

Sharing Quality Improvement Experiences across the WHO South East Asia Region

Country Spotlight: Sri Lanka

Friday, 12th October 1 pm IST

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to introduce themselves



Point of Care Quality Improvement (www.pocqi.org)



WHO COLLABORATING CENTER FOR
TRAINING AND RESEARCH IN NEWBORN CARE
Department of Pediatrics, AIIMS, New Delhi, India



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- **Today's session is being recorded.**



Webinar Roles



Speaker:

**Dr. Sandhya Doluweera,
Consultant Paediatrician In-charge of NICU,
District General Hospital- Kalutara,
Western Province, Sri Lanka**

Moderators



**Ms. Meena Joshi
Nurse Educator
NICU, AIIMS, New
Delhi**



**Dr. Ankur Sooden
Consultant
Quality of Care
WHO SEARO**

Quality Improvement Project

**To enhance early establishment of breast feeding
among the babies admitted to NICU DGH Kalutara**

*Dr. Sandhya Doluweera
Consultant Paediatrician
In-charge NICU*

District General Hospital, Kalutara

- Tertiary care hospital of the Kalutara District of Sri Lanka
- Catering to a population of 1,217,260.
- The Maternity Unit consists of 2 Obstetric units with a delivery rate of 6400 per year.
- Declared a “ Baby friendly Hospital” in 1994



Neonatology Unit



POCQI in Sri Lanka





STEP 1

**Identifying a problem,
forming a team and writing
an aim statement.**

Problems Identified

1. Significant number of admissions to MBU with **lactation problems**
2. Large number of babies were admitted to the unit to receive **multiple phototherapy**
3. Most babies admitted to NICU did **not get sufficient amount of EBM on time**
4. **Irregular waste disposal** in the unit caused an extra burden to the cleaning staff

Prioritization Matrix

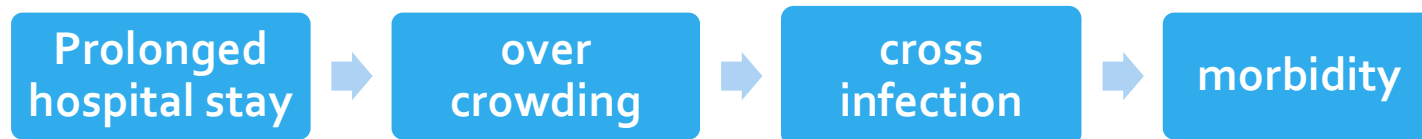
Possible aim	Important to patient outcomes (1-5)	Affordable in terms of time and resources (1-5)	Easy to measure (1-5)	Under control of team members (1-5)	Total score (4-20)
To reduce number of babies admitting with jaundice	5	2	5	4	16
To reduce the admissions with lactation problems	5	4	5	2	16
To regularize waste disposal system	4	5	3	2	14
To Improve the supply of EBM to babies in NICU	5	4	5	3	17

Problem prioritized

- **Most babies admitted to the NICU did not get a sufficient amount of breast milk on time when they were stable enough to be fed**

Breast milk is the best milk for a baby

- For the sick neonate- provides protection
easy to digest
gives optimum nutrition
- Sick newborn may not tolerate enteral feeds initially.
Therefore the first feed can be delayed
- Late expression of milk can result in inadequate milk supply & subsequent lactation failure
 - Delayed establishment of breast feeding causes.....



Increases burden on the hospital & late lactation failure

Our Practice

- All the sick babies in NICU are kept on IV fluid / TPN until they are stable enough to tolerate enteral feeds
- Once stable, enteral feeds are started by way of EBM (10ml/kg/day)
- IV fluid / TPN is continued until their mothers can produce breast milk in sufficient quantities
- Throughout the babies' NICU stay, the mothers are kept in the postnatal ward
- Mothers started expressing milk only when their babies were ready to be fed

Team members

- Team leader - Sister in-charge of NICU
- Recorder - Medical officer NICU
- Communicator - Medical officer NICU
- Sister in-charge of PNW
- Lactation management nurses -5
- Mid wife -1
- Supportive staff -2

Baseline data collection

(from 29.08.2017 to 14.09.2017)

To identify ;

- Magnitude of the problem
- Possible reasons for insufficient provision of milk
- **Inclusion criteria** - All the babies admitted to NICU
- **Exclusion criteria** - Already established on breast milk
 - Not stable to tolerate enteral feeds
 - Transferred out or died before starting on feeds

Baseline data

- Total no of babies admitted to NICU - **57**
- No of babies included into the study - **38**
- No of babies who didn't receive prescribed amount of milk - **26**

