



A Quality Improvement Initiative

Breast feeding practices among mothers of infants admitted in Neonatal Intensive Care Unit



USAID ASSIST Project
Applying Science to Strengthen and Improve Systems

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Background

- Breast milk is unquestionably the best milk for a baby.
- ideally all babies should get mother's milk from day 1 till 6 months (WHO recommendation)
- Late expression of milk ultimately leads to inadequate milk resulting in lactation failure
- Formula feeding has been identified as one of the risk factors for the development of Necrotizing Enterocolitis (NEC) in low birth weight sick neonates
- Practice in Neonatal Intensive Care unit at AIIMS:
 - Neonates are fed with other mother milk (with consent) or formula feed intermittently till the time their mothers can produce sufficient own milk for exclusive maternal milk intake
 - This period of formula /other mother milk feeding may vary from 6-7 days after birth.

Problem Identified

- Mothers whose babies are admitted in NICU start expressing milk only after day 3
- The frequency of milk expression in these mothers is limited to two to three times in a day including the night expression of breast milk)

"This problem was bigger than we thought"

Aim

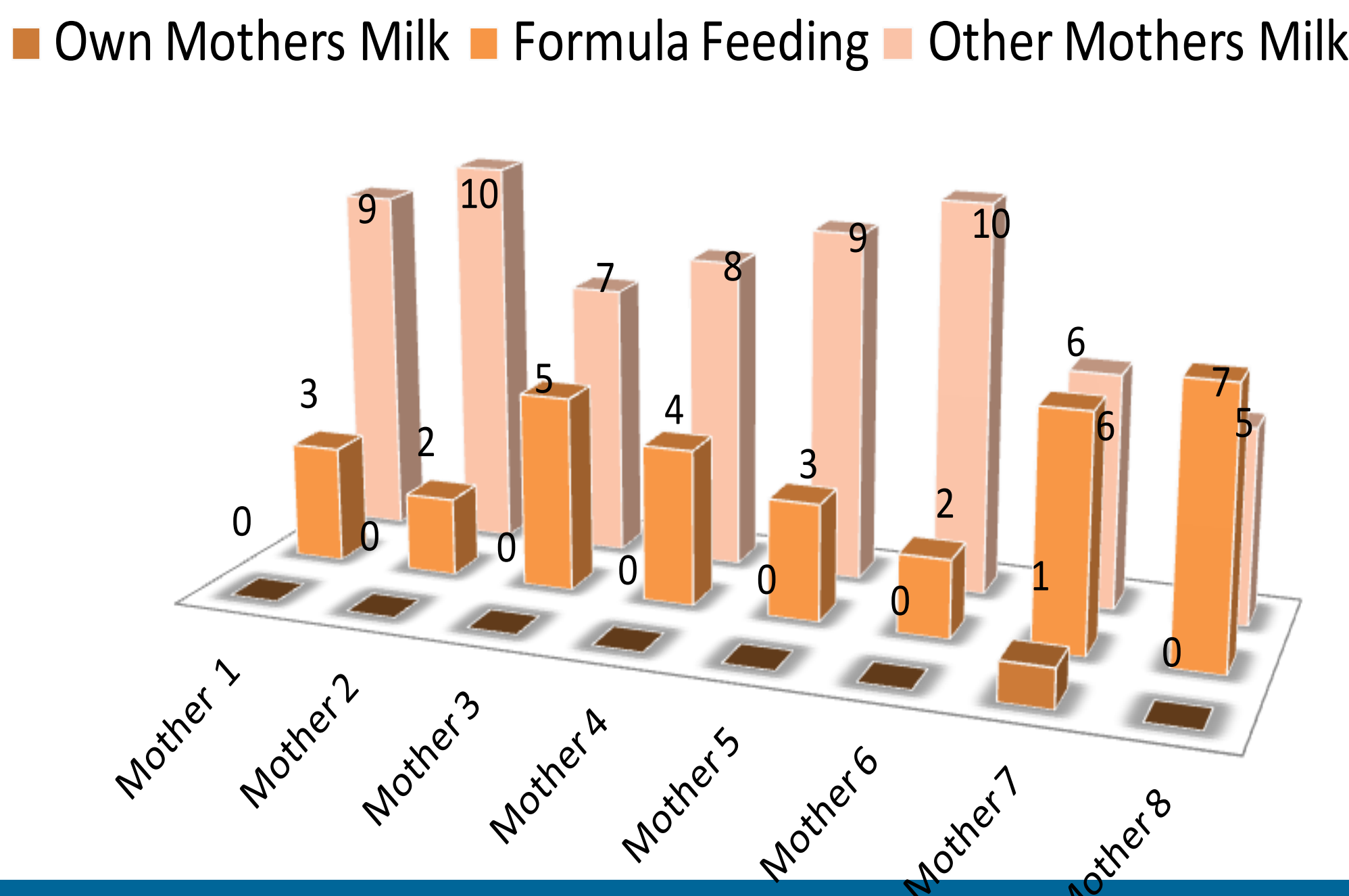
- To increase the amount of breast milk intake in admitted neonates from 5% to 30% over six weeks

