

# Sharing Quality Improvement Experiences across the WHO South East Area Region

## Country Spotlight: Bhutan

Point of Care Quality Improvement ([www.pocqi.org](http://www.pocqi.org))

Tuesday, 14<sup>th</sup> August 2018

Participants to use 'chat box' to  
introduce themselves



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



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# Webinar Roles



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# **QI project to improve the percentage of patients discharged before 11am in NICU and Neonatal ward, JDWNRH**

Jigme Dorji Wangchuck National Referral Hospital  
Gyaltsuen Jetsun Pema Neonatal Intensive Care Unit  
11am Discharge Project Team

Dr. Yoriko Nishizawa, MD.IBCLC.

# **CONTENTS**

- 1. Background**
- 2. Process of Quality Improvement Initiative**
- 3. By-products**
- 4. Keys to Success**
- 5. Lessons learnt**
- 6. Conclusion**

# Kingdom of Bhutan



Area: 38394 sq km  
Population: 735553  
Density: 20.3/sq km

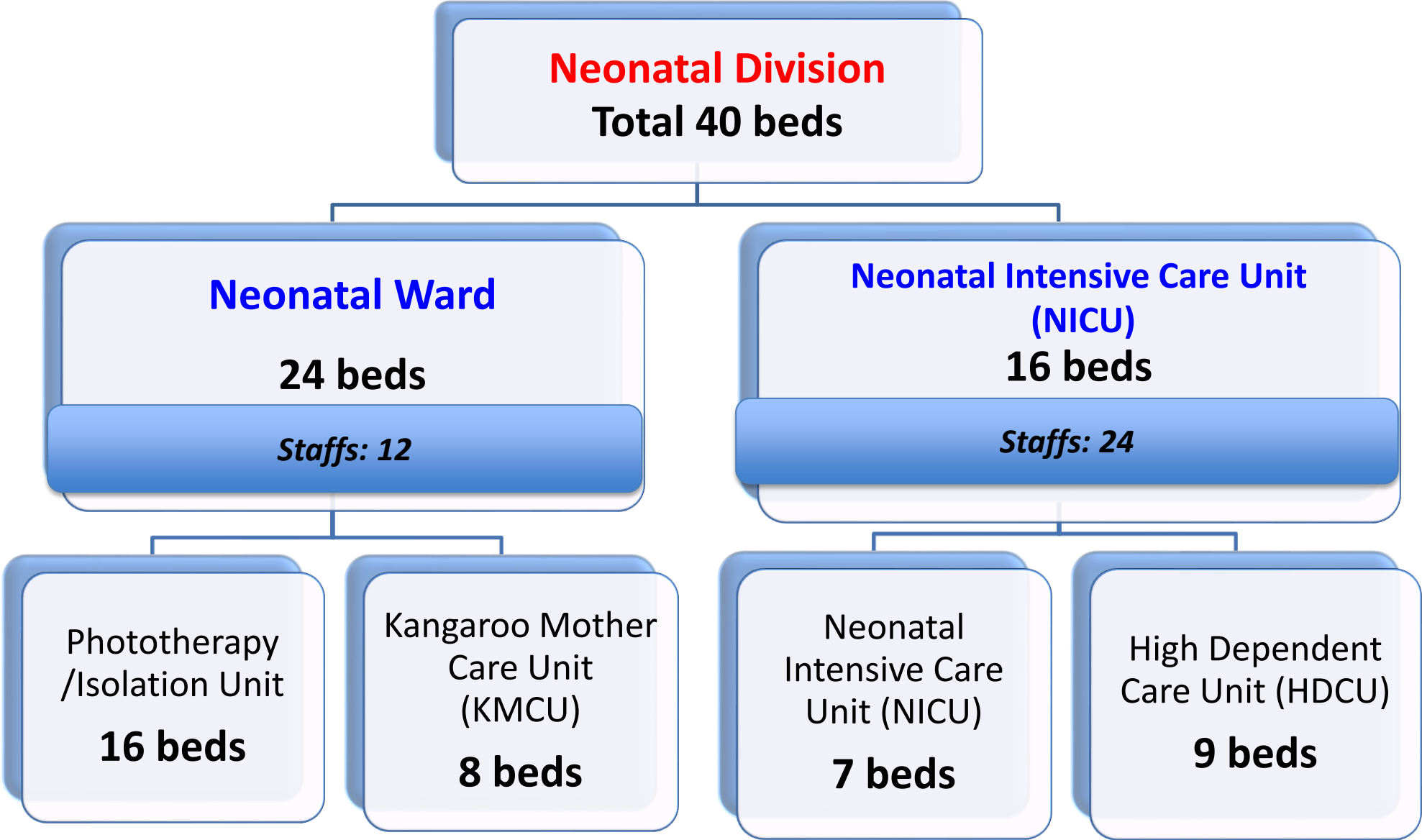
Source: National Statistic Bureau, Royal Government of Bhutan