No of babies who received required amount of
breast milk was only **32%**

Aim Statement

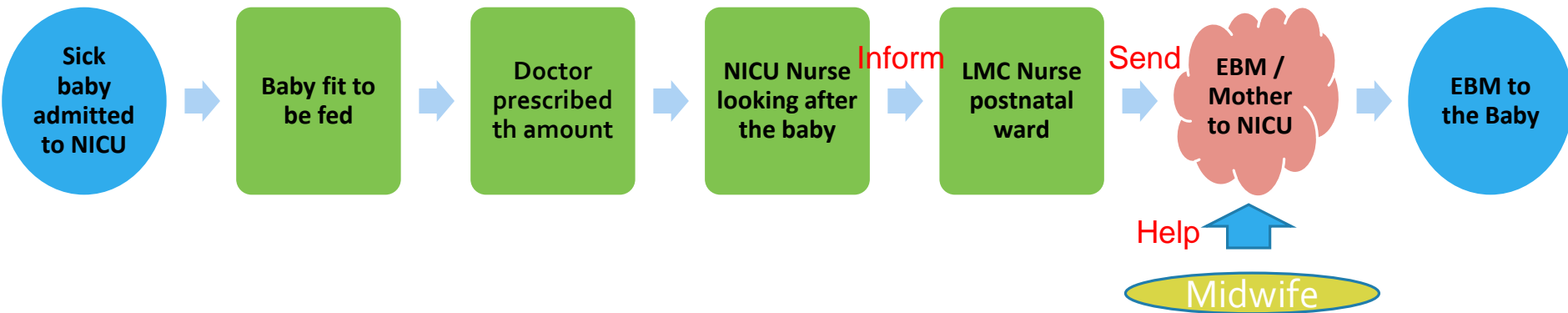
- To increase the percentage of *eligible* babies in the NICU who receive at least 10ml/kg/day EBM (within 3 hr. after the request), from 32% to 60% in 8 weeks



STEP 2

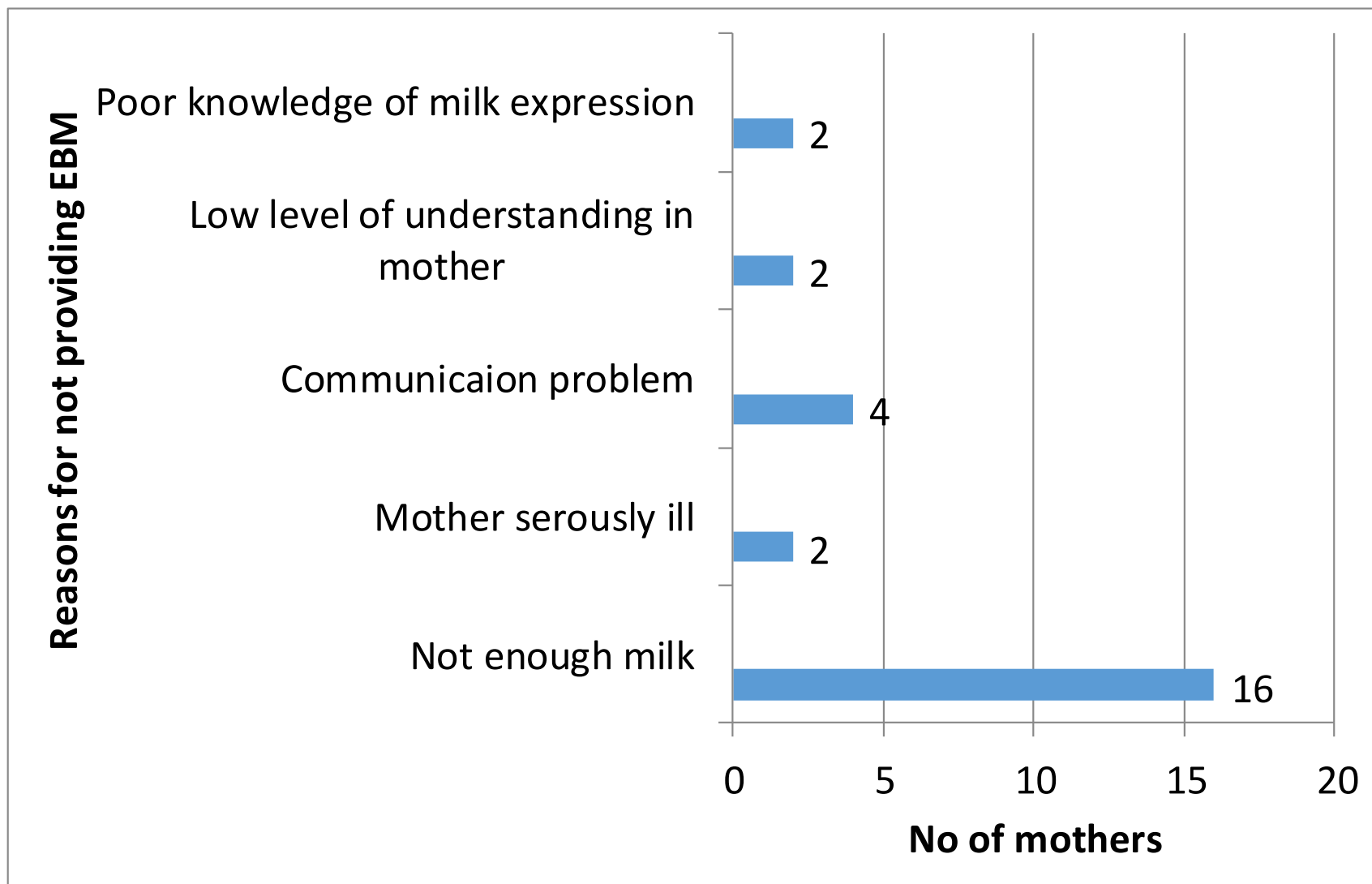
***Analysing the problem &
measuring quality of care***