Baseline Data Collection

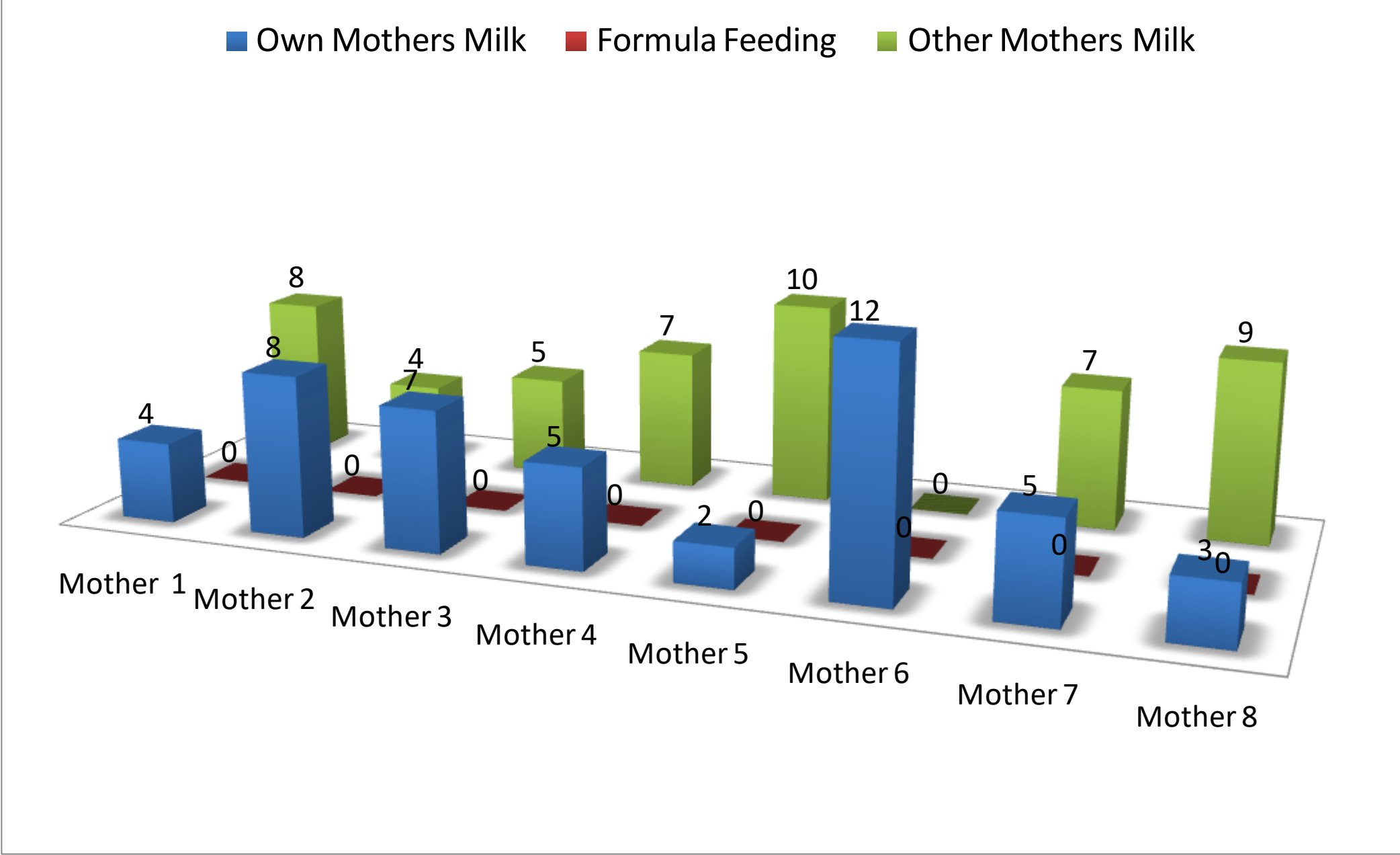
- To evaluate if the mother has received antenatal counseling related to BF
- To evaluate if the mother received post natal counseling related to BF issues
- Identified barriers related to early expression of breast milk/BF as reported by mother

