Title- Early initiation of breastfeeding in a tertiary care hospital

No matter where a newborn takes his or her first breath, the desire to give that baby the best start in life is universal. The first hours and days after birth are one of the riskiest periods of a child's life — but getting an early start to breastfeeding offers a powerful line of defense.

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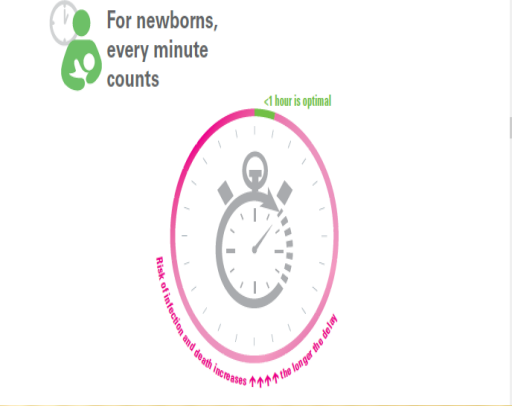
INTRODUCTION



Provision of mother breast milk to infants within one hour of birth is referred to as "early initiation of breastfeeding" and ensures that the infants receives the colostrum or "first milk", which is rich in protective factors for the health of infants

For newborns, every minute counts Risk of infection and death increases the longer the delay Breastfeeding <1 hour after birth saves lives and provides benefits that last a lifetime. Waiting 1 day or more increases their risk of death* by more than 2 times. Waiting 2-23 hours increases their risk of death* by 1.3 times. The longer babies need to wait,, **the greater the risk. 24h 2-23h <1h *Risk of death is presented for the first 28 days of life and in comparison to those who initiated in <1 hour**.

Source: Smith Emily R, et al. 'Delayed breastfeeding initiation and infant survival: A systematic review and meta-analysis.' PLoS

Timely initiation of breast-feeding: Refers to percent of infants (0 - < 12 months) who were put to the breast within one hour of delivery.

”

Calculated as:

Number of infants (0< 12 months) put to the breast within 1 hour of delivery x 100
Total number of infants (0< 12 months)

Countries and territories	Latest estimate[i]			Baseline estimate for trend [ii]		Trend[iii] Category
	Year	Early initiation of breastfeeding (%)	Rank [iv]	Year	Early initiation of breastfeeding (%)	
INDIA	2015	41.5	56	2005	23.1	⇧

Source: UNICEF Global databases 2018. UNICEF_WHO_Capture_the_moment_EIBF_2018

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Globally, only two out of five newborns are put to the breast within the first hour of life