Process flow chart

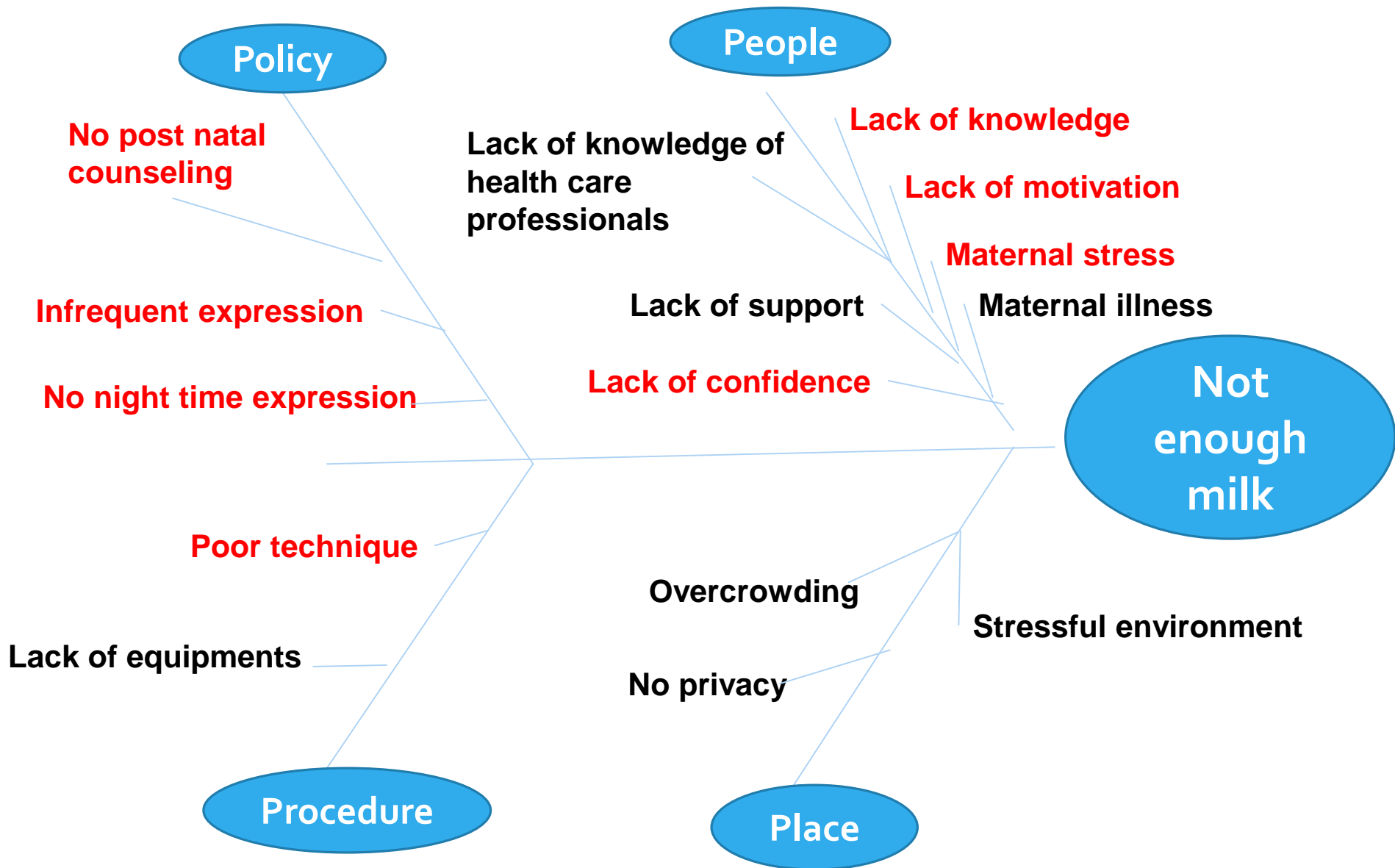


Reasons for not providing EBM

(n = 26)