Mother	D1 (mL)	D2 (mL)	D3 (mL)	D4 (mL)	D5 (mL)	D6 (mL)
M1	0	0	0	20	50	100
M2	0	0	0	15	35	110
M3	0	0	2	20	60	75
M4	0	0	15	20	40	133
M5	0	0	10	50	75	100
M6	1	0	30	40	80	235
M7	0	0	10	35	68	90
M8	0	0	0	10	50	95

Day 1 (Milk intake of admitted neonates)



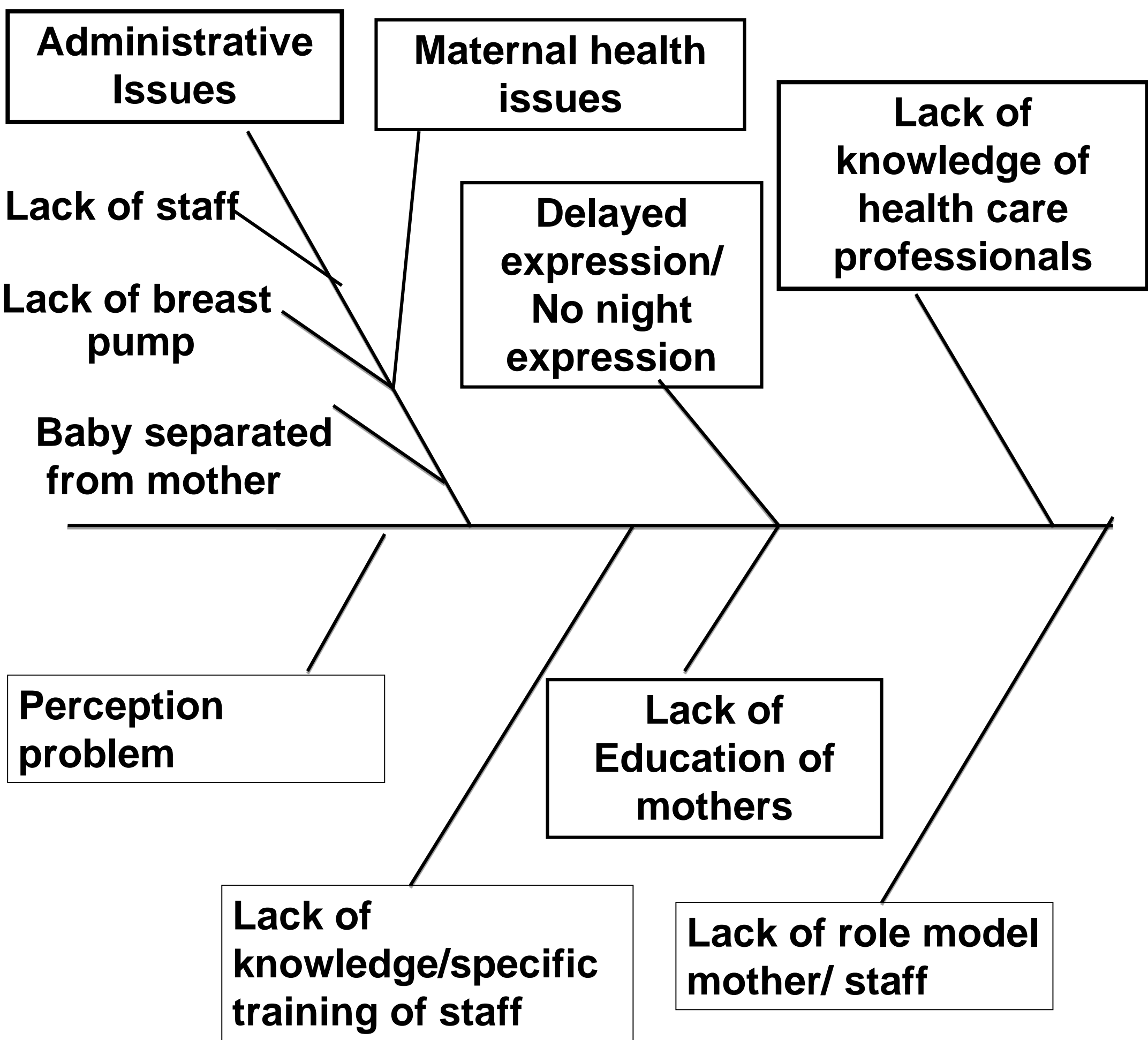
Day 6 Milk intake (number of feeds) of admitted neonates