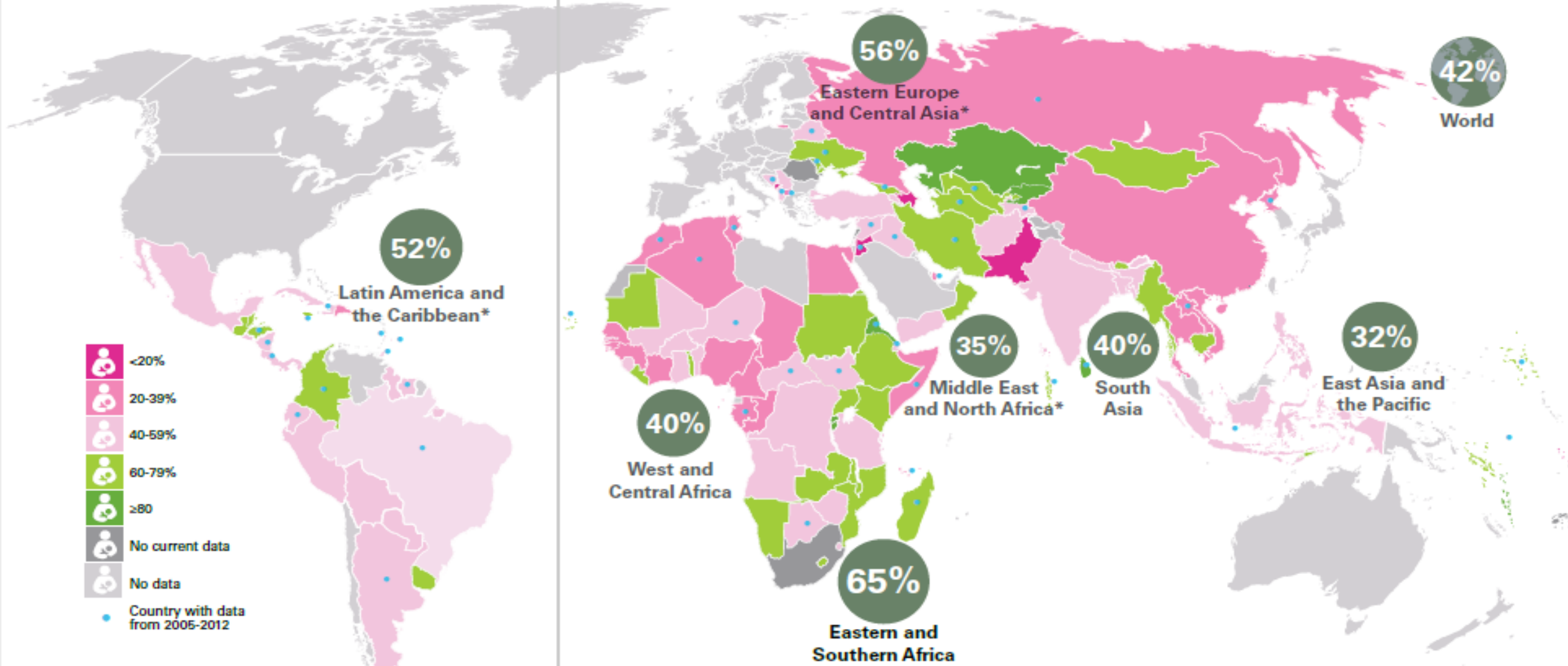


Figure 2. Per cent of newborns put to the breast within one hour of birth, by country and region, 2017.
Source: UNICEF global databases, 2018. For notes on the data, see Annex 3.

OBJECTIVES –

a). To determine the the rate of early initiation of breast feeding in a tertiary care hospital

b). To Improve the first hour breastfeeding Initiation rate by implementing PDSA Cycle as quality improvement method and determining early initiation rate again.

METHODOLOGY-

<u>Research Question</u> – What are the operational method for improving the rate of early initiation of breast feeding in a tertiary care hospital

<u>Research Design</u> - Observational Cross sectional study and Quality Improvement study using PDSA Study cycle as quality improvement method

Study Setting - **Yashoda SuperSpeciality Hospital, kaushambi, Ghaziabad**

Study area-

(a)Labor Room
(b) patient room
(c)Post-Operative Area
(d)Operation Theatre

Study Population - **Inpatient Pregnant women residing NCR regions**

- **Inclusion criteria** -
- **Stable newborns ≥35 weeks of gestation born and weight more than 2500 gm by cesarean section under spinal anesthesia and by normal vaginal delivery**

Exclusion criteria-

hemodynamically unstable, had respiratory distress , encephalopathy in whom feeding would be risky , in whom mother was sick (*e.g.*, eclampsia, or comatose) or where breastfeeding was otherwise drugs, or HIV-infected who had opted for top feeds)

Limitation- timings 7pm- 9 am

Data collection-

Study duration- 65 days

Sampling technique – convenience sampling

Sample size- 152 – (total observed cases in study duration)

Steps followed for baseline study -

(a)Observing cases for initial 15 days and calculating the compliance of first hour initiation of breastfeeding in hospital by following the delivery cases

(b)Eliciting possible reasons for delayed initiation of breastfeeding by fish bone analysis by following cases