Route cause analysis (fishbone diagram)



Commencement of postnatal counselling

- Lack of knowledge in mother
- Lack of motivation
- Maternal stress
- Lack of confidence
- Infrequent expression
- No night time expression
- Poor techniques of expression

Indicators

Indicator = % of eligible babies in NICU who receive at least 10ml/kg/day EBM (within 3 hr. after the request)

Calculating the indicator

$$\frac{\text{\# eligible babies in NICU who received at least 10ml/kg/day EBM (within 3 hr. after the request)}}{\text{\# babies in NICU who were fit enough to be fed}} \times 100\%$$

Data collection

Frequency	Daily
Responsibility	Sister in charge of NICU / Nurse in charge of LMC
Data source	Bed Head Ticket of baby



STEP 3

Developing & testing changes

Developing changes

- **Implementation of comprehensive postnatal counselling of mothers whose babies were admitted to the NICU**
- To identify mothers who need counselling their and display their names displayed in the postnatal ward
- Mothers reminded to express milk every 3 hours
- Expressed milk was stored in the NICU for the future use of the baby

Postnatal Counselling

3 times a day (8 am, 11am, 4pm)

- During the counseling session the following were highlighted;
 - The importance of giving early breast milk to the baby
 - How breast feeding works
 - Importance of regular expression & night time expression
 - Technique of expressing milk
 - Relaxation exercises

Duration – 10 mts

- Videos on expression of milk was shown on day 2 to mothers who were unable to provide sufficient amount of milk
- MO's were responsible to daily update the mothers about the condition of their babies to relieve their stress

LMC nurse counselling a mother



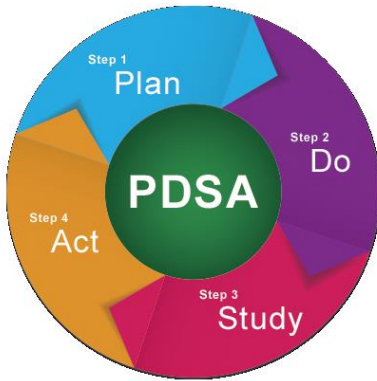
Helping mothers to express milk



Storage of EBM

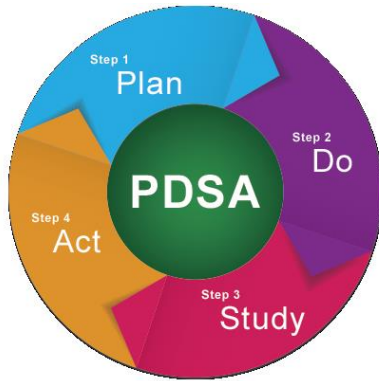


- Expressed colostrum was given to all the babies if there was no contraindication



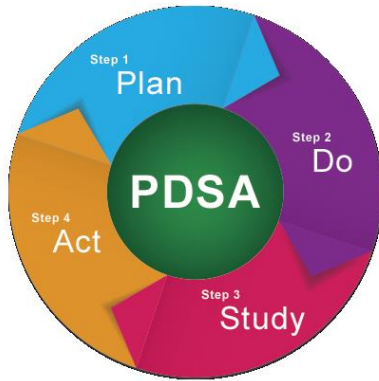
PDSA 1

- **Plan:** LMC Nurse tried to counsel a mother 6hrs after the delivery
- **Do:** Nurse could not do it as mother was in pain
- **Study:** Mother has not had pain relief
- **Act:** Mothers condition was checked before counseling



