Respectful, Comprehensive Care for Small and Sick Newborns : an attempt in Haryana, India

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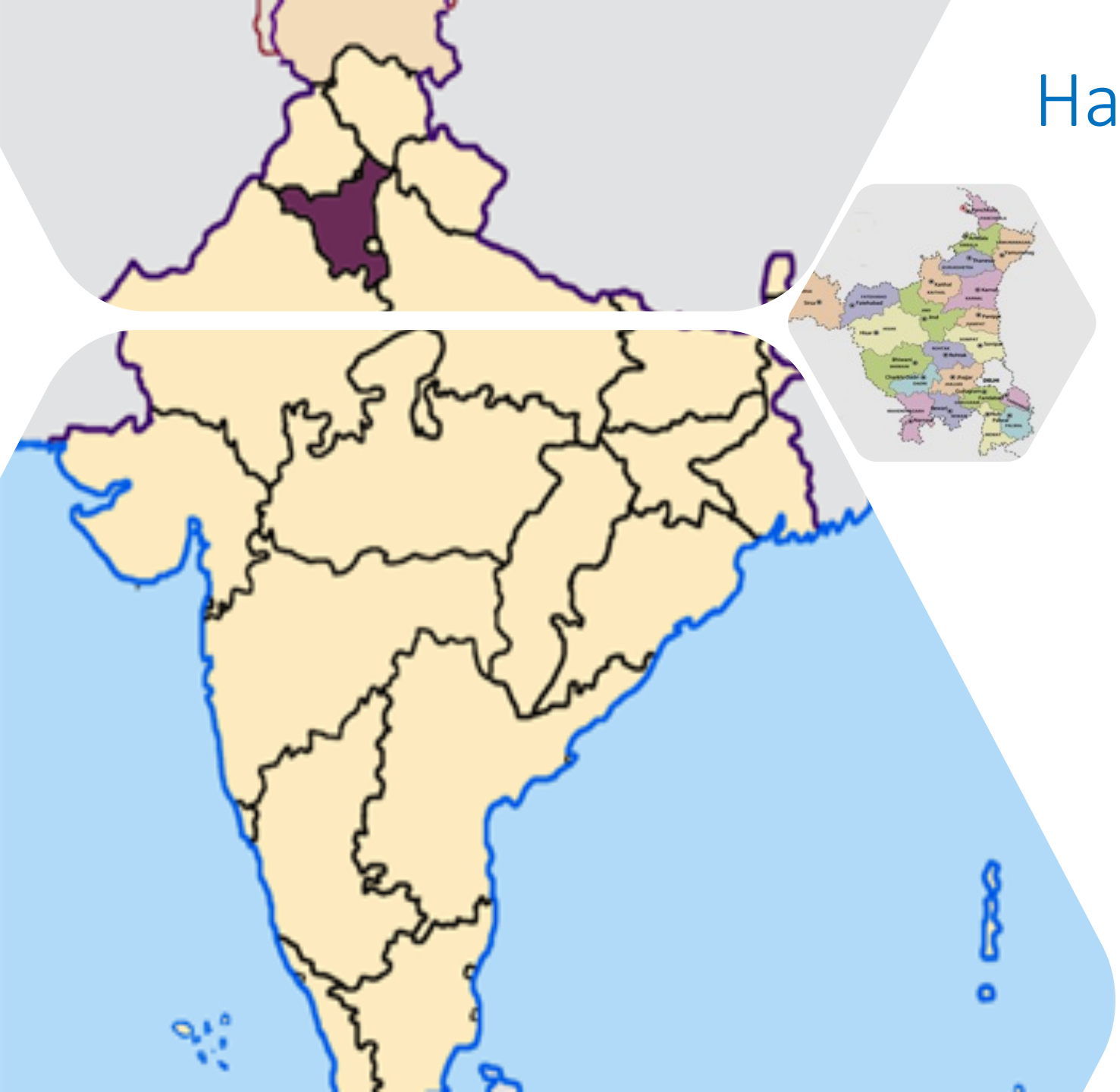


