

Enhancing the Quality of Discharge Counselling and Reducing the Unnecessary Neonatal Follow-Up Visits: A Quality Improvement Initiative

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Abstract

This quality improvement initiative was undertaken in a tertiary care neonatal intensive care unit (NICU) of All India Institute of Medical Sciences (AIIMS), New Delhi to improve the quality of discharge counselling covering all post-natal mothers and reducing the unnecessary follow-up visits of the neonates admitted between June 2016 to December 2016 in the Follow-up clinic. A team was formulated to evaluate the reasons for poor or no discharge counselling and unnecessary neonatal follow-up visits and to plan further strategies for improving the quality of discharge counselling. Multiple PDSA cycles were implemented. The results of the all PDSA cycles were discussed amongst the team members. At the end of the study, all mothers started receiving standardised discharge counselling in 3 months time. Less number of mothers reported with minor neonatal problems. However, no reduction in the number of unnecessary follow-up visits of neonates was observed, but a change was observed in the neonatal problems. Thus, multiple simple feasible interventions led to the improvement in quality of discharge counseling.

Development in neonatal medicine in last few decades has improved the survival rates among the sick neonates including preterm (Sankar et al, 2016). Neonates receive comprehensive neonatal care during their stay in neonatal intensive care unit (NICU). All sick neonates are kept in NICU till their stabilization. Once they are on room air, maintaining saturation (SpO₂), having stable vital signs, feeding adequately and gaining weight are transferred to post natal care (PNC) wards to the mothers for few days before discharge (Bodar, 2012).

A neonatal follow-up (FU) care is considered to be an integral part of the long-term care of sick neonates. After discharge many neonates come for follow-up with problems related to breastfeeding, jaundice, and other minor problems like nappy rash, minor spotting per vagina, neonatal mastitis etc. (Narayan et al, 2003; El Radhi, 2015). In our NICU unit of AIIMS hospital, prior to this QI initiative, as a routine, all sick neonates were called for follow-up after 2 days of their discharge in FU clinic at newborn health and kangaroo mother care (NHKC), while the stable normal neonates were

called in the case of any problem identified by the mothers.

The FU clinic at NHKC runs on all working days from 10.00 to 11.30 hrs, manned by a nurse and a neonatologist. No registration is required as such in the FU clinic. All neonates are weighed in the FU clinic to know their growth pattern and feeding status. They are further assessed for presence of emergency signs like apnoea, or gasping respiration, shock, bleeding, seizures, hypoglycemia and moderate to severe hypothermia, and managed as per the standard treatment protocols (STP) available in the unit. Unstable neonate is immediately admitted in NICU, while the stable neonates are prescribed treatment by the neonatologist and sent home with the advice to revisit if required, else they are called at 6 weeks of life in routine OPD for vaccination.

Post-natal period is very difficult and challenging for the mothers especially the primigravida as they recover from the process of child birth and also learn the newborn care (George, 2005). It is a universally known that an anxious mother, if not adequately counselled and prepared during her stay in post-natal care (PNC) ward or at the time of discharge about the essential newborn care (ENBC) including the identification of danger signs like lethargy, feed refusal, excessive crying, hypo/hy-

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perthermia etc., may report unnecessarily and eventually may make the neonate vulnerable to hypothermia, infection and hypoglycemia en-route and also while waiting for their turn in OPD. This in addition adds to the problem of overcrowding in FU OPD resulting in failure to triage and manage the sick neonates appropriately on the part of health care professional (HCP).

In our PNC wards, we observed that there was no standard policy of preparing the mothers during their hospital stay to enable them to take care of their neonates at home after their discharge. Nurses working in PNC wards were not involved in ongoing counselling of mothers but they just explained mothers about the discharge advices written by the neonatologists. According to The American Academy of Pediatrics (AAP) discharge planning guidelines, it should be ensured that all newborns are discharged from NICU in good condition, their mothers are ready to manage the neonate at home, home environment is ready to receive the new comer, all required services are easily reachable, all home support available, communication with health facilities arranged, and follow-up appointment are given (AAP, 1998).

Objectives

The study was set out to:

1. Enhance the quality of discharge counselling given to the postnatal mothers about the newborn, and
2. Reduce the unnecessary neonatal follow-up visits in the OPD from baseline to 30 percent over a period of 8 weeks by improving the quality of

discharge counselling on ENC.