# Jigme Dorji Wangchuck National Referral Hospital (JDWNRH)



# Organogram of Neonatal Division in JDWNRH





# BACKGROUND

- QI method was introduced by Prof. Ashok Deorari in 2015 during Training of Trainers for Facility-Based Newborn Nursing and Standard Treatment Protocol for Small Hospital.
- There are 50 Key Performance Indicators (KPIs) in the Annual Performance Agreement (APA) of JDWNRH to measure the success of an organization.
- Indicator number 41, to discharge the patients before 11am, is one of them.

# **PROBLEM IDENTIFIED**

1. The patients have been discharged mostly afternoon
2. Late discharge leads to delay in treatment of newly admitted patients
3. Wide variation in definition of discharge time among staffs

# **BENEFITS OF DISCHARGE BEFORE 11AM**

## **For Patients and their parents:**

- Reduced waiting time for new admission
- No delay in treatment for new admission
- Safe early journey back home
- No extra cost for staying extra night in Thimphu

# **BENEFITS OF DISCHARGE BEFORE 11AM**

## **For health staffs:**

- Improved key performance indicators
- Improved working efficiency
- Improved teamwork and increased cooperation

# **BENEFITS OF DISCHARGE BEFORE 11AM**

## **For hospital:**

- Improved KPIs
- Improved patient satisfaction
- Can accommodate more patients
- Reduction in costs



# TEAM FORMATION

1. Neonatologist
2. Pediatrician
3. Resident Doctors
4. In-charges from NICU and Neonatal ward
5. Volunteer nurses from NICU
6. Volunteer nurses from Neonatal ward

# DEFINITION OF DISCHARGE TIME

“The time when all the discharge-related documents (including discharge slip, laboratory or other investigation reports, high-risk follow-up sheet), and medicines are handed over to patient party with proper instructions, and patients are ready to leave the Ward.”

# OUTCOME INDICATOR

## Calculation of percentage of discharge before 11am

No. of live discharges before 11 am  
during the designated period of time

---

× 100%

Total no. of live discharges during the  
designated period of time

# DATA COLLECTION

Frequency	Weekly
Responsibility	QI Team members
Data source	Indoor Admission Register and Census Register

Data was collected NICU and Neonatal ward separately

# BASELINE DATA

The baseline percentage of discharges before 11am:

<b>NICU</b>	<b>38%</b>
<b>Neonatal Ward</b>	<b>20%</b>



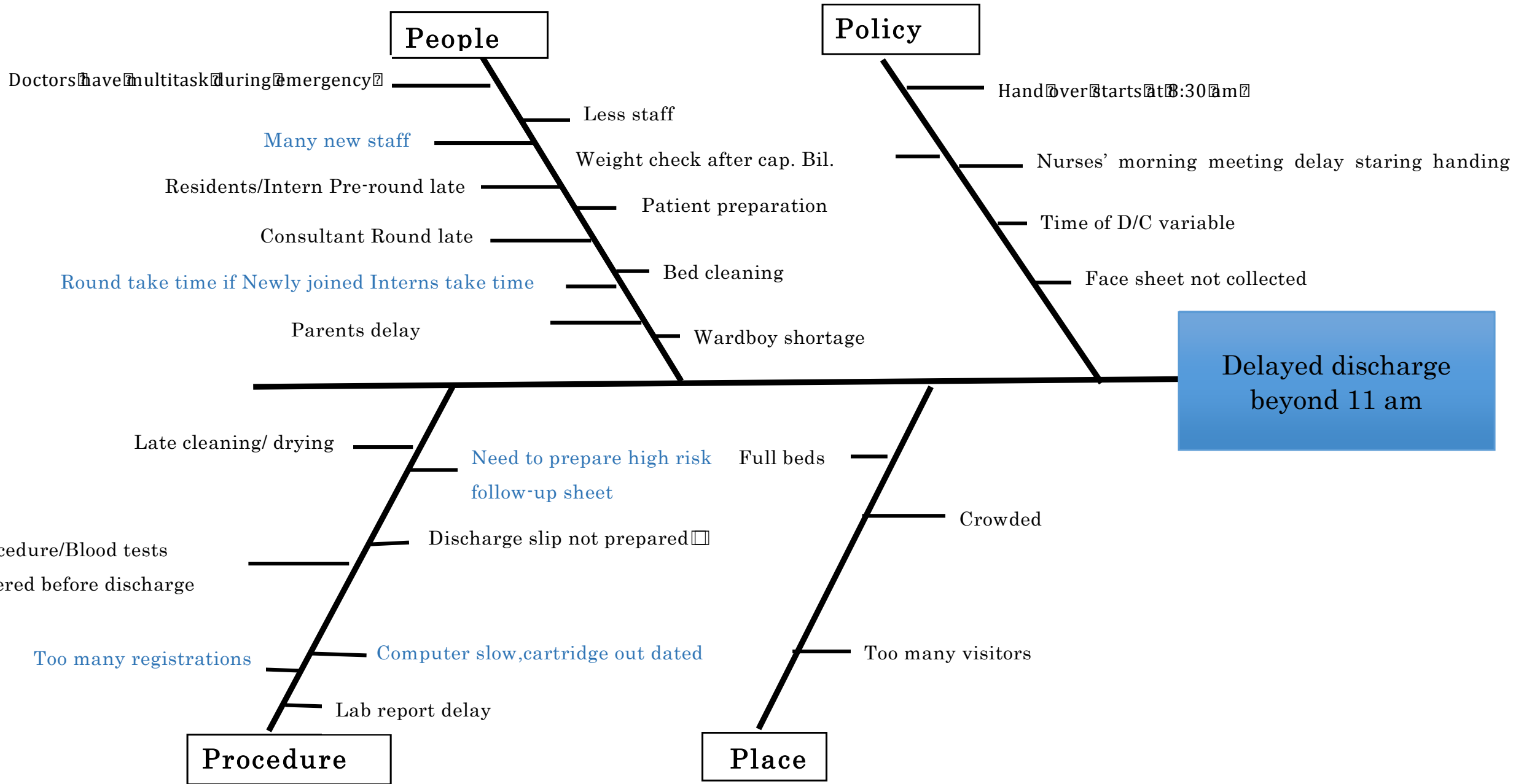
# AIM STATEMENT

**“To increase the percentage of ‘discharges before 11am’ from 38% in NICU and 20% in Neonatal ward to 50% in both units in 8 weeks.”**