Haryana – some statistics

- Population: 25.4 million (65% rural)*
- Sex ratio at birth: 843**
- Literacy rate: 75.6%**
- U5MR: 36/1000 live births**
- IMR: 27/1000 live births**
- NMR: 22/1000 live births**
- MMR: 91/100,000 live births***
- Preterm births: 11.4%
- Low birth weight: 14.8%
- Anemia among children: 71.7%****

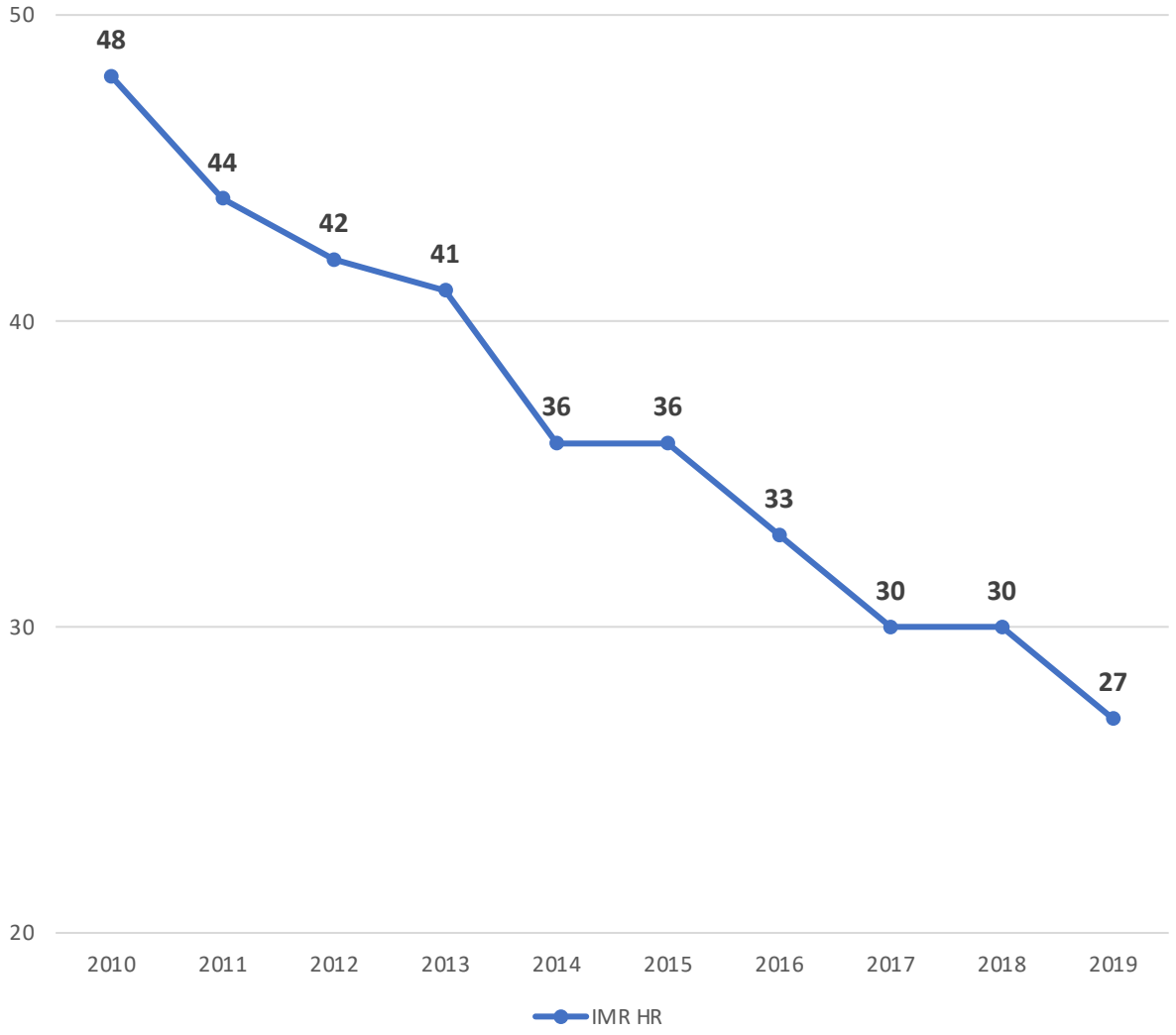
* Census 2011

**SRS 2018

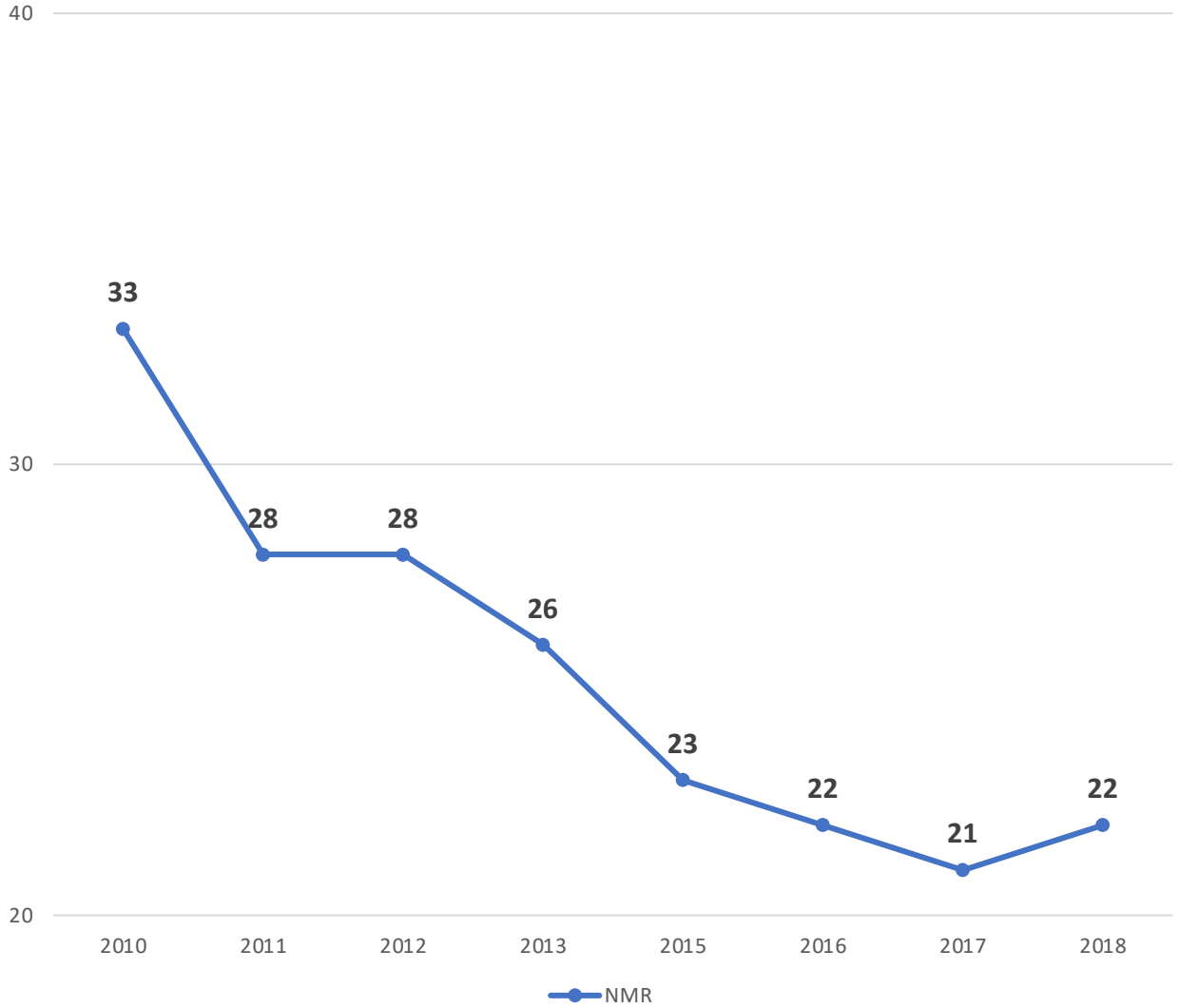
***MMR Bulletin, SRS 2018-20

****NFHS-4, 2015-16

Decline in IMR (steady but slow) and NMR (plateaued)