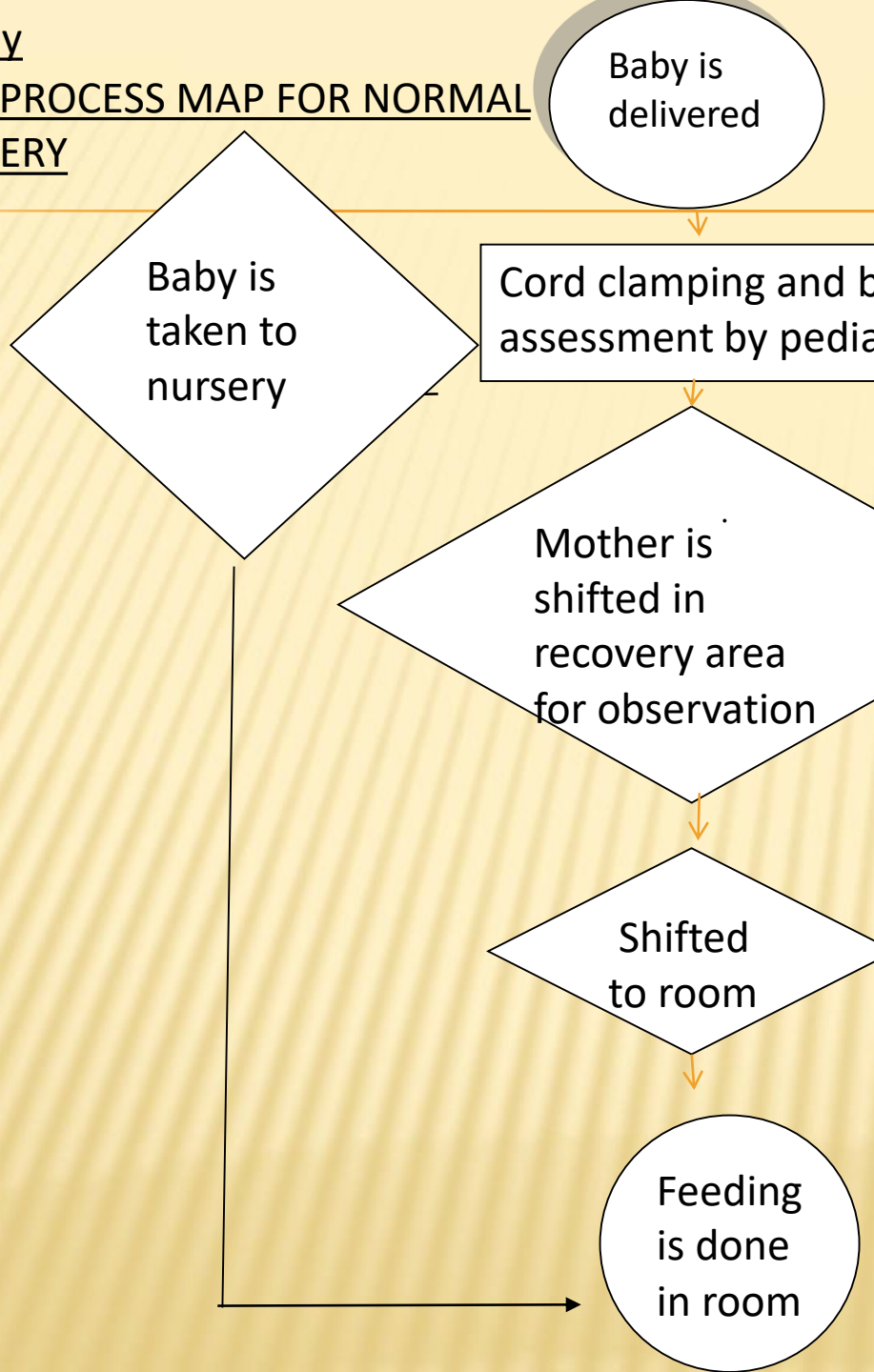
Steps for improving the early initiation of breastfeeding rate

(a)With Plan- do-study-act- cycle (PDSA) quality improvement method, Trying to change and improve the process by implementing cycles and measuring the rate of early initiation again after each cycle