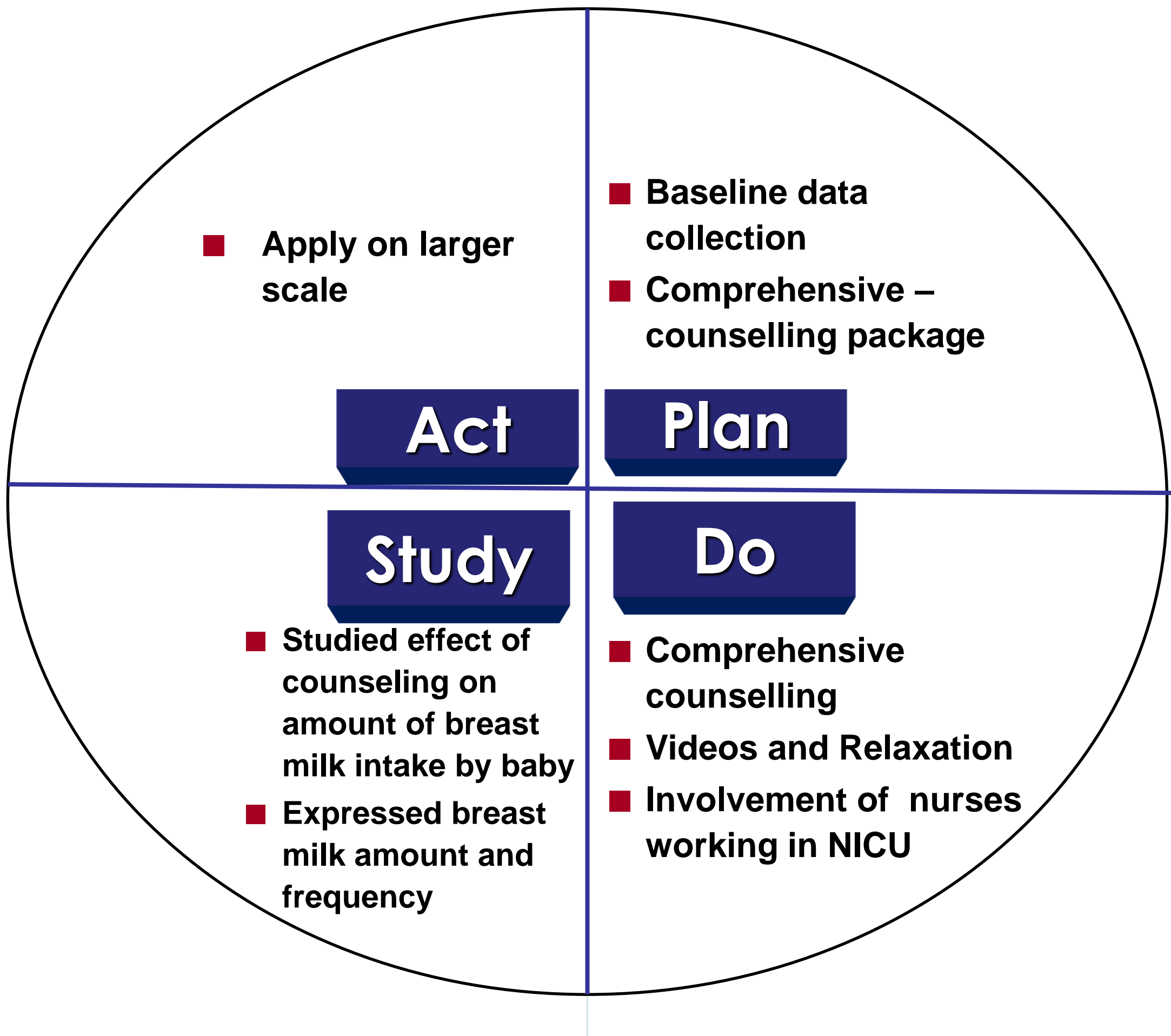
Postnatal - feeding counseling

- Current status of counseling prior to implementation
 - Two lactation counsellors are posted in postnatal and their target is only the mother newborn dyads in postnatal wards
 - No separate counseling of mothers whose infants are admitted in NICU

