



**A QUALITY IMPROVEMENT PROJECT REGARDING BREASTFEEDING PRACTICES AMONG POSTNATAL MOTHER OF INFANTS WHO ARE ADMITTED IN SNCU OF A SELECTED HEALTH CARE SETTING**

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**ABSTRACT**

Breast milk is unquestionably the best milk for the baby. From 1<sup>st</sup> hour to first six months of life, infants should be exclusively breastfed to achieve growth & development, but most of the time this objective is not fulfilled. So to improve the practice of breastfeeding we collected the baseline data from selected unit, we observed that the breastfeeding rate of the postnatal mothers is only 48%. Even after a lot of effort, we could not achieve breastfeeding practice in our SNCU before starting our project. Then we started structured and planned programme in the form of PDSA cycle for 45 days. The study was adopted to increase breastfeeding practice rate from 48% to 80% in 6 weeks among mother in the infants of SNCU. In this QI project applied on 25 postnatal mother of infants who are admitted in SNCU of RG Kar Medical College & Hospital, Kolkata. Data was collected by valid feeding register and observation checklist. For the implementation of the project, a team was formed & a meeting was carried out among the team members. The team found the root cause analysis by fishbone model. The team members decided to carry out PDSA cycles at the interval of 15 days for carrying out three consecutive cycles, Where the first cycle deals with motivating the health care staffs, mothers in SNCU as well as postnatal ward, the second cycle deals with providing IEC materials and privacy of the mother during breastfeeding and the third PDSA cycle deals with involving the family members of the mother. After 1<sup>st</sup> PDSA cycle we have achieved an increase of only 4% of breastfeeding practice rate in the selected unit. After 2<sup>nd</sup> PDSA cycle we have achieved an increased rate of 14% of breastfeeding practice. The team observed even after 2<sup>nd</sup> PDSA cycle we did not achieve our goal, then after involving the family members in the third PDSA cycle, we have observed a dramatic increase in the breastfeeding practice rate upto 80%. The study concluded that simple planned QI group effort can improve the breastfeeding practice rate in the any unit.

**Keywords:** quality improvement, breastfeeding practices, postnatal mother, PDSA, SNCU, health care settings

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**INTRODUCTION**

Breast milk is the best milk for the baby. From 1<sup>st</sup> hour to first six months of life, infants should be exclusively breastfed to achieve optimal growth, development, and health. Breast

milk has antibodies that help keep the baby from getting sick (WHO, 2017). Breastmilk is safe, available, affordable and one of the most effective ways to ensure child health in developing countries (WHO, 2013).

Late initiation of breastfeeding ultimately leads to inadequate milk production and secretion which is prone to develop lactation failure. Exclusive breastfeeding is key to lifetime growth excellence (UNICEF, 2017). According to Unicef, only 39% of infants 0-5 months-old in the developing world are exclusively breastfed (Paula & Gustavo, 2004). Low birth weight babies who have no other symptomatic pathologies and who received breast milk had shorter hospital stays and less weight loss than those fed milk-based formula (Kositamongkol, Nanthakomon, Nukaw. 2019). Because premature and sick children are separated from their mothers in order to receive the necessary and adequate treatment required to maintain their vital functions, which will delay or interrupt breastfeeding, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) state that there is a duty to teach mothers how to begin or maintain lactation if separated from their children (WHO, 2013).

Data presented in figure 2 depicts that 40% of NVD mother giving breastfeeding /EBM their babies and 24% of NVD mother giving feeding from other source and only 8% of LUCS mother giving breastfeeding/ EBM their babies and 28% of LUCS mother giving feeding from other source. The team observed that breastfeeding practice rate in SNCU is poor both NVD and LUCS mother. Mothers are so reluctant to breastfeed their babies and attendant also same. This problem was bigger we thought. This research aims to increase the breastfeeding practice rate from 48% to 80% in 6 weeks among the postnatal mothers of the infants of SNCU.

## **METHOD**

The project took place in R.G.Kar Medical College and Hospital, Kolkata, a tertiary care center with 33 beds of Sick Neonatal Care Unit (SNCU). Before the initiation of the study, we identified that most of the baby did not get his or her own mother's breastmilk. They received feed from other source. It is also observed that breastfeeding practice in both Normal vaginal Delivery and LUCS mother is poor. A team was formed by the members of Obstetrics and pediatric field, Faculty of pediatric field, Sister-in-charge, staff nurse, student nurse, attendant of SNCU, labour room and postnatal ward. First meeting of the team held and decided to collect baseline data from feeding register from the selected unit. Study period from 1<sup>st</sup> week of Feb 2019 to last week of March 2019. Data were gathered from routine nurse's feeding register. Even after a lot of effort, we could not achieve breastfeeding practice in our SNCU before starting our project. So to improve the practice of breastfeeding we collected the baseline data from selected unit.