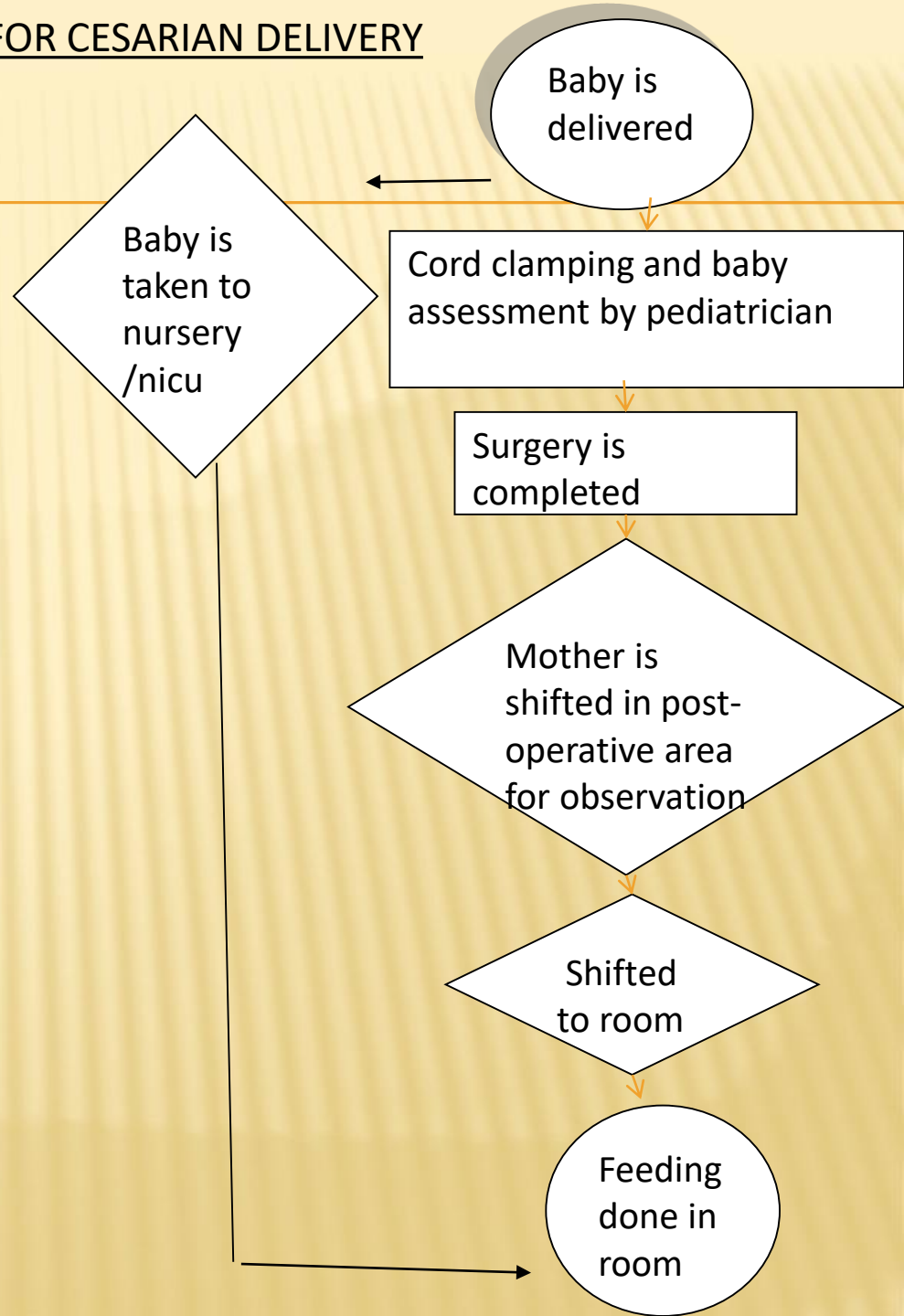
(b)Finally measuring the compliance of early initiation of breastfeeding at the end

baseline study

(FIGURE – 1.1) PROCESS MAP FOR NORMAL VAGINAL DELIVERY



PROCESS MAP FOR CESARIAN DELIVERY



Average time to initiate feeding	3 hr 32 min
Average time taken to shift patient to room	2 hr 45 min
Average time taken to initiate feeding in room after shifting	46 min

TABLE-1.2 For cesarean section under spinal anesthesia

Average time to initiate feeding	2 hr 24 min
Average time taken to shift patient to room	2hr 12 min
Average time taken to initiate feeding in room after shifting	35 min