Root cause analysis (Fish bone)



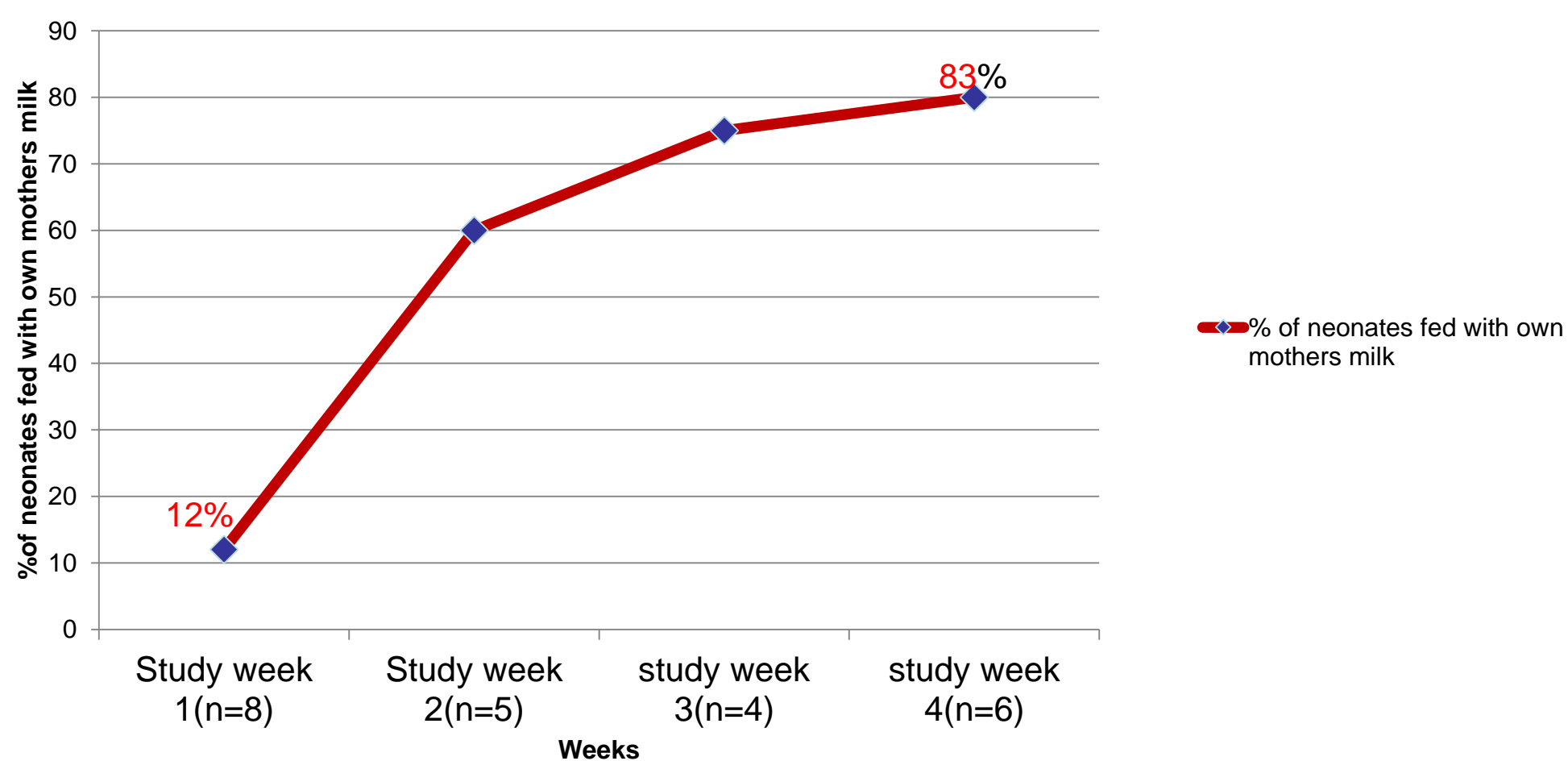
PDSA Cycle



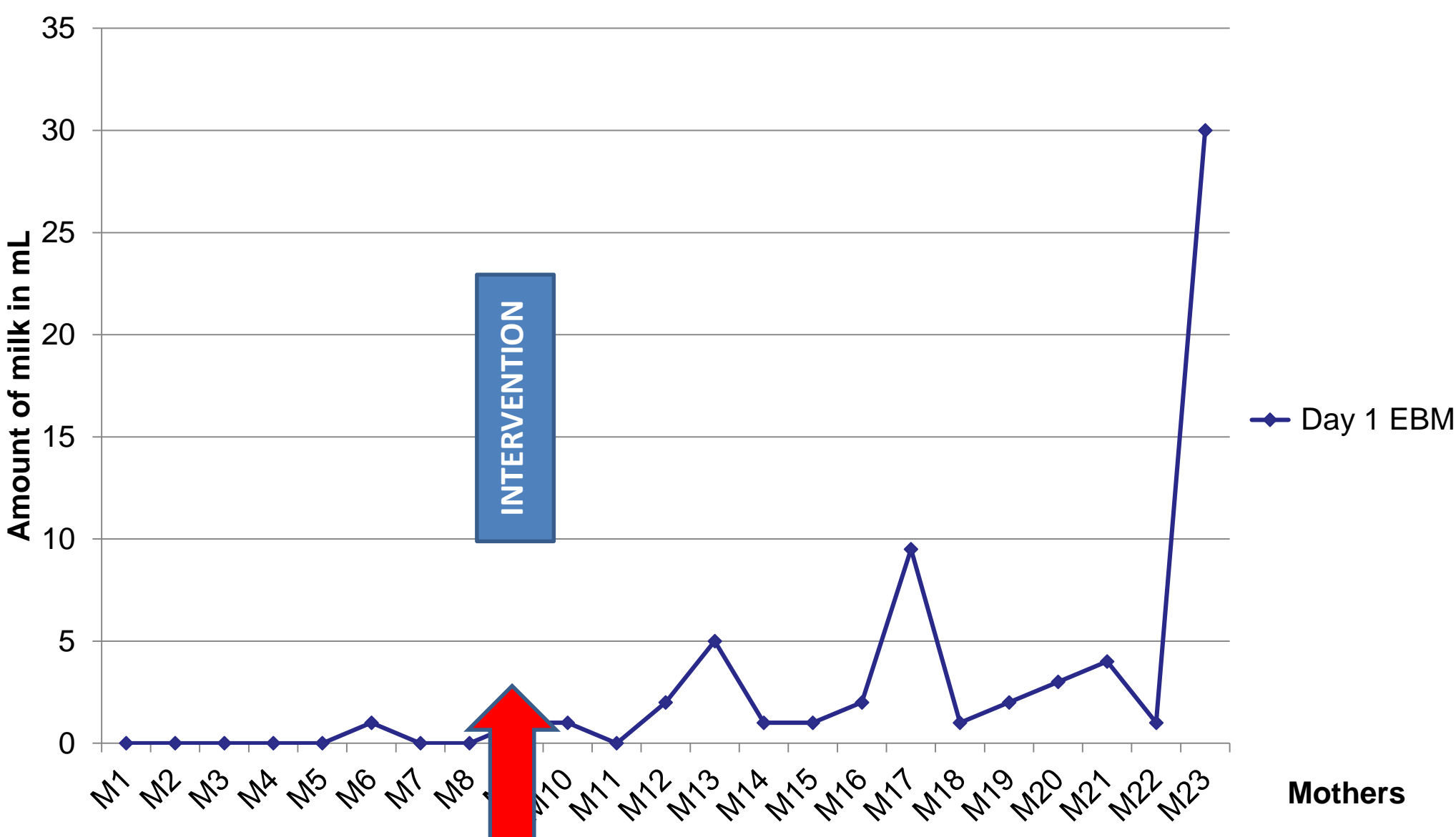
Results

- Frequency of expression of milk including night also increased from 2-3 times to 5-6 times/day
- Amount of EBM increased by 50%
- Intake of breast milk by neonates increased by D7 from 1/8 (12.5%) to 5/6 (83%).