## **RESULTS**

Figure 1 and figure 2 shows the current status of the breastfeeding practice rate in the unit.

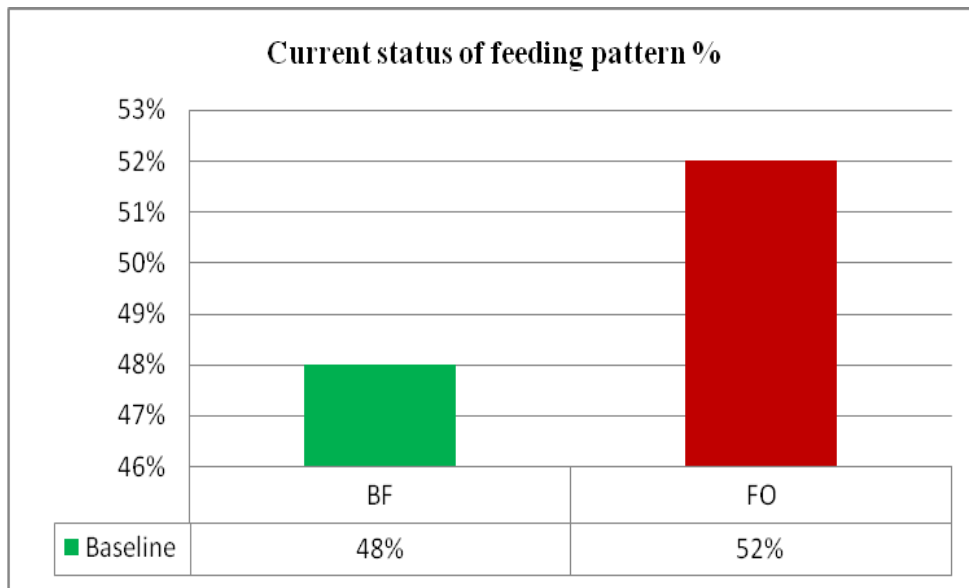


Figure 1.

Bar diagram showing % of feeding pattern among the postnatal mothers of the infants of the unit

Data presented in figure 1 depicts that 48% baby receiving breastfeeding/ EBM and 52%.baby receiving feeding from other source.