Review of Literature

Purdy et al (2015) reported that a thoughtful exchange of information between team members and parents is essential to identify psychosocial stress and ameliorate family concerns. Parents need emotional and educational support and follow-up resources. Establishing individualised, flexible but realistic, pre- and post-discharge plans with parents is needed to start their healthy transition to home and community.

Melnyk et al (2006) conducted a secondary analysis using data from a randomised controlled trial with 246 mothers of low birth weight (LBW) pre-term infants who were randomly assigned to behavioural intervention group (COPE) or placebo control conditions. Measures included maternal stress in the NICU, maternal anxiety and depression, and maternal beliefs about their infants and their role. Observers blind to study group condition rated the quality of mother-infant interaction in the NICU. It was concluded that participation in COPE was both directly and indirectly, via associations with increased maternal beliefs and less maternal depression/anxiety in the NICU, related to mothers' decreased post-hospital depression/anxiety and was associated with higher mother-infant interaction scores.

Wigert H et al (2014) reported that the parents' experience of communication with the staff during their infant's stay at the NICU could be described by the main theme 'being given attention or ignored in their emotional situation. The main theme was derived from three themes; (1) *meeting a fellow human being*, (2) *being included or excluded as a parent* and (3) *bearing unwanted responsibility*. The study concluded that parents experienced communication with the NICU staff as essential to their management of their situation. Attentive communication gives the parents relief in their trying circumstances. In contrast, lack of communication contributes to feelings of loneliness, abandonment and unwanted responsibility, which adds to the burden of an already difficult situation. The level of communication in meetings

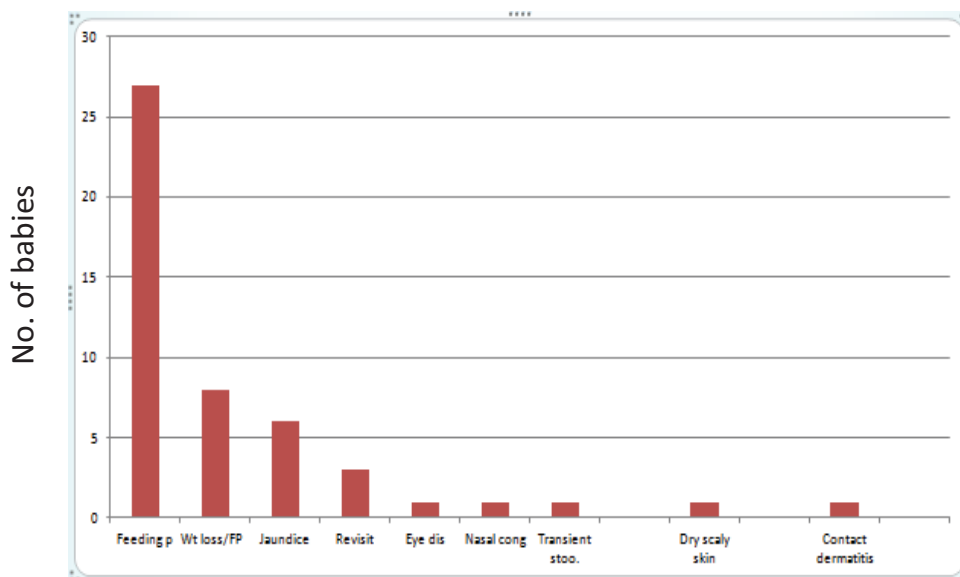


Figure 1: Common neonatal issues (Baseline)