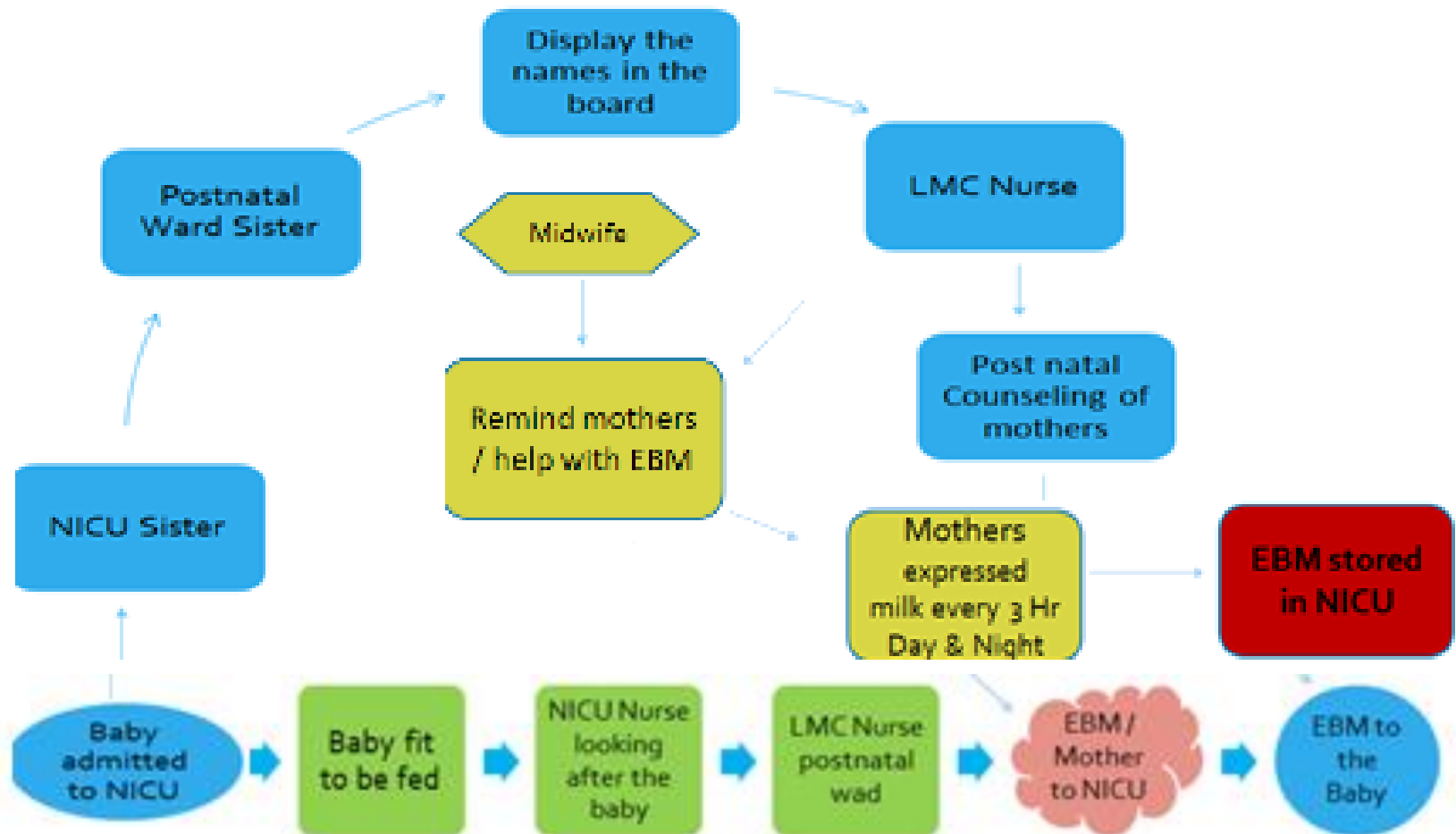
PDSA 2

- **Plan:** LMC Nurse tried to counsel a mother after checking the mothers condition
- **Do:** Nurse could not do it as mother could not understand the language
- **Study:** Mother could understand only Tamil, Nurse was not fluent in Tamil
- **Act:** To check mothers language preference before counseling & to get an interpreter if necessary