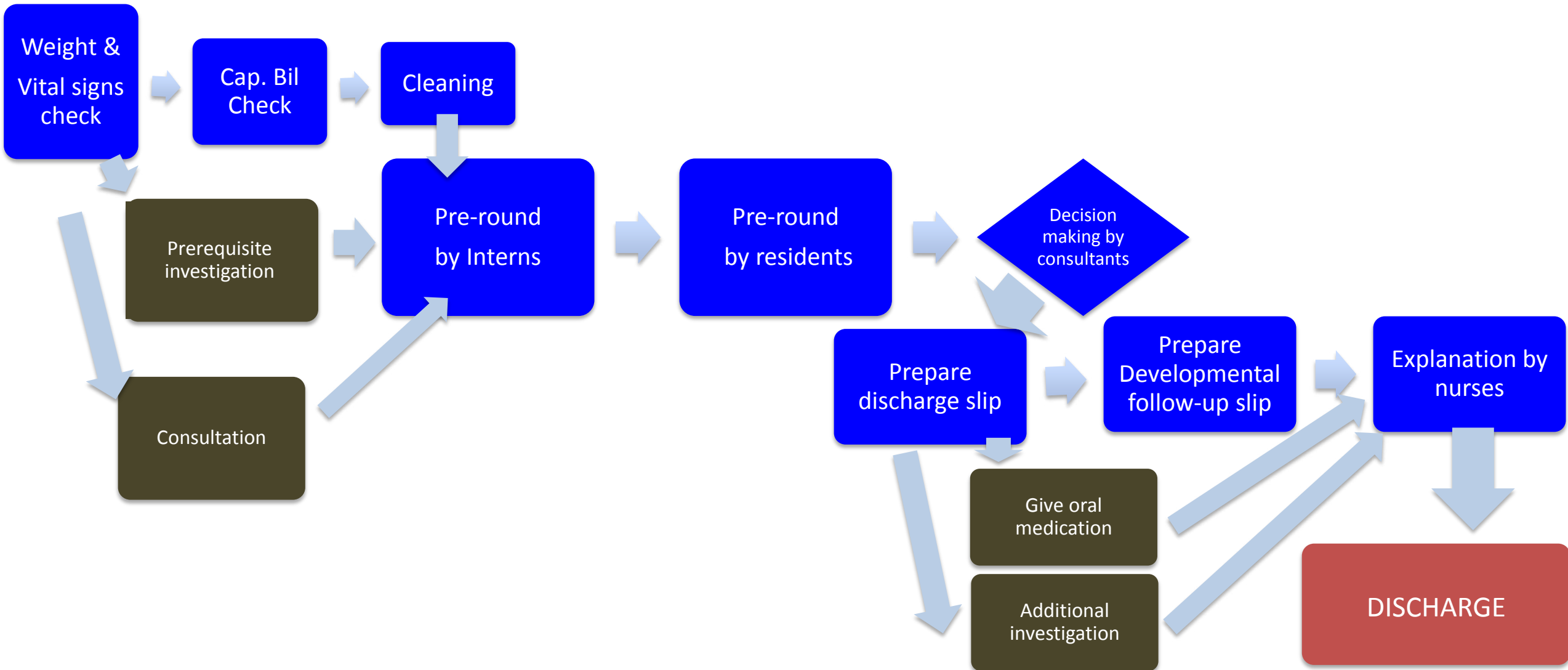
# ANALYZING THE PROBLEM

- Fish-bone Analysis
- 5 WHYs
- Flow chart
  
- Documenting the activities timing in daily activity log book to monitor key milestone timings that affects timing of discharge (hand over, cleaning, vitals monitoring etc.)

# FISH-BONE ANALYSIS



# FLOW CHART FOR DISCHARGE PROCESS IN NEONATAL WARD



# MONITORING KEY MILESTONES WHICH AFFECT TIMING OF DISCHARGES

1. Five minute staff meeting in the morning
2. Handing over of cases by staff
3. Weight measurement
4. Send baby for capillary bilirubin
5. Pre-round by Interns/Residents
6. Starting time of main round by consultant

The image shows handwritten notes on a grid, likely a calendar or schedule, detailing medical rounds and milestones for two dates: 16/9/16 and 17/9/16. The notes are written in blue ink.

Date	Activity	Time	Time
	weighing Round.	9:30	11:50
16/9/16	Pre round.	8:15am	8:55am
	Handing taking	8:30am	8:45am
	Baby sent for Capbil	8:45am	
	weight & vitals	9:15am	9:45am
	Round.	9:55am	10:20am
17/9/16	Handing taking	8:30am	8:45am
	Baby sent for		