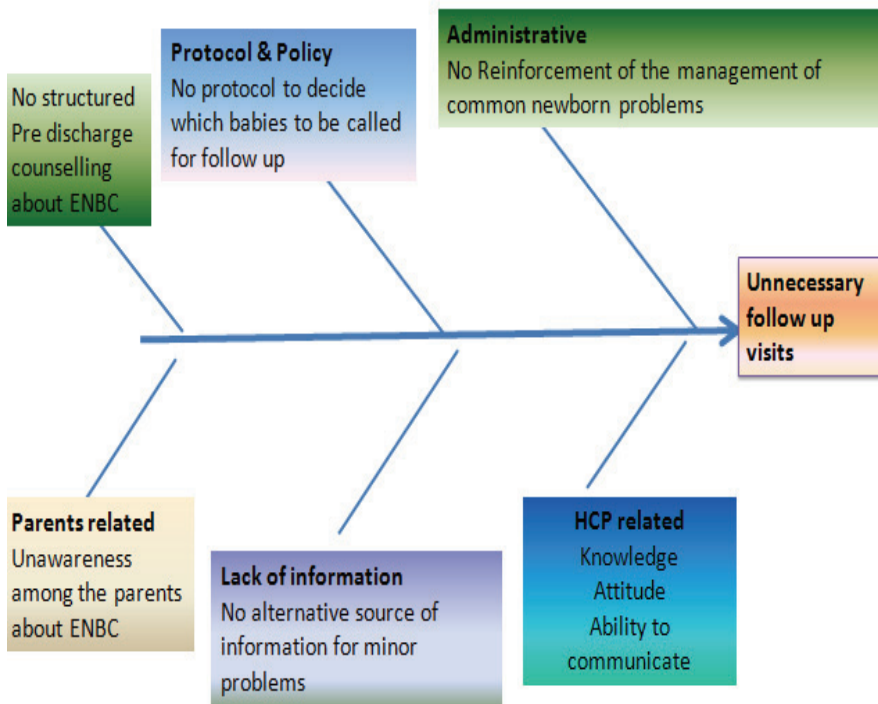


Figure 2: Reasons for no counselling (Fish bone analysis)

with staff could have a decisive influence on parents' experiences of the NICU.

Methodology

It was a descriptive survey type study involving post-natal mothers and their neonates admitted in post-natal wards, and NICU of AIIMS, New Delhi and attending FU clinic, conducted from June 2016 to December 2016.

Baseline data collection: We reviewed the records of 4 months from June to September 2016, which

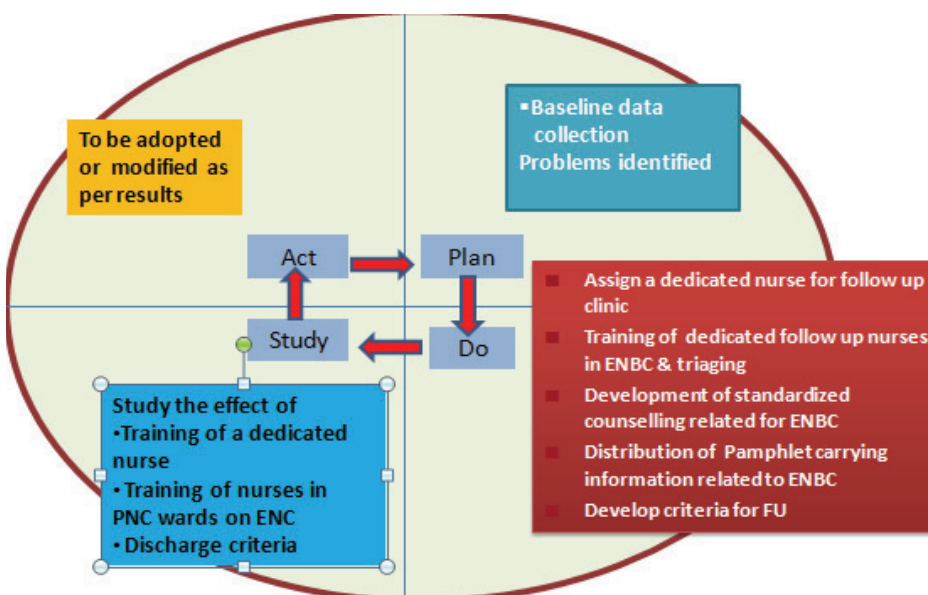


Figure 3: PDSA cycles

revealed an average 20-22 neonates attending FU clinic every day, 2-3 days following their discharge from Newborn Health and Kangaroo Care (NHKC). Majority of the neonatal problems were related to breastfeeding issues, weight loss, jaundice, revisit, eye discharge, nasal congestion, transient stool, dry scaly skin, and contact dermatitis (n=48) (Fig 1).

It was found that most of the neonatal problems were minor. More than one problem was identified in the neonates. Many visits of the parents for the neonates were unnecessary, inconvenient, required significant time and resources of the family in terms of travel cost, lost wages etc., and potentially exposed the mother-baby to infection, hypothermia and poor feeding. Majority of the reported problems of the newborns could have been easily managed at home if

mothers were properly counselled by the HCP in general and by nursing personnel in particular, about the essential newborn care (ENBC) and the danger signs, thereby avoiding the unnecessary FU visits of the discharged neonates. We decided to initiate a quality improvement (QI) project for 3 months (October to December, 2016) to reduce the number of hospital visits of the neonates to follow-up OPD.