PDSA 3

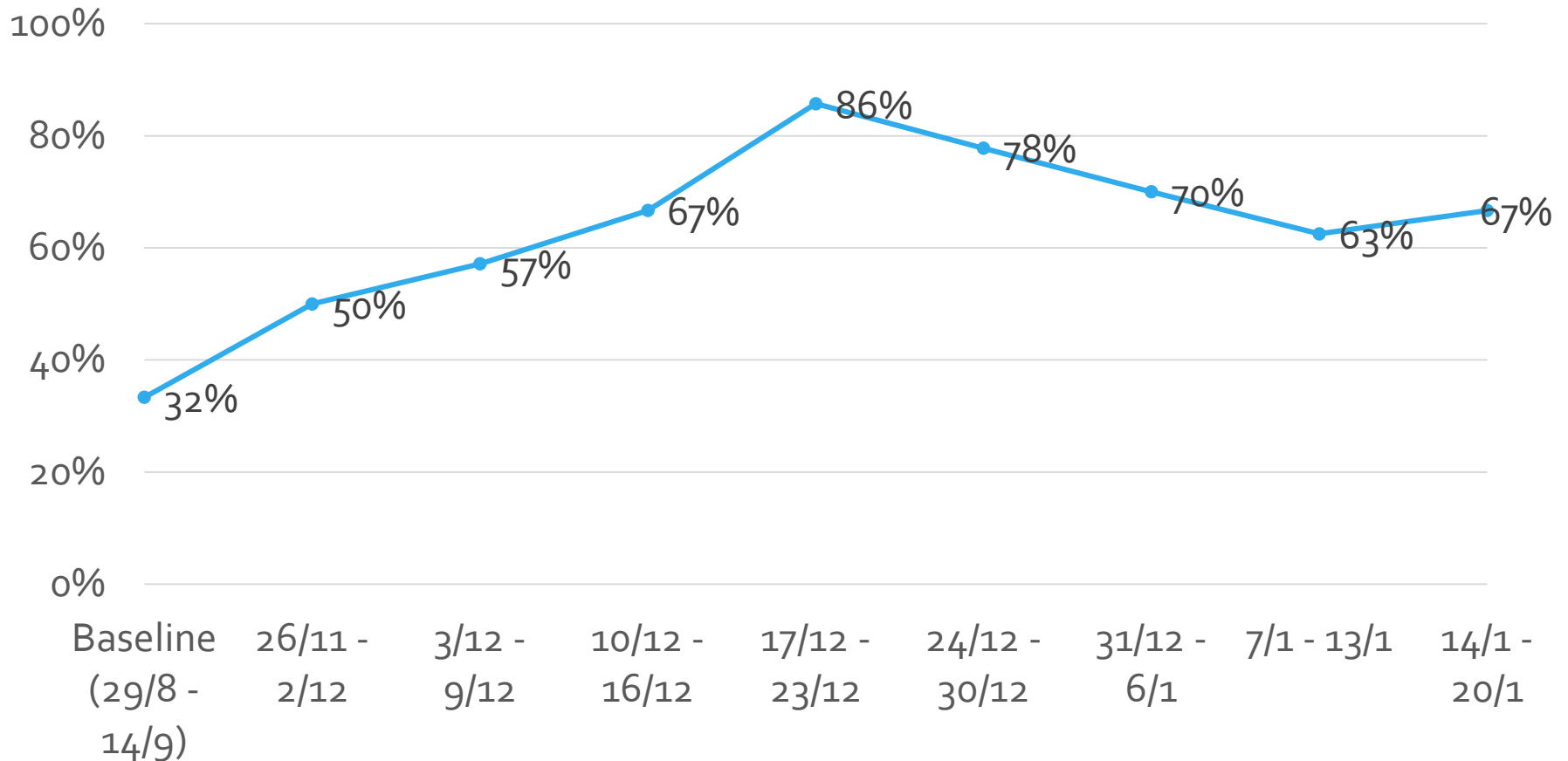
- **Plan:** LMC Nurse tried to counsel the mother after checking the mothers condition & language preference
- **Do:** Mother has not expressed milk
- **Study:** Mother has not understood the technique of expression
- **Act:** To teach the technique of milk expression on mother herself rather than on the breast model



Time Series Chart

**% babies admitted to NICU Kalutara who received EBM \geq prescribed
10ml/kg/day when they were fit to be fed**

(26 Nov 2017 - 20 Jan 2018)



Results

- We could achieve our target of increasing the percentage of babies in NICU who receive at least 10ml/kg/day EBM when they were fit enough to be fed (within 3 hr. after the request) from 32% to >60% (67%) in 8 weeks

Observations

- Mothers initiated the practice of frequent expression of milk day & night from the day of admitting their babies to NICU
- Most of them used to visit the NICU regularly to express milk even before they were asked to do that
- They themselves sought the help of the LMC nurses to express milk when they were having difficulties
- NICU staff developed the interest of getting EBM as soon as the babies were fit enough to be fed
- Post natal staff was motivated to send mothers / EBM to NICU on time

Further observation

- After the 2nd counseling with a video session 92% of them received the required amount of milk by day 2
- 96% were on full feeds with in first 5 days of starting the feeds (off I.V.fluids)
- Nurses taking the initiation of getting approval from the doctors to start feeds rather than waiting for the doctors request

Conclusion

- Provision of EBM increased after postnatal counseling
- Postnatal counseling could improve the attitudes of mothers towards their babies in NICU
- Participating in the project itself motivated the staff towards changing the practices in the unit

All of these resulted in early establishment of breast feeding & early discharge from the hospital



STEP 4

Sustaining improvement

Making a new policy

- Every mother whose baby is admitted to NICU has to be counseled by a designated LMC Nurse within first 12hrs
- Mothers are encouraged to express their milk starting from day 1, both day & night
- To designate a particular nurse for each shift who is responsible for getting EBM from the mothers whose babies are in NICU
- To have 2 counseling sessions per mother with a video session
- MO's in postnatal ward should daily update mothers on the condition of the baby

Quality Improvement Project

To enhance early establishment of breast feeding among the babies admitted to NICU



Staff Motivation



Quality Improvement Project to enhance early establishment of breast feeding among the babies admitted to Neonatal Intensive Care Unit, District General Hospital Kalutara



Background

- Breast milk is the best milk for a baby.
- It is particularly good for the sick neonate as it is easy to digest, provides protection against infection & gives optimum nutrition for their growth.
- However, sick newborns may not tolerate enteral feeds initially. Therefore the first feed can be delayed from hours to days.
- Late expression of milk can result in inadequate milk supply & subsequent lactation failure.
- Delayed establishment of breast feeding causes....



