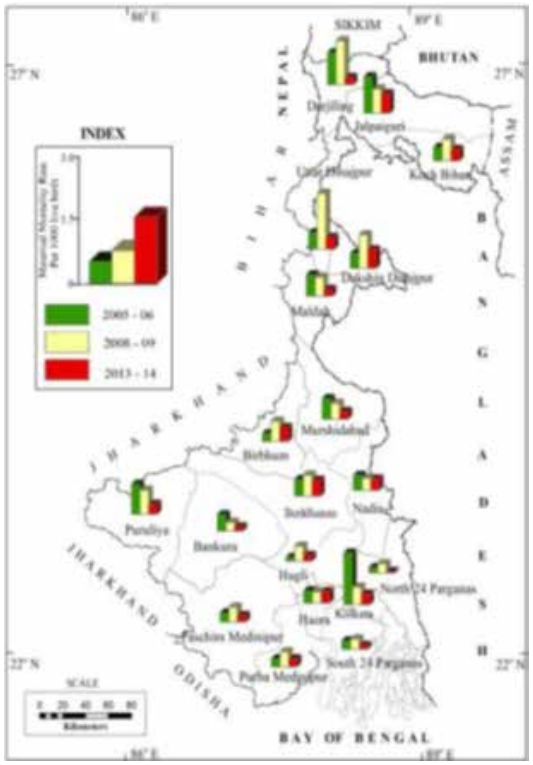
(*Data source: State Family Welfare Bureau, Govt. of West Bengal)*

Barddhaman administrative division [Fig:2]. These practices are very low among the female population of Darjiling district. In case of the urbanized district of Kolkata, the women of the upper elite class are not interested to follow the breast-feeding practices, just because of their modern life-style.

6.3 Institutionalization Of Child Delivery :

The Institutionalization of child delivery is an

important parameter for assessing the health care infrastructure of a nation as well as that in the State. The percentage of child delivery carried in hospitals and medical institutions is far lagging behind from the optimum level in West-Bengal. In the rural areas of the State, the institutional deliveries are carried out in block primary health centres (BPHC), sub centres, rural hospitals, district hospitals, sub divisional hospitals etc, while in the urban areas there are medical colleges and hospitals, municipal health care centres, ward health units, clinics and dispensaries maintained by the municipal authorities etc. The State has at present 13 Medical Colleges and Hospitals (MCH) scattered in a number of districts, whereas five medical colleges and hospitals are situated in Kolkata. This is the reason why, Kolkata is one such district which has been recorded no deliveries conducted by unskilled birth attendants. In this State, the institutional deliveries have been improved over time [Fig-3].



Fig–3 : District-Wise Temporal Variation of Institutional Deliveries in West Bengal

(Data Source : SFWB, Govt. of W.B)

The percentage in 2005-2006 was 50.72 which was increased to 53.51 in 2007-2008 and further to 63.80 in 2011-2012. In 2013-2014, this percentage was recorded an appreciable rise to 77.50. The districts under the Presidency administrative division have performed well in carrying out institutional child delivery, followed by the districts under the Barddhaman administrative division. Bankura under Bardhaman administrative division has been recorded to have 88.80 per cent institutional deliveries

in 2013-2014 while the figure was 66.33 per cent in 2005-2006. In case of district-wise analysis of the institutionalization of child delivery, the percentage has always been highest in Kolkata followed by Darjiling. Though Darjiling has been the district with best performance among the districts under Jalpaiguri administrative division, the low percentage of institutional deliveries carried out in the districts of Uttar Dinajpur and Maldah has contributed to the poor performance of the administrative division as a whole.