**Status of feeding pattern according to mode of delivery**

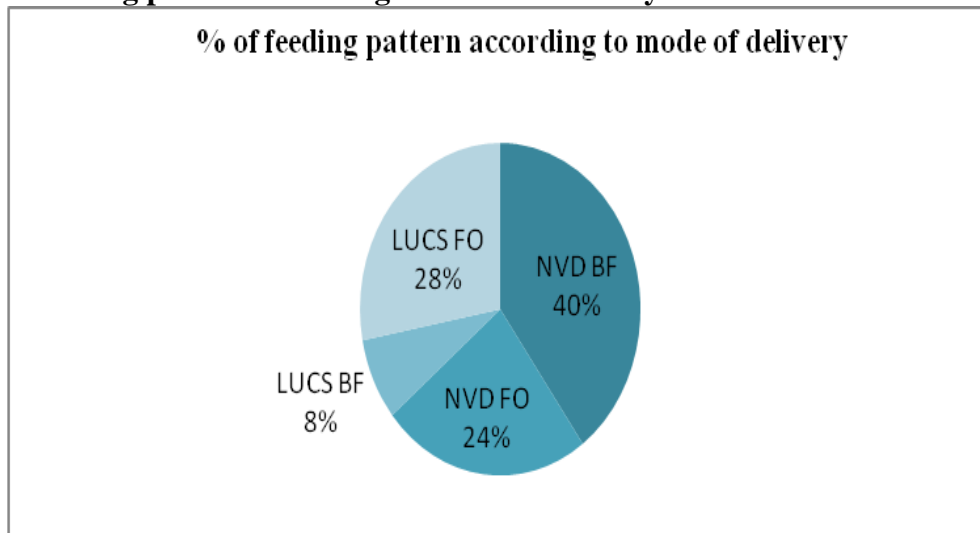
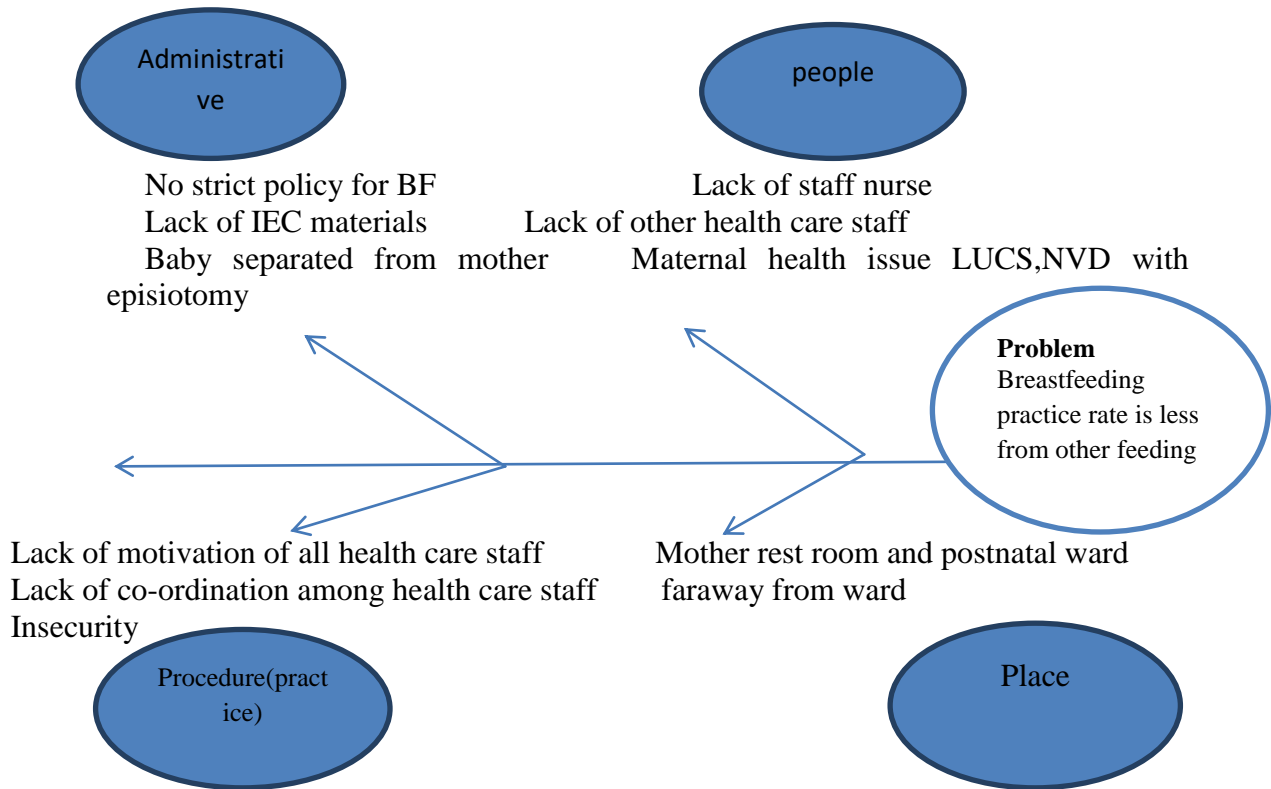


Figure 2.

Pie diagram showing % of feeding pattern according to mode of delivery of the unit.

Then the team identified the root causes analysis of poor breastfeeding practice rate by fishbone diagram (POCQI, 2019) (Fig 3)



**Figure 3.**  
**Shows the root cause analysis.**

The team decided for PDSA(Plan,Do,Study,Act) cycle. There 3 changes ideas (PDSA cycle)which were applied 15 days interval for the period of six weeks.The change ideas were implemented as PDSA cycles in accordance with the Quality improvement principles.

### 1<sup>st</sup> PDSA cycle

The team members decided to carry out 1st PDSA cycle for 15 days .Where the first cycle deals with motivating the health care staffs ,counseling and health education regarding breastfeeding among the mothers in SNCU as well as postnatal ward.After 1<sup>st</sup> PDSA cycle it is observed that breastfeeding practice rate is increased only 4% from the baseline(fig4).