IMR



NMR

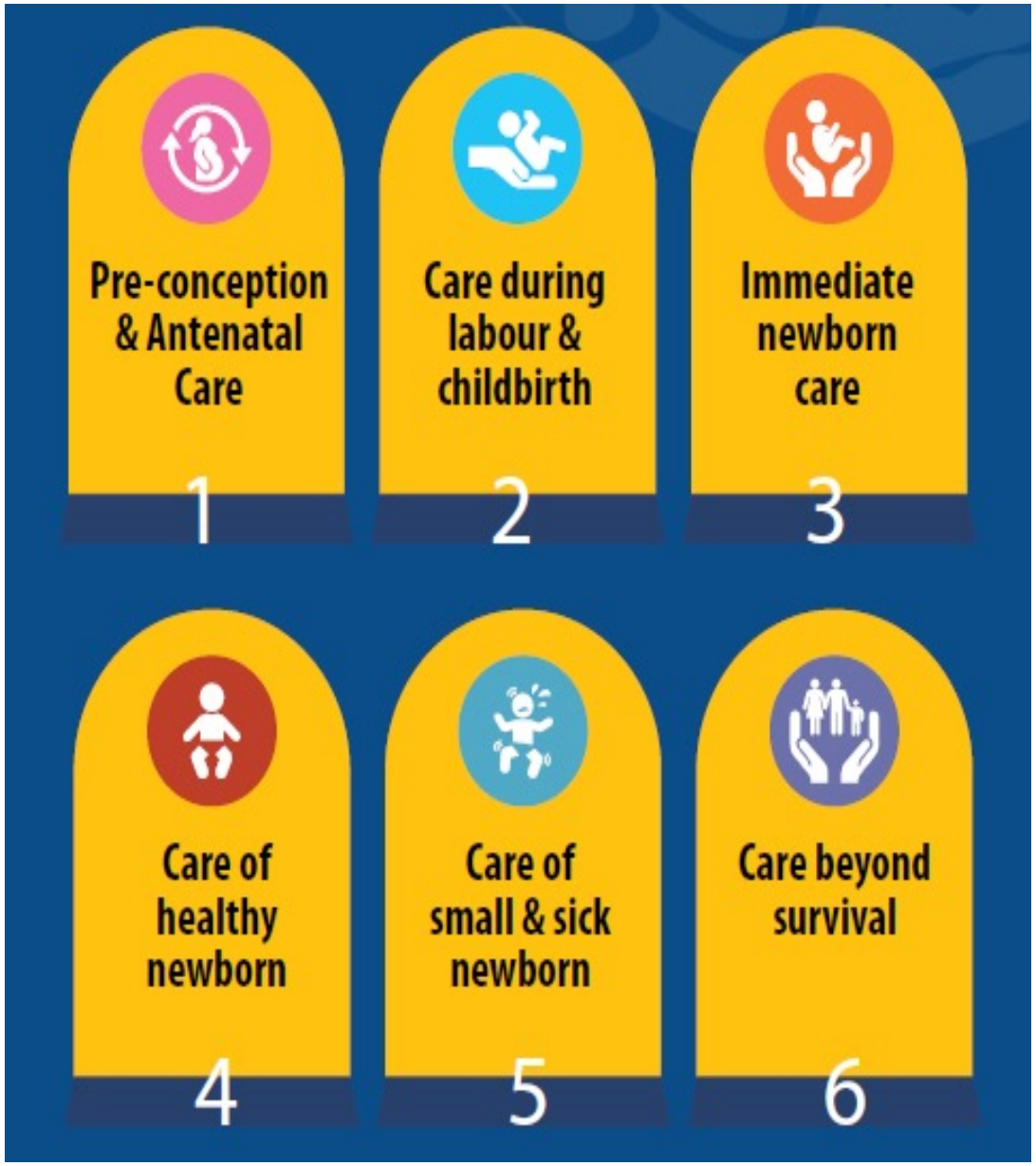
India’s Newborn Action Plan: 6 Intervention pillars