Results

Quality improvement initiative and analysis

A quality improvement (QI) team consisting of a nurse educator, NICU faculty in-charge, one senior resident, and a follow up nurse was framed. We assumed that better pre-discharge preparation of mother by trained nurse using standardised education tool can reduce the need for follow-up visits in hospital. At the time of this QI there were no a standardised protocols for discharge counseling in post-natal ward. We collected data prospectively by doing root cause (fish bone) analysis (Fig 2).

Number of reasons found out were namely (i) overburdened doc-

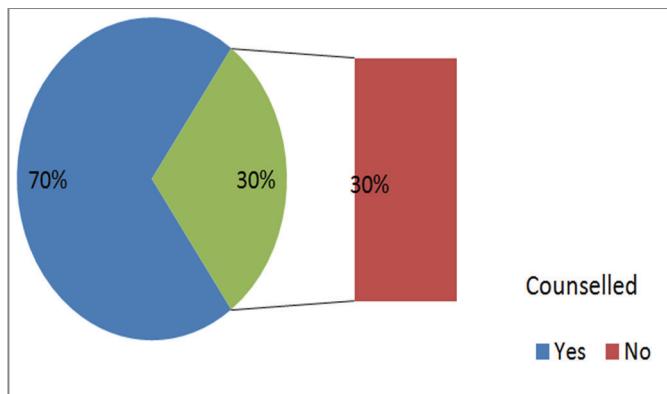


Figure 4: After PDSA cycle 1

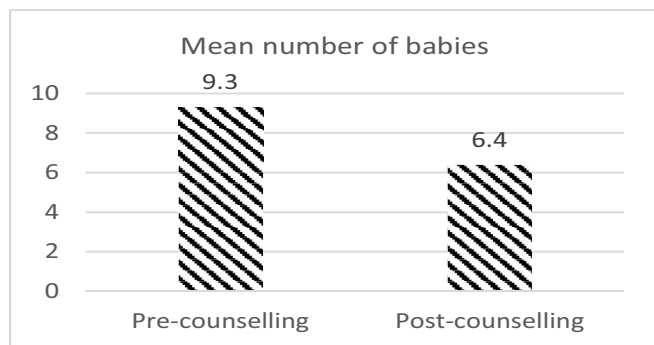


Figure 5: No. of babies coming for follow up before and after PDSA cycle 2

tors, having no time to counsel the parents, (ii) limited knowledge of nurses related to essential newborn care (ENBC) and (iii) lack of attitude of HCP towards parental counselling. The median time (minutes) taken by parents to reach the hospital was 60 (10-120). The median money spent by the parents for each hospital visit was Rs 150 (30-1200), with 3 (1-4) median numbers of people accompanying each baby. Total time spent in getting the baby examined (hours) including the time taken to reach the hospital was 2.30 hrs (0.40 – 4.0), the same could have been avoided in most of the cases.

In quality improvement initiative Plan-Do-

Study-Act cycle (Fig 3) is generally used to bring improvement in the existing system. We used total three PDSA cycles. Each PDSA cycle lasted for 2 weeks and at the end of each cycle the improvement in quality of discharge counselling and reduction in unnecessary FU visits were assessed.

As part of PDSA cycle – 1, a dedicated nurse for follow-up clinic was identified and trained in assessing the common neonatal problems. Small teaching learning sessions (2-3 nurses) on ENC were organized by the nurse educator for the nurses working in postnatal (PNC) ward. At the end of first PDSA cycle, 70% of the mothers (14/20) received post-natal discharge counselling (Fig 4).

In PDSA cycle-2, a group meeting was held in the post-natal ward between the faculty in-charge and the nurses working in the postnatal ward in order to sensitize them with the existing increased load of neonates in FU clinic. During the meeting, nurses working in post-natal wards agreed to provide detailed pre-discharge counselling to the parents.

A standardised counselling tool on ENBC was developed with the help of experts for the nurses to use at the time of counselling prior to discharge. It was decided that nurses posted in PNC wards would do first counselling at 24 hours and second counselling at 48 hours of birth. A checklist was prepared to assess the quality of counselling, done by nurses posted in the PNC ward at 24 hours and 48 hours prior to discharge. At the time of discharge all the mothers were provided with a pamphlet in Hindi describing the ENBC, and identification of danger signs in newborns. At the end of PDSA cycle -2, we found decrease in mean number of babies coming to FU clinic from 9.3 to 6.4 which was not statistically significant ($p>0.05$) with 100 percent discharge counselling of all admitted postnatal mothers (Fig 5).