TABLE-1.1 For normal vaginal delivery cases

AVERAGE TIME TO INITIATE FEEDING AFTER DELIVERY PER DAY

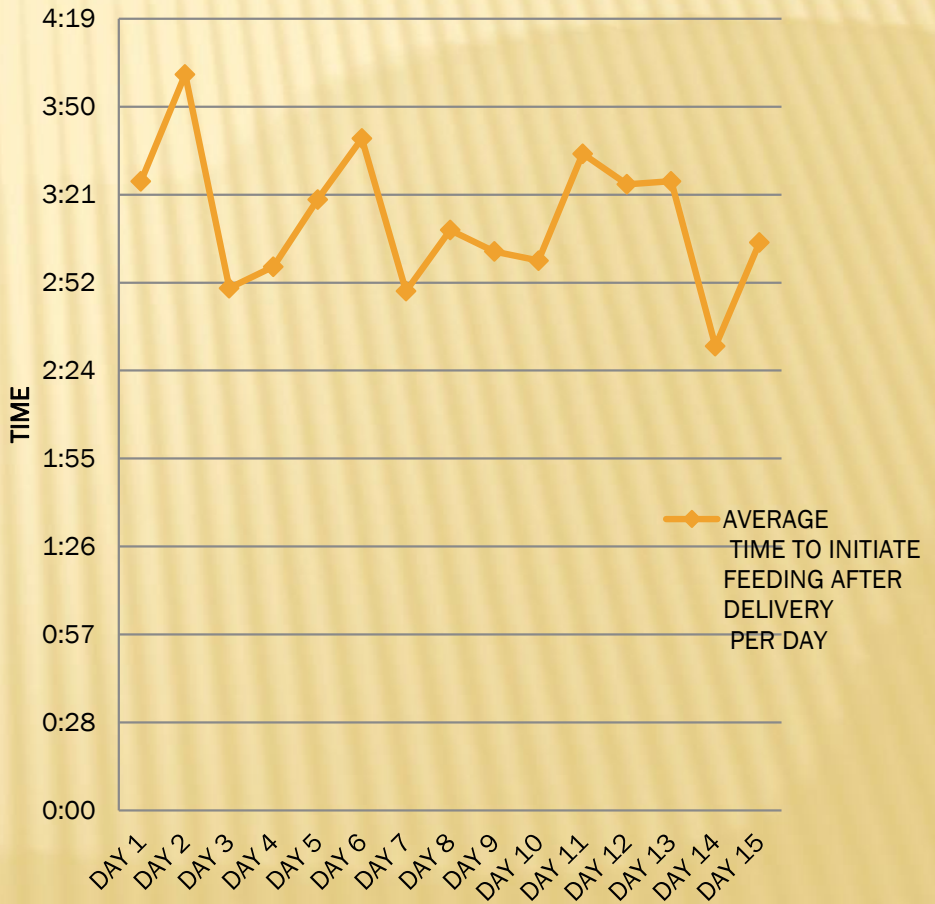
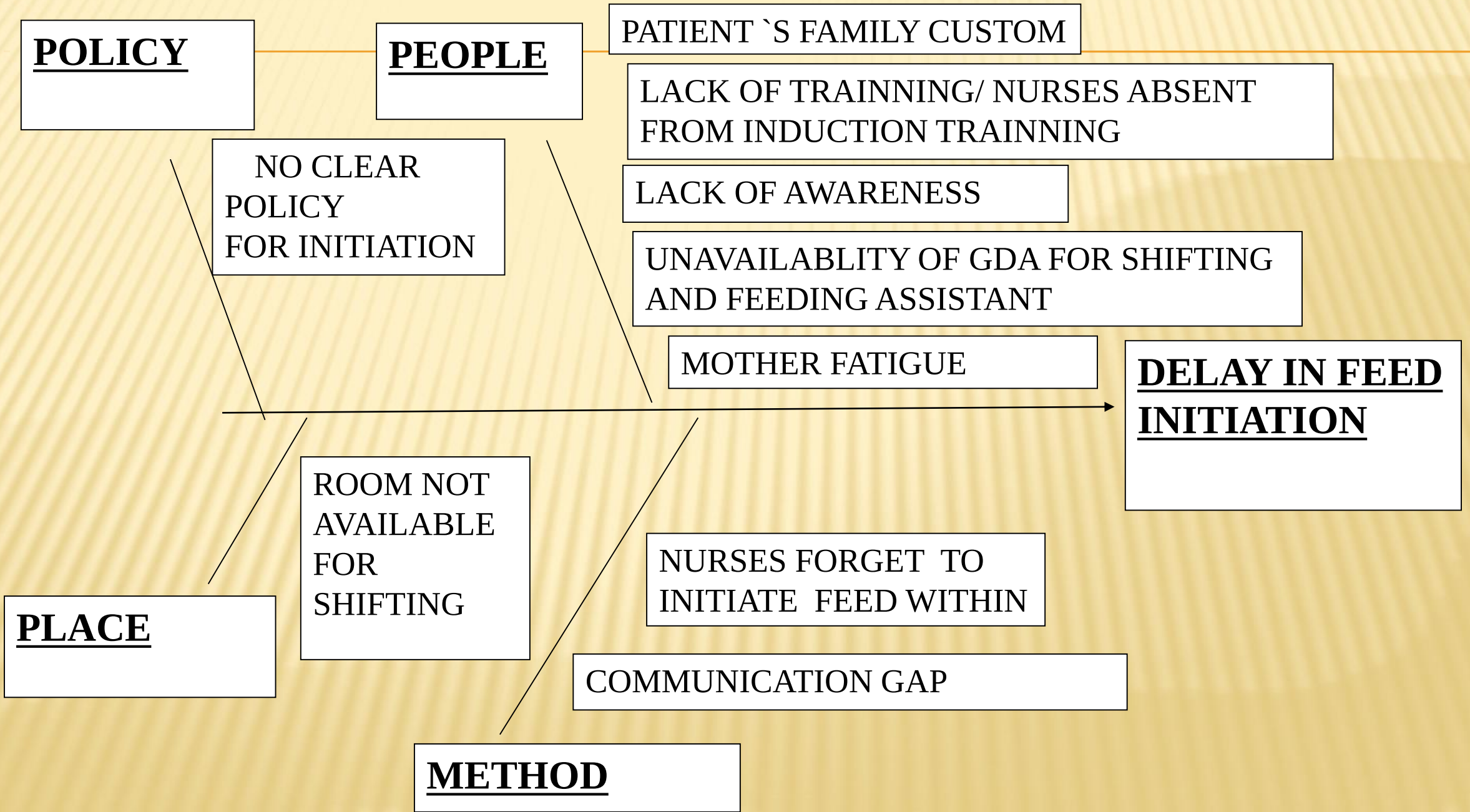