6.4 Maternal Mortality Rate

The Maternal Mortality Rate (MMR) is expressed in per 1,000 live births. In 2008-2009, the MMR has been remarkably declined in Kolkata (1.29) followed by Jalpaiguri(1.78). The districts under Barddhaman administrative division

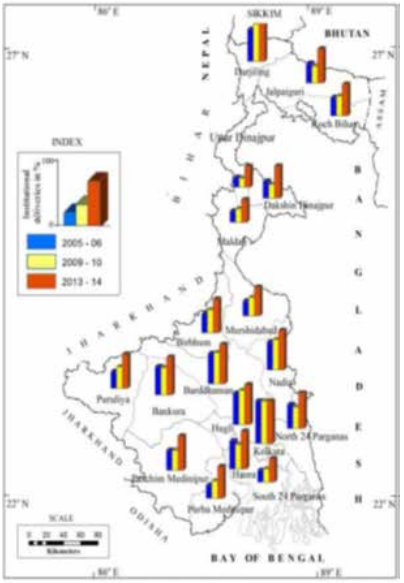


Fig-4 : Maternal Mortality Rate in Districts of West Bengal (Data source: SFWB, Govt. of India)

especially Hugli, Bankura and Purba Medinipur have controlled the rate throughout. Bankura though considered as a backward district in the State ,has made substantial improvement in this field. Kolkata has effectively reduced the MMR to 0.81 in 2013-2014 and have become the highest performing district in the State in case of controlling the rate [Fig-4]. The district is followed by North 24 Parganas (0.19) and South 24 Parganas (0.31). In 2013-2014, MMR has been highest in Jalpaiguri (1.45) followed by the Dakshin Dinajpur district (1.39).

6.5 Still Birth Rate

The Still Birth Rate (SBR) is expressed in per 1,000 total births. In West-Bengal, the SBR was 16.12 in 2005-2006 which has been reduced to 15.88 in 2013-2014. During the financial years 2005-2006 to 2013-2014, Kolkata has been recorded highest SBR among other districts. In 2005-2006, the SBR was lowest in Purba Medinipur (9.01) followed by Hugli (11.78). In this case, the performances of the districts under Barddhaman administrative division have been relatively better especially in Hugli and Purba Medinipur districts. The situation in Maldah (19.42) under Jalpaiguri administrative division has been alarming throughout, but in other districts under the same administrative division the condition is getting improved very slowly.

6.6 Perinatal Mortality Rate

According to WHO(1976), the perinatal period extends from the 28th week of pregnancy to the seventh day of life. The Perinatal Mortality Rate (PNMR) is expressed in per 1,000 total births. As the child itself has to adjust with the outside environment after birth, it is likely to develop many physical complications during this time which often leads the perinate to death. In 2013-2014, PNMR of the State

was 24.91, where the highest percentage was found in Kolkata(57.81), followed by Bankura (30.59).

6.7 Neonatal and Post-Neonatal Mortality Rate

The Neonatal Mortality Rate (NNMR) is expressed in number of deaths of neonates within 28 days of life per 1,000 live births. In 2013-2014, NNMR of the state West-Bengal was 10.75, while Kolkata was registered with a high NNMR of 43.18, followed by Bankura (13.58). Other districts like – Darjiling, North 24 Parganas and South 24 Parganas controlled the rate substantially over the time.

The Post-neonatal period extends from first 28 days of life to one year. During this time period, a neonate is likely to get affected with a number of infectious airborne, water-borne and vector-borne diseases which can affect its health. In 2013-2014, PNNMR of the state was 2.37, where the highest percentage was recorded in Kolkata (5.19), followed by Barddhaman (4.71). During the same time period, the rate was remarkably low in North 24 Parganas and South 24 Parganas under Presidency administrative division. The situation in Maldah, Uttar Dinajpur and Dakshin Dinajpur was deteriorated over time.

6.8 Safety Parameters :

The important tools, which can assess the level of achievement of various maternal and child welfare programmes are - safe motherhood index and child survival rates.

6.8.1 Safe Motherhood Index

The Safe Motherhood Index (SMI) is an essential tool to assess the maternal health situation and also to measure Government initiatives for reducing maternal mortality during and after pregnancy by providing ante-natal care and child delivery in health care institutions.