### 2<sup>nd</sup> PDSA cycle

Then the team decided for 2<sup>nd</sup> PDSA cycle for another 15days,the second cycle deals with displaying IEC materials in the mother staying area and proving privacy for themother during breastfeeding along with counseling and health education (Government of India, 2014). After end of the 2<sup>nd</sup> PDSA cycle it is observed that breastfeeding practice rate is increased 14% from baseline(fig 5)

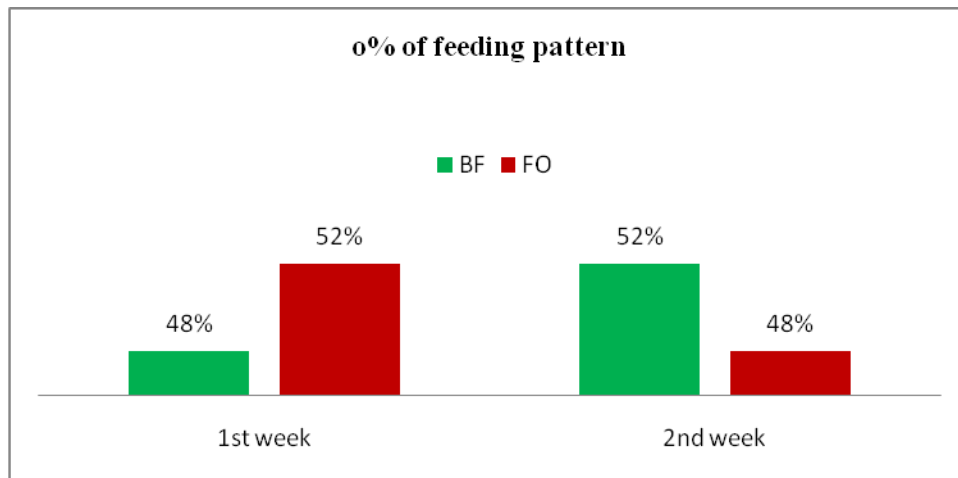


Figure 4.

Bar diagram showing % of feeding pattern among the postnatal mothers of the infants of the unit up to end of the 2<sup>nd</sup> week

Data presented in Figure 4 depicts that from the 1<sup>st</sup> week to end of the 2<sup>nd</sup> week of the study, the breastfeeding practice rate is increased from 48% to 52% and feeding from other source decreased from 52% to 48%.

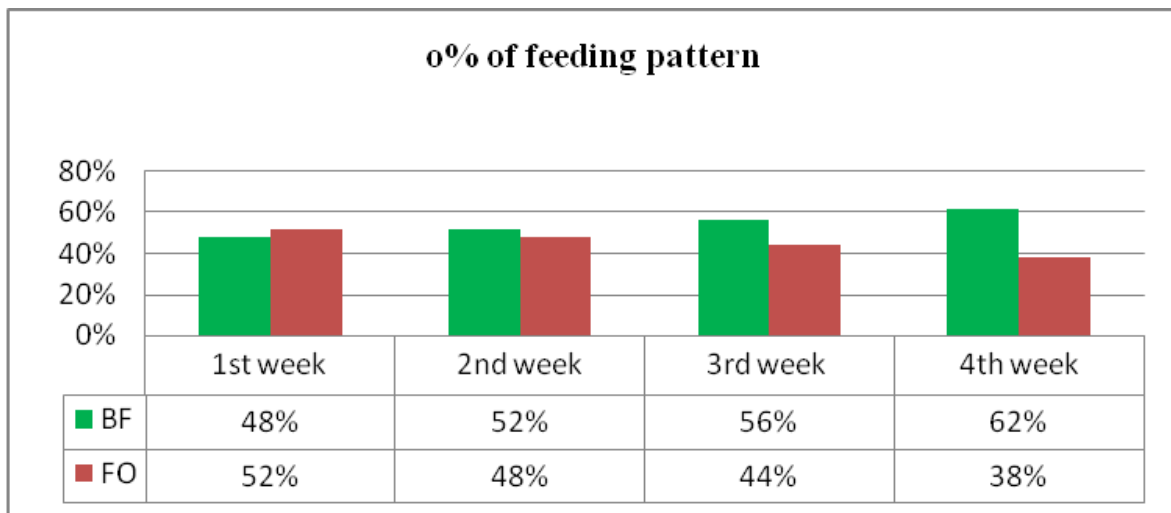


Figure 5.

Bar diagram showing % of feeding pattern among the postnatal mothers of the infants of the unit up to end of the 4<sup>th</sup> week

Data presented in Figure 5 depicts that from the 1<sup>st</sup> week to end of the 4<sup>th</sup> week of the study, the breastfeeding practice rate is increased from 48% to 62% and feeding from other source decreased from 52% to 38%.