Increase burden to the hospital & late lactation failure

- The practice in our unit:
- To initiate breast milk to all sick neonates as soon as they are stable enough to tolerate enteral feeds by way of EBM. Until then, they are kept on IV fluid / TPN.
 - Mothers started expressing milk only after their babies were ready to be fed.

Problem Identified

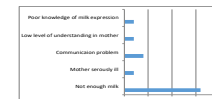
Most babies admitted to NICU did not get sufficient breast milk on time when they were fit enough to be fed.

Team Members for QI Project

Team leader - Sister in-charge of NICU, 2 Medical officers NICU, Sister in-charge of PNW, 5 Lactation management nurses, Mid wife, 2 Supportive staff members.

Baseline Data Collection

- Study period - 17 days (29.08.2017 to 14.09.2017)
- To identify the magnitude of the problem & possible reasons for insufficient provision of milk.
- Results - No of babies who received sufficient quantity of breast milk on time was only 33%.
- Mothers who couldn't provide sufficient EBM were interviewed by a medical officer to find out the reasons.



Route cause analysis (Fish Bone)



Commencement of postnatal counselling of mothers can address following causes of insufficient milk

- Lack of knowledge in mother
- Lack of motivation
- Maternal stress
- Infrequent expression
- No night time expression
- Poor techniques of expression

Our Aim

To increase the percentage of babies in NICU who receive at least 10ml/kg/day EBM (with in 3 hr. after the request), when they were fit enough to be fed, from 33% to 60% in 8 weeks.

Process

- Postnatal Counselling was done by the Nurses three times a day (8 am, 11am, 4pm), one to one or as a group.
- Videos on expression of milk was shown on day 2 to mothers, who had a difficulty in getting EBM.
- Counseling by the medical officers were done during their postnatal round once daily.

Each mother was supposed to have at least one counseling session

- During the counseling session following were highlighted;
- The importance of giving breast milk to the baby as early as possible
 - How breast feeding works
 - Importance of regular expression & night time expression
 - Technique of expressing milk
 - Relaxation exercises

Duration - 10 minutes

MO's were responsible to update the mothers on the condition of their babies daily to relieve their stress



Storage of EBM



Expressed colostrum was given to all the babies if there was no contraindication

PDSA Cycle

PDSA Cycle 1

Plan : LMC Nurse tried to counsel the mother (6hr after the delivery).

Do : Nurse could not do it as mother was in pain.

Study : Mother has not had pain relief.

Act : Mothers condition was checked before counseling & she was kept comfortable.

PDSA Cycle 2

Plan : LMC Nurse tried to counsel the mother after checking the mothers condition.

Do : Nurse could not do it as mother could not understand the language.

Study : Mother could understand only Tamil, Nurse was not fluent in Tamil.

Act : To check mothers language preference before counseling & to get an interpreter if necessary.

PDSA Cycle 3

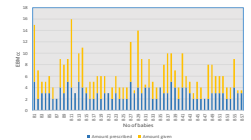
Plan : LMC Nurse tried to counsel the mother after checking the mothers condition & language preference.

Do : Mother has not expressed milk.

Study : Mother has not understood the technique of expression.

Act : To teach the technique of milk expression on mother herself than on the breast model.

Results



We could achieve our target of increasing the percentage of babies in NICU who receive at least 10ml/kg/day EBM when they were fit enough to be fed (with in 3 hr. after the request) from 33% to >60% (70%) in 8 weeks.

Observations

- Mothers initiated the practice of frequent expression of milk day & night from the day of admitting their babies to NICU.
- Most of them used to visit the NICU regularly to express milk even before they were asked to do that.
- They themselves sought the help of the LMC nurses to express milk when they were having difficulties.
- NICU staff developed the interest of getting EBM as soon as the babies were fit enough to be fed.
- Post natal staff was motivated to send mothers / EBM to NICU on time.
- After the 2nd counseling with a video session 92% of them received the required amount of milk by day 2.
- 96% were on full feeds (off IV fluids) within first 5 days of starting the feeds.

Conclusion

- Provision of EBM to babies in the NICU increased after postnatal counseling.
- Postnatal counseling could improve the attitudes of mothers towards their babies in NICU.
- Project itself motivated the staff towards changing the practices in the unit.
- All of these resulted in early establishment of breast feeding & early discharge from the hospital.