In 2005-2006, the SMI of the state was 72.16, while the index was highest in Kolkata (98.96) and lowest in Purba Medinipur (52.47). In 2009-2010, the index was improved in all the districts with the state value of 77.57 and highest index value was recorded in Kolkata (99.52) followed by Darjiling (98.56) and Hugli (85.38). The situation was worse in Dakshin Dinajpur and Purba Medinipur with the index value of 56.86 . In the financial year 2013-2014, the index was declined marginally for the state (77.05), just because of the poor performance of ante-natal care in the rural areas. In Kolkata, the maternal health care facilities provided in many centres was found to be inadequate in comparison with the demand, as the ever increasing inflow of patients from surrounding districts, states and countries created a huge pressure on the health care

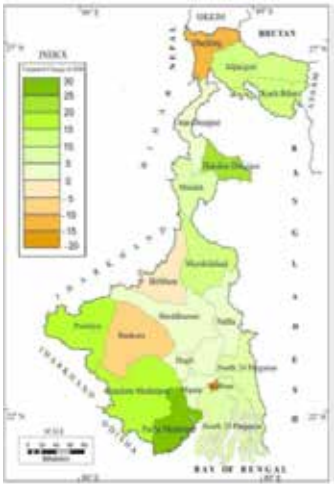


Fig-5:District-wise Positive and Negative Changes in Safe Motherhood Index in a Gap of Eight Years in West Bengal, 2005-06 and 2013-14 (Data source: SFWB, Govt. of W.B.)

institutions especially on the government run health care institutions. For this reason, Kolkata was recorded to have decrease in the index value by 15.31 [Fig-5]. This situation was followed by other districts like - Darjiling, Birbhum and Bankura, which recorded negativity in the index value during the financial years 2005-2006 to 2013-2014. The districts which improved remarkably over time are Jalpaiguri and Koch Bihar districts under Jalpaiguri administrative division, Purulia and Paschim Medinipur districts under Barddhaman administrative division and lastly, Murshidabad district under Presidency administrative division. The reason behind this improvement was the block primary health centres, sub-centres and the rural hospitals provided antenatal care, institutional deliveries and post-natal care under various maternal and child welfare programmes like - National Rural Health Mission (NRHM), National Child Survival and Safe Motherhood(CSSM) Programme and Janani Suraksha Yojana (JSY).

6.8.2 Child Survival Rate

The Child Survival Rate (CSR) is an important tool to assess the improvement in child health by calculating the decline in child mortality incidences and comparing it with increase in child survival. It is normally expressed in percentage and is calculated by subtracting under-five child mortality rate from 1,000 and dividing it by 10 [Park, 2009].

The CSR is inversely proportional to the under-five child mortality rate, indicating the improvement of the child's health. In 2005-2006, the CSR in the State was 98.19 per cent with the highest rate in South 24 Parganas district (99.43%) under the Presidency administrative division and the lowest rate in Kolkata(95.08). In 2007-2008, the CSR in West Bengal was 97.47 per cent, with the highest rate in Haora (98.61) and the lowest rate in Kolkata(95.08). In 2010-2011, the CSR rate of the state was 97.47 per cent. The district with the lowest CSR was Purulia (96.17%), followed by Paschim Medinipur (96.28%). The performance of Haora (98.43%), Hugli(98.11%) and Purba Medinipur (98.15%) was quite appreciable. In 2013-2014, the CSR in West Bengal was 98.60 per cent with the highest CSR in North 24 Parganas (99.75%) district under Presidency administrative division followed by Darjiling (99.60%) district under Jalpaiguri administrative division, mainly due to the successful implementation of the two programmes i.e. - Integrated Child Development Services (ICDS) Scheme and National Child Survival and Safe Motherhood (CSSM) Programme.

6.9 Malnutrition and Nutritional Anaemia among Mothers and Children :

The World Health Organization (WHO) has defined malnutrition as "the cellular imbalance between the supply of nutrients and energy and the body's demand for them to ensure growth maintenance and specific function". In West-Bengal, the percentage of the female children suffering from severe malnutrition was 1.30, whereas this percentage was 1.13 for

the male children during the six months span between January to June, 2014.