FIGURE 2) - **FISH BONE ANAYSIS FOR FINDING ASSOCIATED REASONS FOR LATE INITIATION OF BREAST FEEDING AFTER DEIVERY**



IMPROVEMENT PROCESS STARTED THROUGH- PDSA CYCLES-

PDSA	PLAN	DO	STUDY	ACT
1	Changing the process map of the delivery process of both cesarean and normal vaginal delivery cases . a)Caesarean delivery- mother is shifted to post operative area after the surgery is done and then feeding is initiated b) normal vaginal delivery- mother is shifted to recovery area in labour room and feeding is initiated in recovery area.	Feeding is initiated by feeding assistant after shifting	Lack of awareness among the staff . Lack of staff , communication gap	This changed idea is applied

2	Assess the rate of early initiation in new born babies with this new changed idea of conducting feeding in post operative area and recovery room in labour room for 15 days	Awareness is spread among the staff . Training sessions conducted for increasing efficiency	Shifting to post operative area after completion of surgery and to recovery area after all process, takes long time, analysing feeding rate	The results discussed
3	Assessing the feasibility of initiation of breast feeding on OT table in case of caesarean delivery and on the LR table in case of normal vaginal delivery	(a)Baby is kept on mother `s breast by the circulating nurse	Its feasible and observed that its not hampering surgical space , mother enjoyed the moment	This changed idea applied

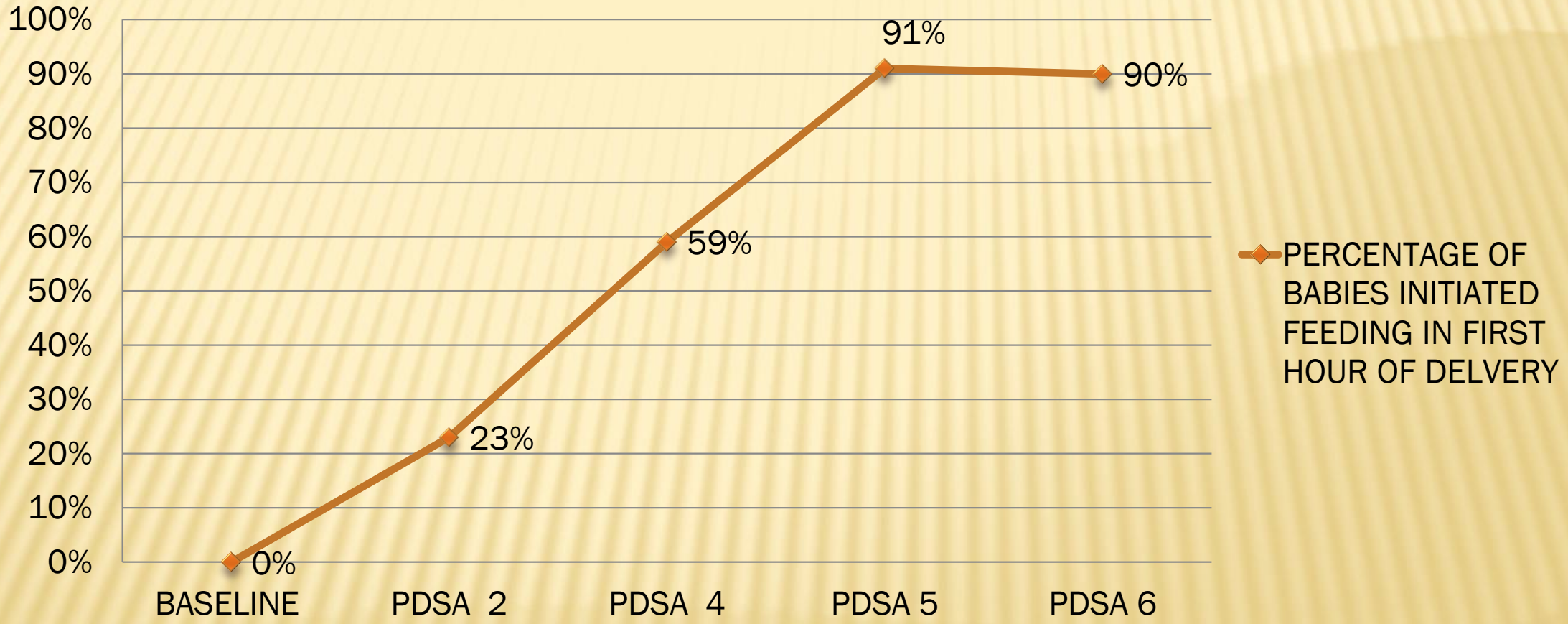
4	Assessing the rate of early initiation in new born babies for 5 days on OT/LR Table	Messages circulated among the staff about the new process	and analysed the feeding rate Reason for non compliance in OT- Circulating nurse become more occupied	More reminders , feeding assistant allotted
5	Assessing the rate of early initiation in new born babies after putting reminders and clarifying feeding criteria. Feeding assistant allotted for feeding in OT and in labour room for 15 days	(a)Separate reminders on nursing station , anesthetists trolley (b)Mother couselling done for awareness about feeding within 1 hour	Compliance increased by analysing feeding rate	Implementation expanded over more days