Making a New Policy

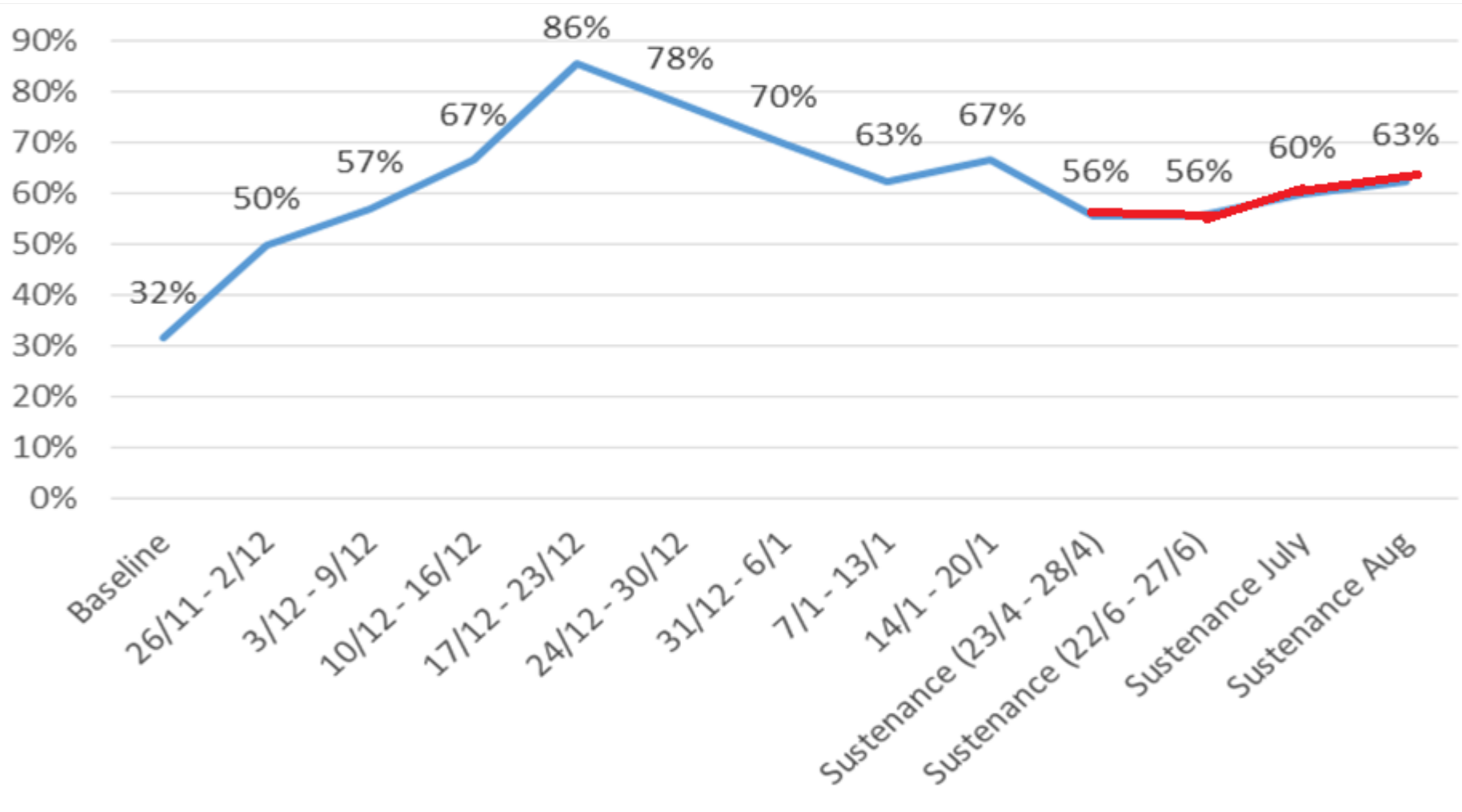
- Every mother whose baby is admitted to NICU has to be counseled by a designated LMC Nurse within the first 12hrs.
- Mothers are encouraged to express their milk starting from day 1, both day & night.
- To designate a particular nurse for each shift who is responsible for getting EBM from the mothers whose babies are in NICU.
- To have 2 counseling sessions per mother with a video session.
- MO's looking after the baby are responsible to find out the reason if a baby is not getting EBM.
- MO's in postnatal ward should update mothers on the condition of the baby daily.



PERCENTAGE OF BABIES ADMITTED TO NICU-KALUTARA WHO RECEIVED EBM
 ≥ PRESCRIBED 10ml/Kg/day WHEN THEY WERE FIT TO BE FED



% babies admitted to NICU Kalutara who received EBM \geq prescribed 10ml/kg/day when they were fit to be fed





Thank you
Questions & Discussion
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Next Steps

- ☐ Contact your Coach. If you don't know who your coach is please email us or leave us a note in the chatbox.
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