De-novo beginning

- Initiative of State Health Systems Resource Centre (SHSRC), Haryana as part of the usual monitoring exercise
- Started with Program Review with NHM's Child Health division – desk review and interviews with key informants
- Field visits to several districts
- Gap analysis
- Preparation of a roadmap
- Budget available under 'Quality Assurance' and 'Quality Improvement' utilized for gap closure

Program Review findings

From policy to practice: the ground reality



- Pillar 5: 24 SNCUs & 66 NBSUs established. 393 neonatal beds in place at SNCUs with usual bed occupancy of 90%
- Pillar 6: Follow-ups at SNCUs and NBSUs
- Pillar 3 and 4: Quality of care in labor rooms has improved, newborn corners at all delivery points, birth attendants trained in ENBC
- Pillar 1 and 2: Supposedly a job of ‘Maternal Health division’ & Obstetricians

Monitoring and Supportive Supervision visits

Findings from field visits

1. SNCU housed within labour ward, compromising respectful maternity care, still mothers had very limited access to their sick newborns

2. Admission into SNCU too liberal, resulting in unnecessary separation of babies from mothers

3. Manual weighing scales used. Clustering around 2/2.5 kgs

   Admission into SNCU on the basis of ‘in-born’ or ‘out-born’

4. No triage

5. Pre-defined criteria for admission & discharge and SOPs for care: non-existent

6. Lack of continuity of care, discharges directly from SNCU

7. ‘Family participatory care’ not practiced

‘What’ changed and ‘How’?

How?

- Sharing visit reports with the facility managers, district civil surgeons, MD NHM and Secretary Health
- Getting a memo sent from the secretary's office to all districts
- Taking pediatricians on board
- Stakeholders' consultation on barriers and finding solutions (e.g. utilizing available staff most efficiently, filling vacant positions)
- Roping in the engineering department for preparation of plans/drawings and budget estimates for structural modifications
- Arranging budgets
- Writing SOPs, clinical protocols
- Organizing trainings

What changed?

- Patient flow streamlined
- ‘No separation policy’ introduced. Changing mindsets took time.
- Infrastructure changes brought in, washrooms, shower cubicles for mothers created inside SNCU
- Quality standards introduced for new-born care at SNCUs and Labor rooms
- Trainings imparted to senior doctors and nurses
- Regular visits of trained staff and Quality Manager ensured and visit reports documented
- Evidence based clinical care initiated, flow charts prepared and pasted in clinical areas

What changed?

- Handwash stations increased, mothers trained on handwashing, breastfeeding, KMC, infection prevention and identification of danger signs in the newborns
- Staff trained in family participatory care
- Kangaroo Mother Care scaled up at all SNCUs by provisioning SDUs
- Pilots of comprehensive care initiated in District Hospitals of Kaithal, Sonipat and Ambala during 2019

Key interventions

1. ‘No Separation Policy’ introduced

Before	Quality Improvement initiatives
Sick newborns kept in SNCUs, mothers away	• **‘No separation policy’** implemented for mother baby dyads • Mothers mandated to stay with neonates 24x7 unless the baby is too sick (mother to visit the baby regularly) • Recovering neonates kept in ‘step down units’ along with their mothers