6	Assessing the rate of early initiation in new born babies for 10 days on OT/LR Table	Discussions with staff	Increased compliance maintained by analysing feeding rate	Policy of early initiation of feeding formed , register is maintained by nurses for maintaining the data of feeding

RESULT OF PDSA CYCLE

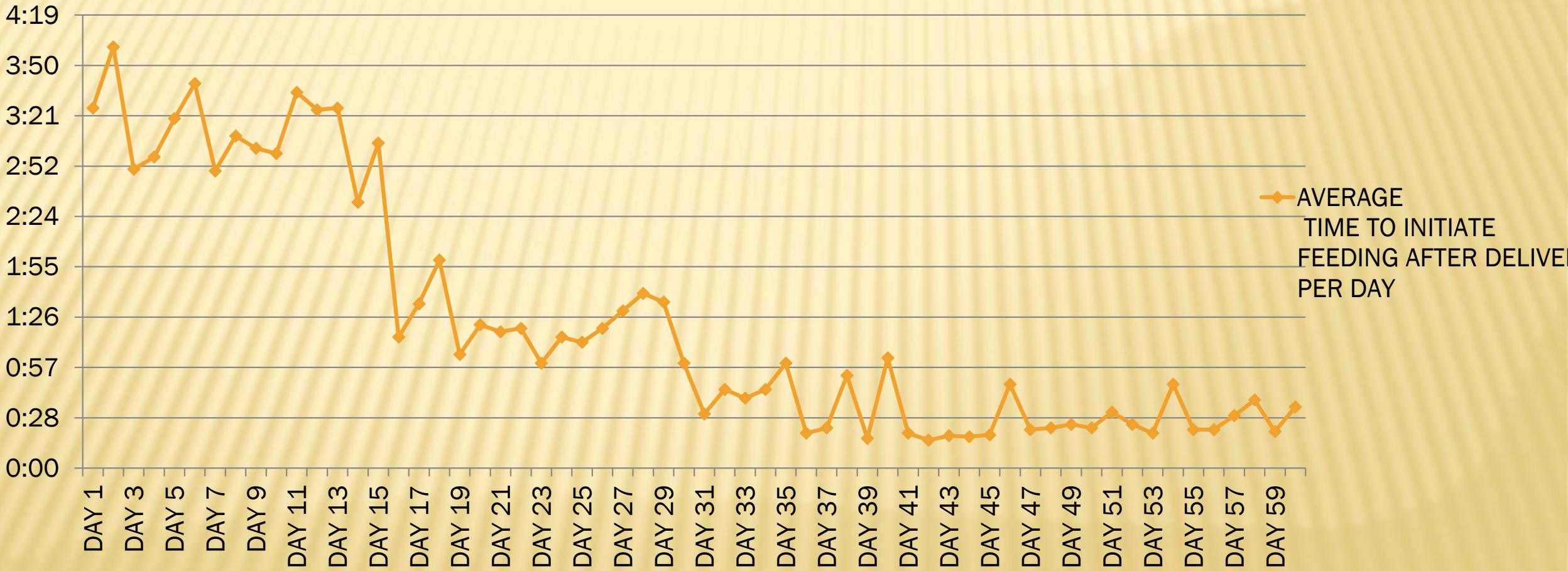
	BASELINE STUDY	PDSA2	PDSA4	PDSA 5	PDSA6
FIRST HOUR FEEDING RATE	0%	23%	59%	91%	90%
AVERAGE TIME TO INITIATE FEEDING	3 hr 32min (C-SEC) 2hr 24 min(NVD)	1 hr31 min (C-SEC) 1 hr 12 min (NVD)	50 min	25 min	29 min
AVERAGE TIME TO SHIFT PATIENT	2 hr 45 min(C-SEC) 2 hr 12 min (NVD)	1 hr 13 min(C-SEC) 55 min15 sec(NVD)			