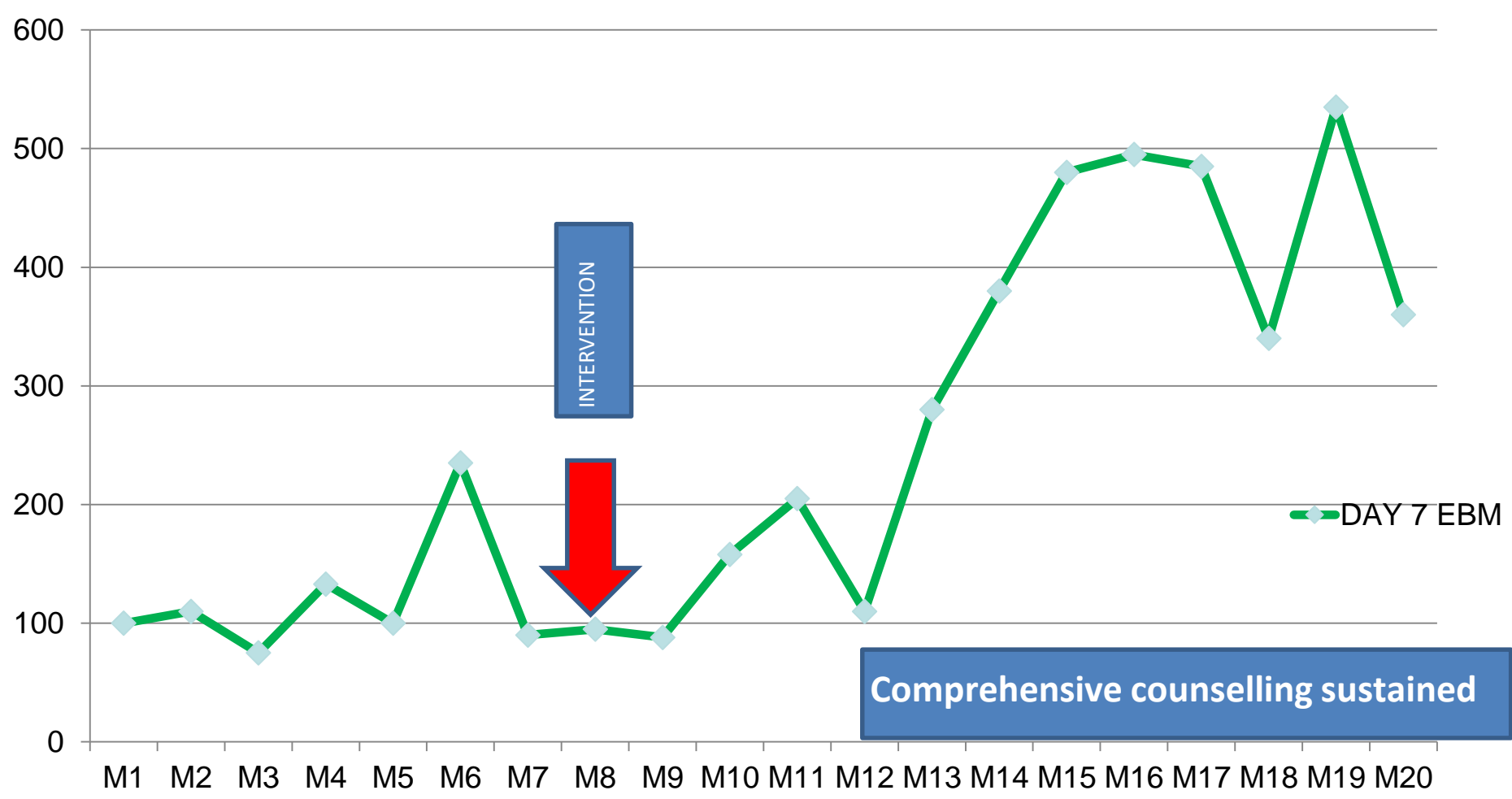
Proportion of neonates fed with own mothers milk



Quantity of breast milk expressed on day 1



Quantity of breast milk expressed on day 7



Conclusions

- Expressed breast milk (EBM) output increased following postnatal counseling
- Early and frequent expression day and night helped mother to express more milk
- These two changes resulted in early substitution of other mothers milk and formula milk by own mother's milk