Key interventions

2. Concept of triaging introduced

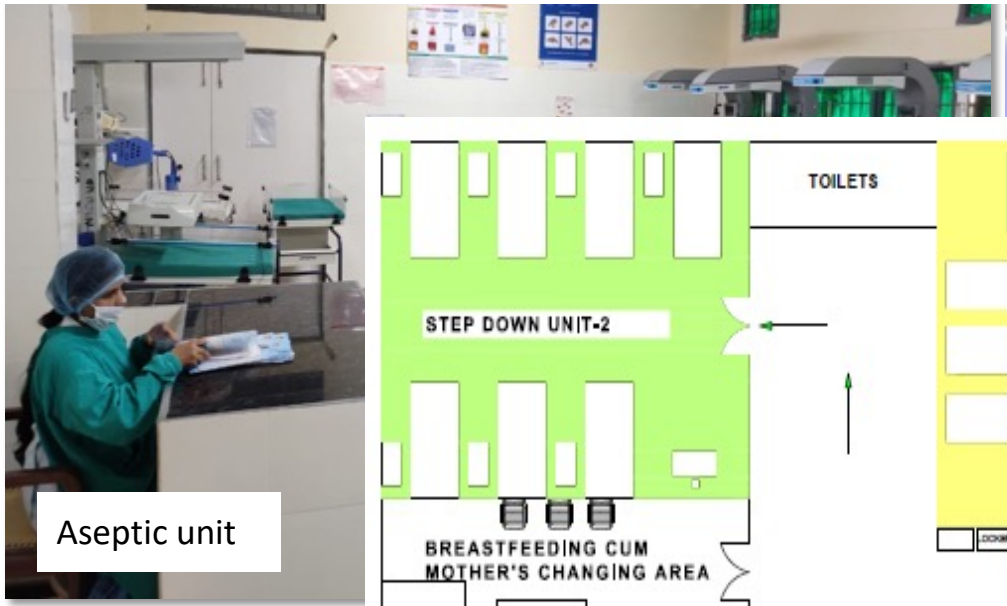
Before	Quality Improvement initiatives
No Triage	• **Triage (baby receiving) cum counselling area designated** at the entrance of SNCU • Pre-evaluation of all sick newborns brought in (during day or night) done here by the doctor on duty • Standardized Triage Categorization System initiated for unidirectional flow

Key interventions

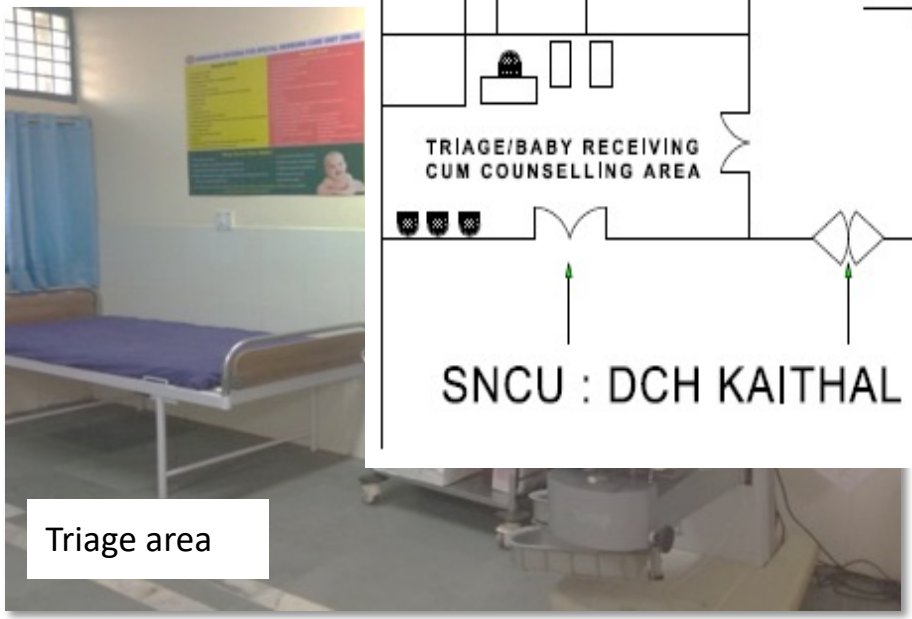
3. Categorization of areas done

Before	Quality Improvement initiatives
No categorization of areas	• Structural modifications done for appropriate flow and areas demarcated for **triage, observation, changing rooms, step down units (1 & 2), aseptic unit, septic unit, breastfeeding area, clean utility, medicine store, kitchen, dirty utility, laundry etc.**