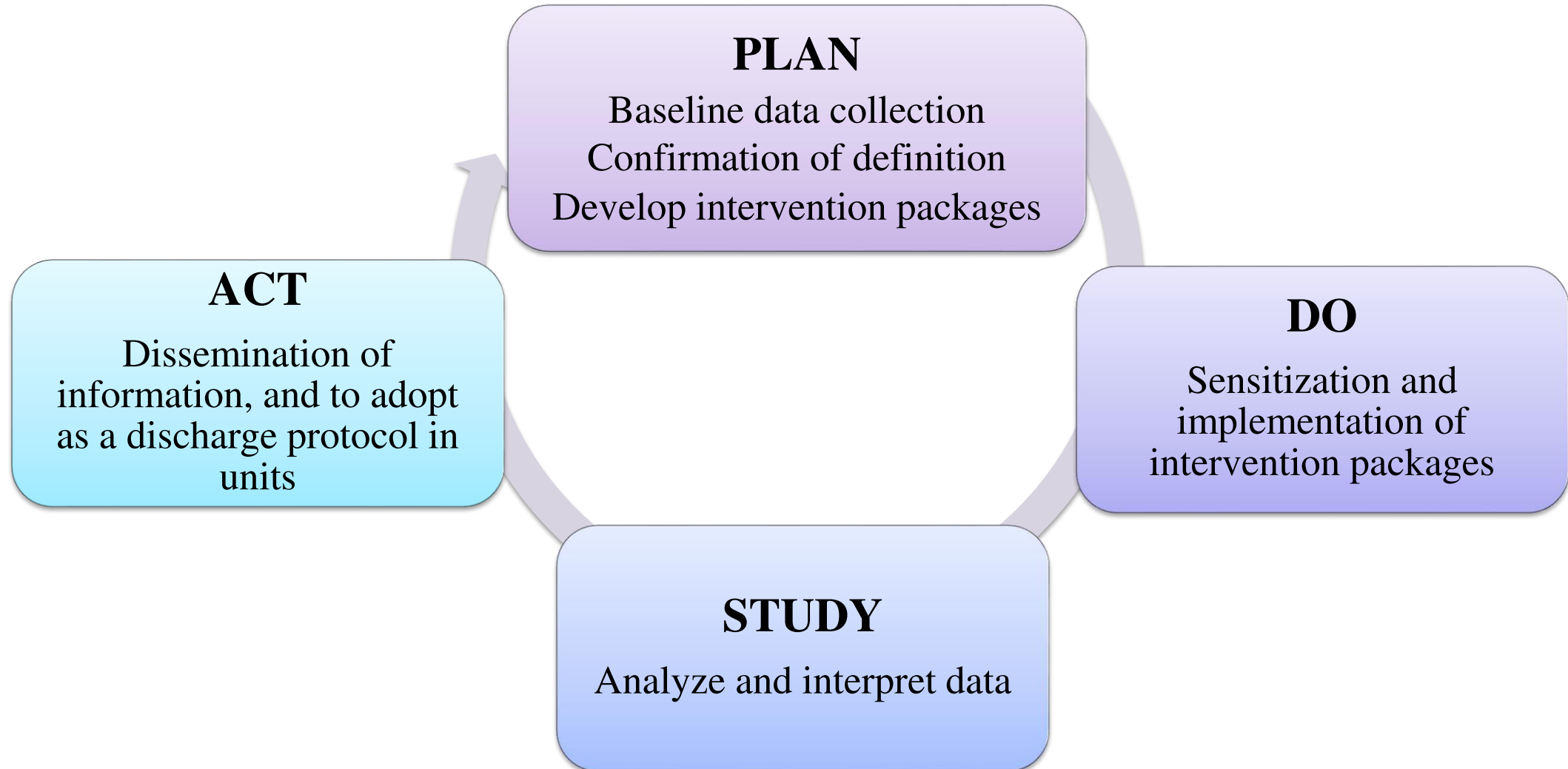
# **CONTINUOUS MONITORING OF CAUSE OF DELAYED DISCHARGES**

All causes of each delayed discharges were documented by the nurses on duty in indoor registration on the spot.