### 3<sup>rd</sup> PDSA cycle

After the end of the 2<sup>nd</sup> PDSA cycle the team observed that the result is not satisfactory. Then the team decided for 3<sup>rd</sup> PDSA cycle for another 15 days, the family members of the mother were involved to actively participate in this programme, where they were motivated to convenience the mother for breastfeeding their babies.(fig6)

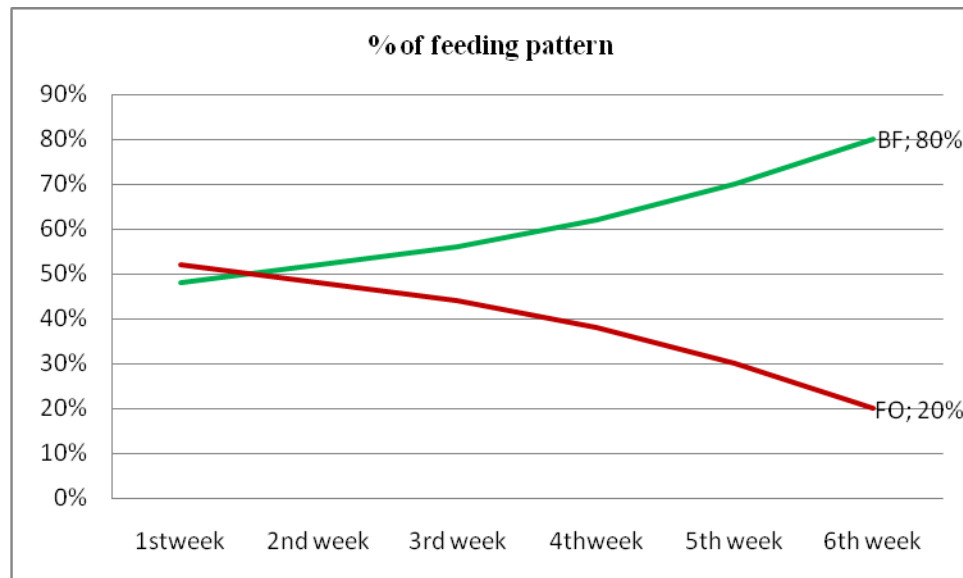


Figure 6.

Line diagram showing % of feeding pattern among the postnatal mothers of the infants of the unit from 1<sup>st</sup> week to end of the 6<sup>th</sup> week

Data presented figure 6 depicts that from the 1<sup>st</sup> week to end of the 6<sup>th</sup> week of the study, the breastfeeding practice rate is increased gradually and feeding from other source decreased gradually.

### DISCUSSION

In the baseline survey out of 25 postnatal mothers only 48% baby received breastfeeding /EBM and 52% baby received feed feeding from other source. After 1<sup>st</sup> PDSA cycle we have achieved an increase of only 4% of breastfeeding practice rate from the baseline in the selected unit. After 2<sup>nd</sup> PDSA cycle we have achieved an increased rate of 14% of breastfeeding practice rate from the baseline. The team observed even after 2<sup>nd</sup> PDSA cycle we did not achieve our goal, then after involving the family members in the third PDSA cycle, we have observed a dramatic increase in the breastfeeding practice rate upto 80%. Mothers, family members and health care staffs were actively participate with motivation for breastfeeding. Frequency of night feeding were also increased. Breastfeeding practice rate has increased from 48% to 80% within 6 weeks both normal vaginal delivery and LUCS mother.

WHO recommends that breastfeeding should be initiated in all newborns within one hour of life.<sup>10</sup> After planning of this project, we identified through root-cause analysis that there are several factors such as People issue (lack of staff nurse, other healthcare staff & mother with LUCS and NVD with episiotomy), Place issue (Mother staying area & postnatal ward are far away from SNCU, insecurity), Administrative issue (No strict policy for breastfeeding, baby separated from mother & lack of IEC materials), Practice issue (Lack of motivation & co-ordination among health care staff).

Team conducted 3 PDSA cycle to implement this project. Initially motivated the health worker and mother through counseling for breastfeeding. Then provide IEC materials, privacy and security but there was no significant improvement (Ministry of Health and Family Welfare, 2014). After motivating the family members during visiting hour (all family members available at that time) significant improvement achieved.

The team suggest that QI project is feasible and lead to improve rate of breastfeeding practice in SNCU. The project was done with involvement of existing health care staff and without any fund, which suggest the importance of simple QI principles using team approach (Sharma, Sharma, Dinesh, 2018). The study will help our hospital to improve breastfeeding practice in the future.

## **CONCLUSION**

The study concluded that simple planned QI group effort can improve the breastfeeding practice rate in the any unit. Administrators, all categories staff, health care personnel are also motivated for increasing breastfeeding practices. Mother and baby related all wards are involved themselves with this breastfeeding programme and practicing it regularly.

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## **DECLARATION OF INTEREST**

The Authors declare that there is no conflict of interest. There is no funding for this quality improvement project.

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