Key interventions: DH Kaithal



Aseptic unit



Triage area

Step down unit

Drug store

Key interventions

4. Admission & discharge criteria defined, clinical protocols and Standard operating procedures (SOPs) developed

Before	Quality Improvement initiatives
No pre-defined criteria for admission	• **Admission criteria defined for aseptic, septic and step-down units 1 and 2** • Kangaroo mother care is advised for all the newborns
No standard operating procedures	• **Standard operating procedures developed** for admission, discharge, referral, discharge, infection prevention and control

Key interventions: Admission Criteria for SNCU

Aseptic Area

1. Prematurity (<34 weeks)
2. Birth Weight (<1500gm)
3. Birth Weight (1500 – 1800gm, not accepting KS feed)
4. Perinatal Asphyxia
5. Meconium Aspiration Syndrome
6. Respiratory distress (rate>60/min or grunting or chest retractions)
7. Apnoea/gasping
8. Central Cyanosis
9. Convulsions
10. Hypothermia (<35.4 degree celsius)
11. Hypoglycaemia (Blood Sugar <45mg%)
12. Shock : cold peripheral extremities with CFT >3 sec along with weak and fast pulse
13. Bleeding from any site
14. Unconscious baby
15. In-born baby with refusal to feed
16. Oliguria
17. Major congenital malformation (with unstable vitals or refusal to feed)
18. Severe jaundice (requiring exchange transfusion)

Septic Area

1. Baby with positive septic screen (raised TLC/absolute neutrophil count, immature to total neutrophil ratio, micro-ESR, CRP)
2. Hyperthermia (>37.5 degree celsius)
3. Convulsions with fever/meningitis
4. Abdominal distension
5. Septic shock
6. Meconium Aspiration Syndrome /foul smelling meconium
7. Diarrhoea
8. Pneumonia
9. Home delivery
10. Delivery in potential septic circumstance
11. Referred case already on antibiotics
12. Outborn baby with refusal to feed
13. Baby with criteria as mentioned for those to be admitted in aseptic area along with signs of infection in mother i.e.
    - -H/o leaking P/V >18 hrs
    - -H/o uterine tenderness
    - -H/o fever in mother during perinatal period
    - -Mother already on antibiotics
    - -Foul smelling liquor
    - -Any other sign of infection during perinatal period
    - -Multiple obstetric procedures/intrapartum malhandling

Key interventions: Admission Criteria for SNCU

SDU 1

Stable baby shifted from septic/aseptic unit

Step Down Units

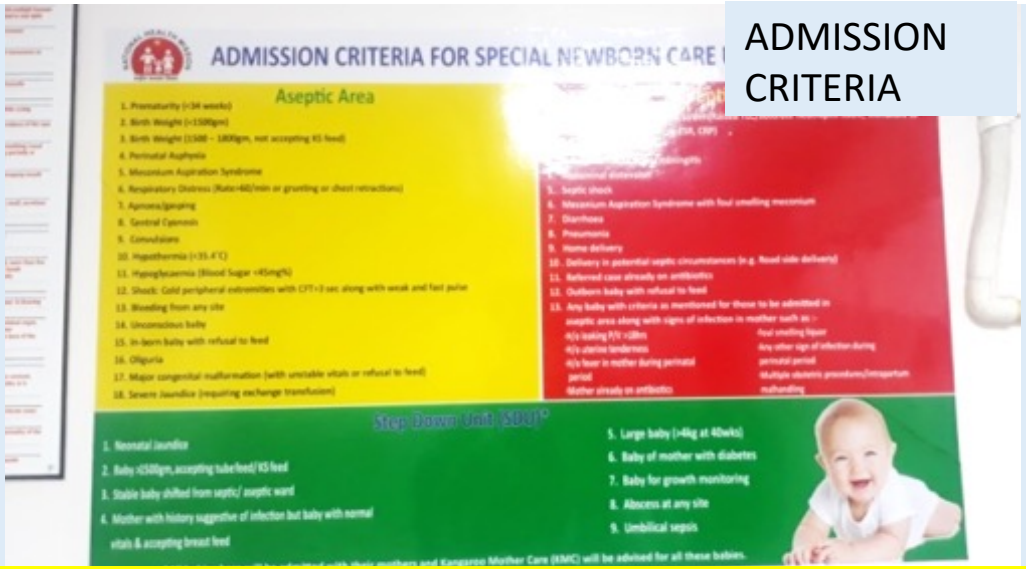
- Neonatal jaundice
- Baby 1500 gms, accepting tube feed/KS feed
- Mother with history suggestive of infection but baby with normal vitals & accepting breast feed
- Large baby (>4kg at 40 wks)
- Baby of mother with diabetes
- Baby for growth monitoring
- Abscess at any site
- Umbilical sepsis