# CAUSES OF DELAYED DISCHARGE

1. It took long time for consultant round as the medical charts are not well organized.
2. Laboratory reports and face sheet were not collected on time
3. Discharge not planned earlier so it took time to prepare required documents for discharge.
4. Staff shortage – only one Neonatologist do both NICU and Neonatal ward round
5. Multitasking during emergencies in NICU
6. Late Pre-rounds by interns and residents and Rounds by consultant
7. Inappropriate timing of vital check (6 am and 10 am)
8. High turn over of interns and residents

# PDSA CYCLE



# PDSA CYCLE 1 - Improve preparation for discharge

## Interventions

1. Developed “Standard of medical chart” and organize them with dividers with standardized indexes
2. Implemented discharge plan and preparation checklist
3. Identified all planned discharges during morning round and prepare the necessary documents prior to discharge date
4. Discharged planned discharge patients first before starting morning round

## Interventions which did not work well

- Implemented discharge plan and preparation checklist

# PDSA CYCLE 2 - Improve timing of activities before discharge

## Interventions

1. To complete Pre-round by Interns latest by 8:30am and send patient to lab for Cap. Bil check before arrival of OPD patients
2. Asked to deploy one additional pediatrician in Neonatal ward to start consultant rounds latest by 9:30am and complete latest by 10:20am to allow Neonatologist to do NICU round in parallel and attend emergencies.
3. Changed Vital Signs monitoring timing from 10 am to 12 noon for Nurses
4. Changed timing of weight check during cleaning time to save time
5. Resident prepare discharge documents simultaneously to consultant round.

## Interventions which did not work well

- Complete pre round before 8:30am
- Deployment of additional pediatrician
- Resident prepare discharge documents simultaneously to consultant round