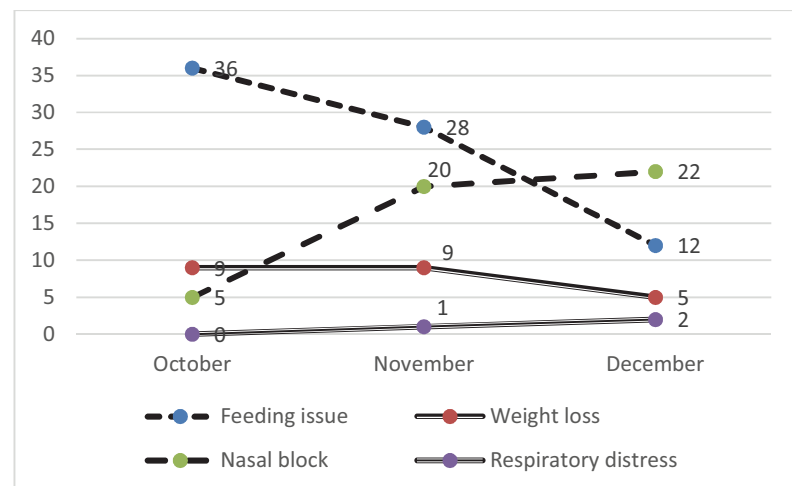


Figure 6: Changed pattern in neonatal problems after QI.

In order to reduce the case load in the FU OPD, in PDSA cycle 3, a standardised criterion for deciding upon the type of neonates to be called was developed and implemented. The criteria included (i) low birth weight (LBW) eight babies (birth weight < 2500 gm) with history of NICU stay, (ii) small for dates (SFD) babies (birth weight < 10th centile for gestation), (iii) asymptomatic hypoglycemia, (iv) neonatal hyperbilirubinemia treated with phototherapy or clinician's discretion about jaundice requiring follow up at 48 hours. Other babies are to attend FU clinic in case of any danger signs identified by

their mothers.

After PDSA cycle 3, we observed slight reduction in number of neonates attending the FU OPD from 22 to 18 neonates which was not statically significant ($p>0.05$). There was 100 percent coverage of post-natal mothers for discharge counseling. We could not make significant decrease in the number of newborns attending the FU clinic, but the newborns with feeding problems and weight loss showed decline. However, newborns with respiratory distress and nasal block showed increase which could be attributed to the seasonal variation (Fig 6).

Discussion

In the present QI initiative, we were successful in providing discharge counselling to all post-natal mothers but could not succeed in decreasing the number the neonates coming for follow-up; however, change was observed in the profile of the problems that neonates came with. Also, there was decline in number of babies coming with non-urgent, simpler problems like breastfeeding which were amenable to proper counselling of parents. In December, 2016 we observed that there were more babies coming with seasonal issues such as nasal block and respiratory distress, which was expected. Findings of the present QI study are supported by Purdy et al (2015), Melank (2006) and Wigert et al (2014).

During the project, we enquired about the acceptability of mothers towards the telephonic counselling programme (TCP) on ENC, as there is an initiative being taken for starting the telephonic counselling for the post-partum mothers in the hospital. Majority mothers (95%) had shown interest in (TCP) in which they would be able to seek expert opinion regarding baby care and the management of minor problems on phone, considering it as more convenient and quicker relief for them. It can be a better alternative for the those mothers who have to travel long distance from home to reach the FU OPD either by their own on public transport, taking off from the work place causing lot of stress to the family, wasting time, money and increasing rush in the OPD.

Nursing Implications

The present study has number of nursing implications. Nurses are considered to be the backbone of quality neonatal nursing care. There is need to initiate the nurse guided counselling sessions in the postnatal wards of all the hospitals. This QI initiative which was started on a small scale in postnatal ward has become the part of the system in the postnatal wards. It is ensured that all post-

natal mothers are counselled on ENBC prior to discharge.

Recommendations

Our QI initiatives were simple, inexpensive doable and easily integrated into available maternal health services. They can be replicated on a large scale in postnatal wards of different hospitals through hospitals and easily integrated into maternal and child care services.

Conclusion

Multiple simple feasible interventions led to enhancement in the quality of discharge counselling in the post-natal wards of AIIMS, New Delhi.

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