PERCENTAGE OF BABIES INITIATED FEEDING IN FIRST HOUR OF DELVERY



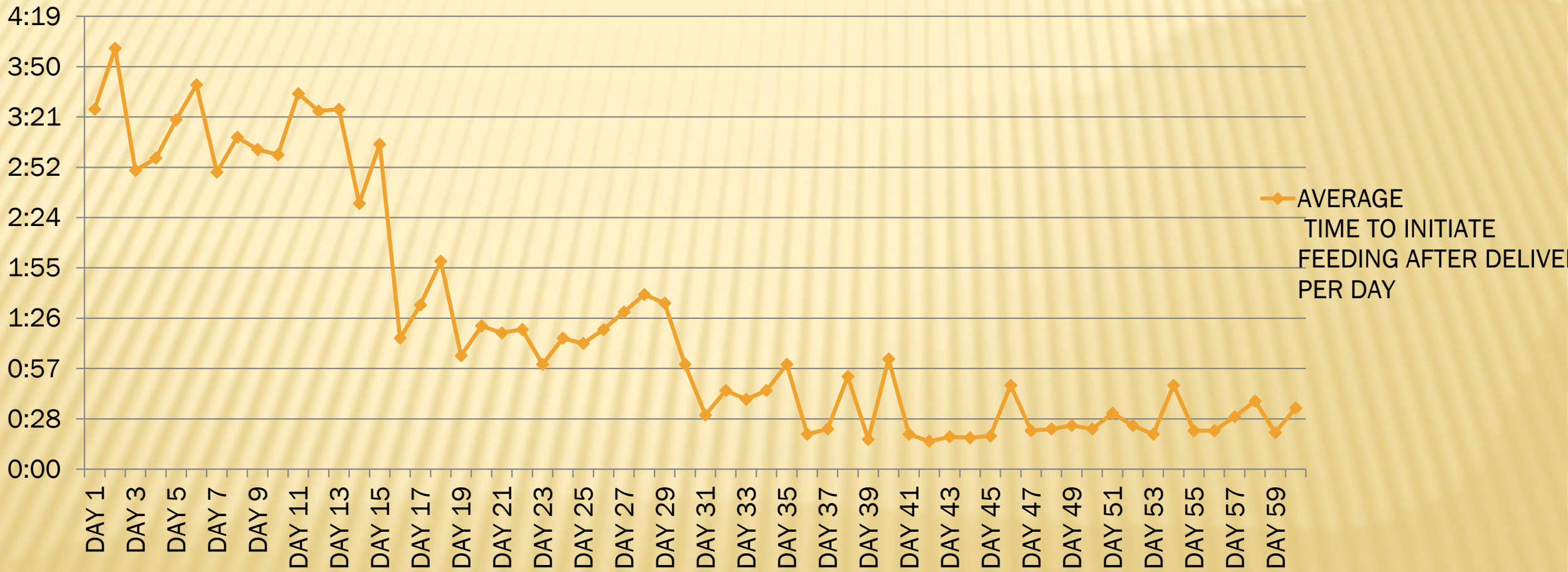
AVERAGE TIME TO INITIATE FEEDING AFTER DELIVERY PER DAY

Cesarian delivery



AVERAGE TIME TO INITIATE FEEDING AFTER DELIVERY PER DAY

Normal vaginal delivery



CONCLUSION-

So , finally early initiation feeding rate was improved to 91% from 0% which we observed in baseline study and sustained 90% in last PDSA .

Suggestions-

For maintenance of this process close monitoring and evaluation is required

Data of feeding should be maintained

Regular Training and education of staff

- THANKYOU , HAVE A NICE DAY