SDU 2

Baby not eligible for admission into SNCU but requiring observation

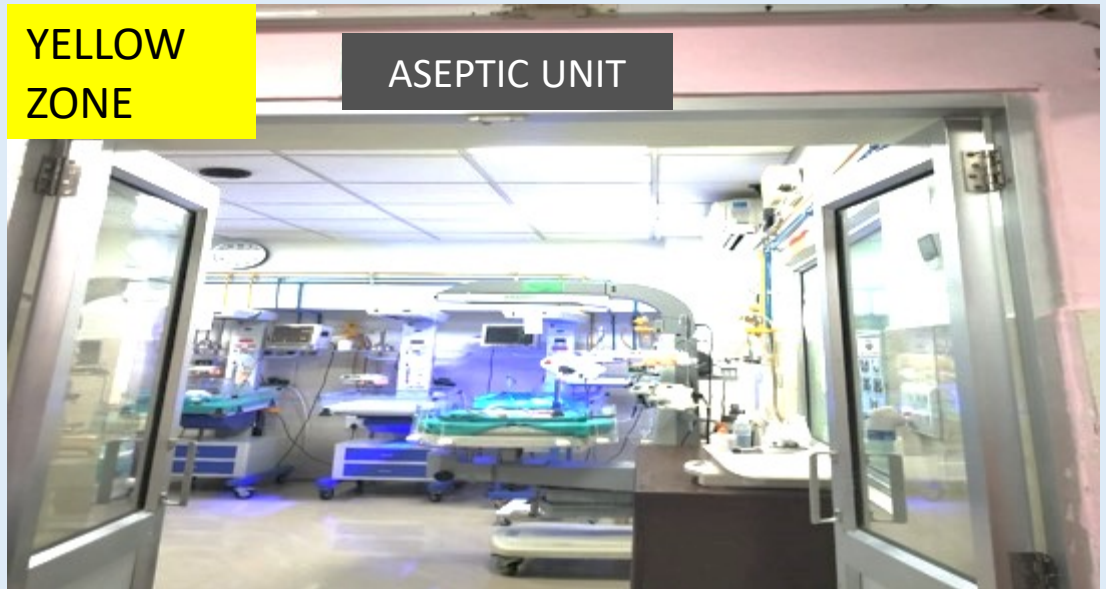
All babies in SDUs are admitted with their mothers and Kangaroo Mother Care (KMC) is ensured for these babies

Key interventions: DH Sonipat



ADMISSION CRITERIA

Triage criteria for admission and step down being followed, SNCU categorized into red, yellow and green zones



Process…

Introduction of Family Participatory Care DH Kaithal

Infection control nurse taking sessions for mothers on hand hygiene and infection prevention practices

Mothers being trained in donning PPE and hand washing before entering SNCU

Involving mothers in care of their babies

Outcome

- Higher satisfaction levels of mothers and family members with clinical care
- Higher staff satisfaction
- Low infection rates
- Better follow up rates
- Early admission to hospitals of sick newborns due to early reporting of danger signs by mothers/family members

Thank you!