Table-1 : Rural – Urban Variations in Anaemic Status of Pregnant Women and Children in West-Bengal (2012-2013)

Selected Section of the Population	Anaemia	Severe Anaemia				
	In Percentage					
	Rural	Urban	Total	Rural	Urban	Total
Pregnant Women	77.5	79.8	79.2	3.3	2.8	3.1
Children	82.2	87.6	86.4	5.8	6.5	6.3

(Source : Govt. of India and IIPS, 2014)

Anaemia is mainly to affect the female health at the beginning of the adolescence mainly due to the effect of the menstrual cycle in the body. In 2012-2013, 79.20 per cent of the pregnant women and 86.40 per cent of the children were found to have anaemia among which 3.1 per cent of the pregnant women and 6.3 percent of the children had severe anaemia (<7.0g/dl) [Table-1]. Among the districts of West-Bengal, Jalpaiguri (7.5%) was recorded with the highest percentage of pregnant women suffering from severe anaemia followed by Haora (5.6%) and Kolkata (5.3%), whereas Purba Medinipur district was recorded with no such incidence in the same financial year. The districts under Barddhaman administrative division had made remarkable achievements in controlling severe anaemia among the pregnant women , while the districts under Presidency administrative division had somewhat lagged behind, mainly due to the poor performance of anaemia elimination programmes, especially marked with illiteracy and ignorance.

7. STEPS FOR IMPROVEMENT :

The various steps have been taken for the improvement of safe motherhood in West-Bengal. Various health care facilities have been created. It is as follows :

7.1 New Health Care Facilities :

The Government of West- Bengal has undertaken a number of initiatives to improve the overall health condition especially for the maternal and child health in the state. With the aim to improve the neonatal survival rate and decline the neonatal mortality incidences, 37 Sick Neonatal Care Units (SNCU) have been established (all are functional) in 19 districts with seven units performing in Kolkata hospitals during the period between 2007 and 2014. For more advanced and critical neonatal care, 198 Sick Newborn Stabilization Units (SNSU) are running in 18 districts of the state with highest number of SNSU in South 24 Parganas (23), followed by North 24 Parganas (17) under Presidency administrative division in 2014 [report by SFWB, Govt. of West Bengal, 2015]. In Kolkata, no such units have yet been established till 2014.

Another appreciable initiative of the State Government includes the establishment of Fair Price Medicine Shops (FPMS) and Fair Price Diagnostic Centres (FPDC) at Government hospitals following Public-Private-Partnership (PPP) model. The number of planned FPMS till November, 2014 was 116 out of which 94 have been functioning. These medical shops run by the Government, offer huge discounts on medicines for the benefits of the low-income group of population. During the period between December, 2012 to November, 2014; the gross sales of the FPMS have been Rs. 521.22 crore, while the amount of discount availed by the patients have been Rs.302.57 crore [report by SBHI, Govt. of West Bengal, 2015]. At present, 22 Fare Price Diagonostic Centres (FPDC) have been established in Government run hospitals by the Directorate of Health and Family Welfare to provide digital X-ray, CT scan, MRI scan and dialysis services to the people at a cheaper rate. Numerous Mobile Medical Units (MMU) have been launched in the districts of the state, especially in the underserved areas of Bankura, Purulia, Paschim Medinipur, South 24 Parganas, North 24 Parganas etc. to provide the medical services such as - radiological, diagnostic, curative and Reproductive and Child Health (RCH) services for the local people in general and pregnant and lactating women.

Though CINI is playing an active role for the improvement of the present health status of our state, the following steps are also necessary for the betterment of the reproductive health issues :

a) The state government should reduce the level of difference in district level variation regarding the medical facilities for both the pregnant women and the children.

b) Both the state government and the local government should be more aware and active about the implementation of the necessary policies, regarding safe motherhood rather than the formulation.

c) Both the pregnant women and their families must be aware about the medical facilities from the local government as well as state government.

8. CONCLUSION

Thus it has been found that safe motherhood is an important parameter for the health status of any state, especially for the women. In case of west-Bengal, the scenario of safe motherhood is getting improved year after year. Both the state government and the local government are taking initiatives for the improvement of this aspect. But more necessary steps are needed. Specially, the women should be much aware about their health as well as the rights. Then the scenario of safe motherhood of this state can be reached to the optimum level in the near future.

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