# PDSA CYCLE 3 - Improve orientation for discharge procedures

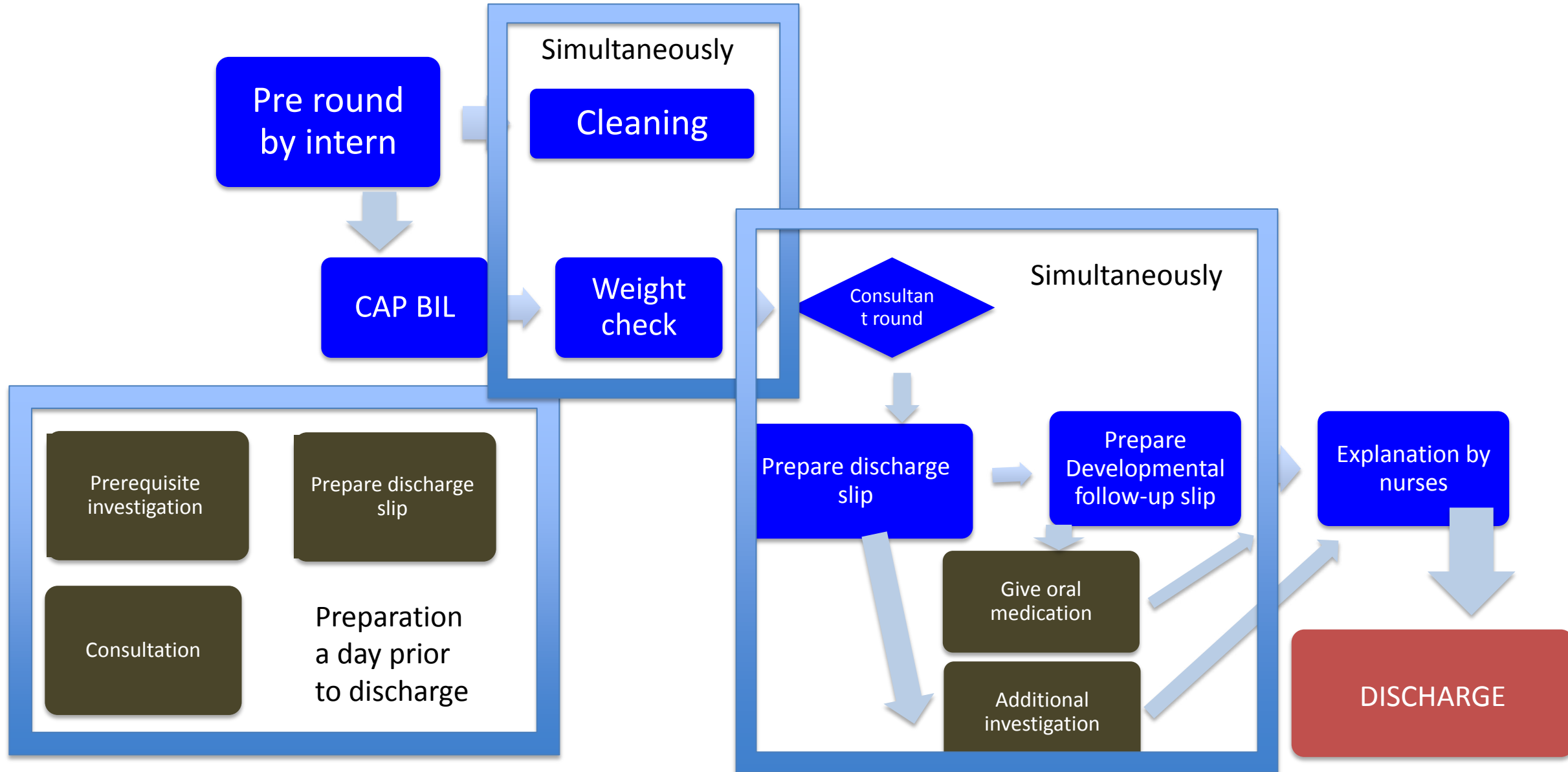
## Interventions

1. Developed laboratory report tracking system with “Due report folder” and “designated status seals” in the unit to ensure the timely report collection
2. Gave dedicated orientation session to all interns before posting Neonatal Division
3. Developed Pre-designed discharge slips with common discharge advices to save time to prepare discharge slip

## Intervention did not work well

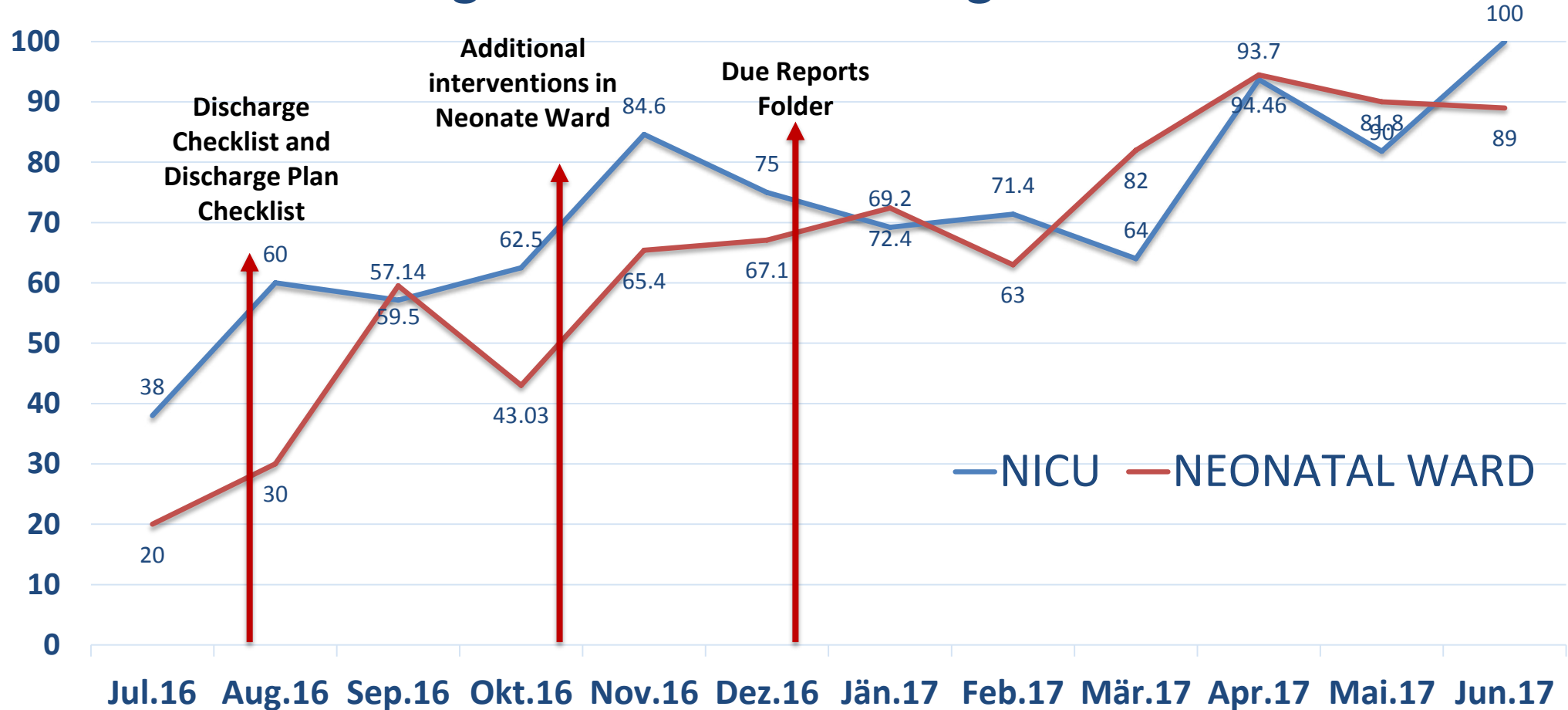
- Orientation to intern

# POST INTERVENTION FLOW CHART FOR DISCHARGE PROCESS IN NEONATAL WARD



# RUN CHART FOR TRACKING CHANGES

## Percentage of Patients Discharged before 11am





# BY-PRODUCTS OF 11AM QI PROJECT

1. Organized medical charts
2. Developed discharge checklists
3. Maintained daily activity log book
4. Develop laboratory result tracking system with “Due Reports Folder” and “Designated status seals”
5. Pre-designed discharge summary for phototherapy clinical pathway
6. Made discharge summary digitalized/typed for long term admission
7. Designated seals in Census Register
8. Team member learned *Quality Improvement (QI) methodology* practically
9. New QI project was formed and started with new team.

# KEYS TO SUCCESS

1. The topic chosen was one of KPI so it was easy to draw attentions from all the staffs and gain team effort.
2. NICU and Neonatal ward worked on the same topic simultaneously so healthy competition and synergistic effect was created.
3. Displayed data weekly and make it visualized to all the staffs.
4. Constant monitoring and evaluation of cause of problem and interventions.
5. Adopt the QI interventions as a Discharge Standard Operating Protocol (SOP) in all Units.

# LESSONS LEARNT

- It took longer time as we planned as it was our first attempt of QI project.
- We should have avoided multiple interventions at a time in one PDSA cycle.
- We could have use Pareto chart to identify the change which has bigger impact to implement first.

# CONCLUSION

- We have improved the percentage of Discharges before 11am in our units with a Quality Improvement Project.
- This QI Project improved work efficiency, teamwork and cooperation among the Staff.

# ACKNOWLEDGEMENT

## QI 11am DC PROJECT MEMBERS

Sarala Pradhan

Sonam Choidon

Tanuja Bhattarai

Nima Dorji Tamang

Uttam Rana

Yeshi Tshomo

Ugyen Dorji

Yeshi Lhamo

Tshetrim Rinchen

- Dr. Ashok Deorari
- Ms. Meena Joshi
  
- All staffs of NICU and Neonatal Ward
- All the Consultants, Residents and Interns of the Department of Pediatrics, JDWNRH
- All allied health staffs visiting NICU and Neonatal Ward
- Laboratory Department, JDWNRH
  
- Sister Sawako Yoshikawa, Senior JICA volunteer



THANK YOU



# Questions & Discussion

Please **use the chat box** to:

- ✓ Ask questions
- ✓ Contribute
  
- ✓ All participants are muted currently.
- ✓ To speak message in chat box!

# 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.
- ❑ **Share your QI work!** Email us [ontopaiims@gmail.com](mailto:ontopaiims@gmail.com)
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