

# Reducing Neonatal Mortality at Satkhira District Hospital by Quality Improvement Interventions

## Background

- District Hospital, Satkhira is a 100 bedded hospital with 10 pediatric beds.
- Pediatric ward is managed by consultant pediatrics, MO, 8 SSNs with other support staff.
- JICA is providing technical support to improve quality of services at District Hospital, Satkhira since 2012.

## QI Interventions Undertaken in Satkhira DH

### Staff training

- Neonatal resuscitation.
- Essential newborn care.
- Emergency Triage Assessment and Treatment (ETAT).
- Infection control.
- Kangaroo Mother Care.

Protocolized management of neonatal sickness

Renovation of hospital by government

Health education to the attendants

5S-Kaizen-TQM

Regular analysis and sharing of data with pediatric service providers

Initiatives taken after introduction of 5S-Kaizen-TQM in pediatric ward:

- Developed baby management corner.
- Visitor control (one attendant for one baby).
- Shoe free ward.
- Health education to patients' attendants (hand washing, exclusive breast feeding etc.).
- Central oxygen supply system.
- Updated neonatal register.

## Objective of Data Collection and Analysis

### Objectives

- To assess the impact of QI interventions on neonatal admissions and outcome at district hospital, Satkhira.

### Data collection

- Data on neonatal admissions (case by case) were collected from the pediatric ward register from March 2011 to December 2014 and analyzed.

Proceeding

Volume 5 Issue 5 - 2016

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**Received:** October 30, 2016 | **Published:** November 04, 2016

## Results

Total neonatal admissions in 2014 was 2,632, which is about 48% higher than 2011

The main causes of hospital admissions were

- Perinatal asphyxia (39.6%).
- Prematurity and low birth weight (16.3%).
- Pneumonia (11.9%).
- Sepsis (10.0%) (Figures 1-11).

## Findings

- Hospital service utilization for neonates has increased by about 50%.
- Overall neonatal case fatality rate (CFR) has declined- from 17.7% in 2011 to 11.7% in 2014.
- More than 70% of the neonatal deaths were due to perinatal asphyxia (41%) and prematurity/LBW (36%).
- Of all the neonatal deaths, 75% were on the first day of life.

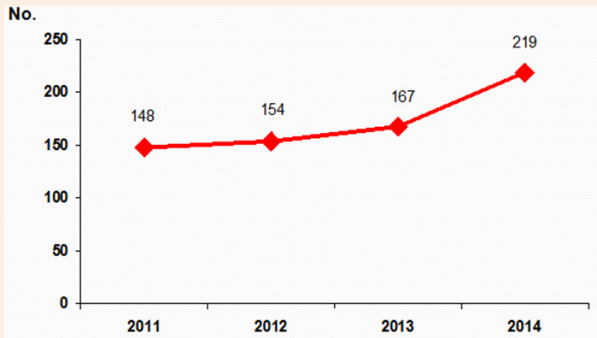


Figure 1: Trend of neonatal admissions: Average per month (No.).

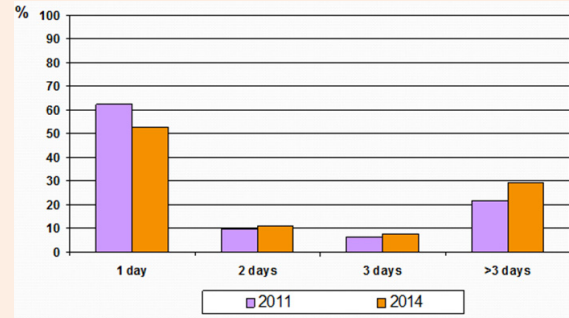


Figure 2: Neonatal admission (%) by age: 2011 & 2014.

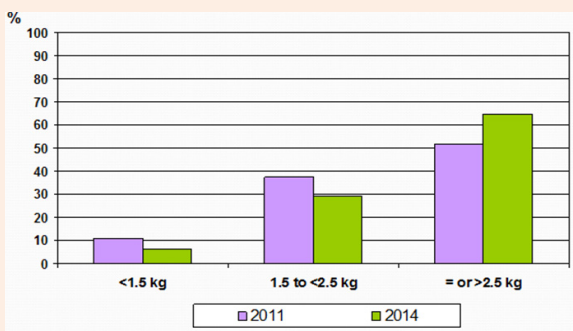


Figure 3: Admission body weight of neonates (%): 2011 & 2014.

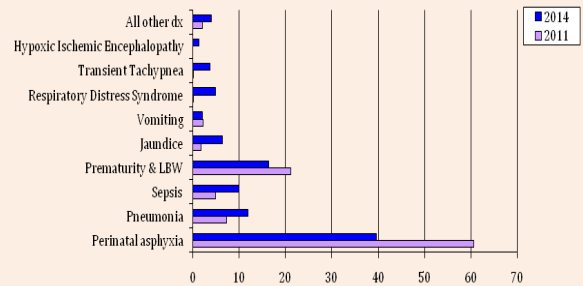


Figure 4: Causes (%) of neonatal admissions: 2011 & 2014.

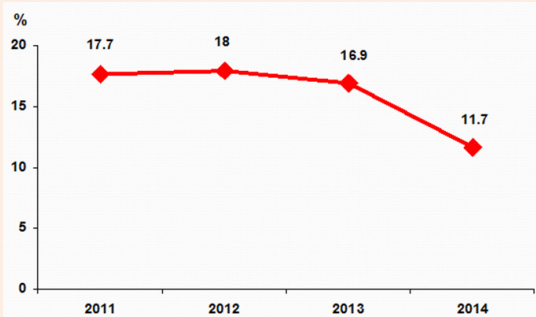


Figure 5: Trend of overall neonatal case fatality rate: 2011-2014.

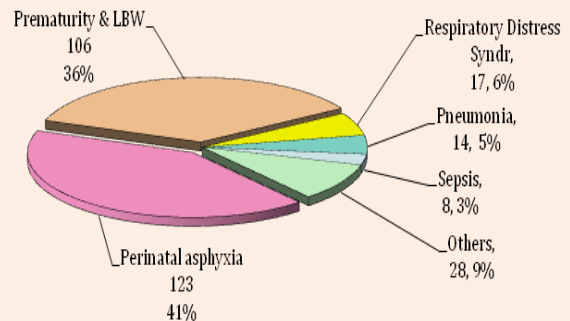


Figure 6: Causes of neonatal death: 2014.

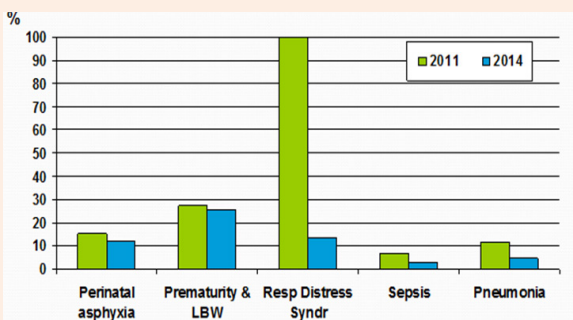


Figure 7: Disease specific case fatality rate: 2011 & 2014. There was only one case of RDS in 2011

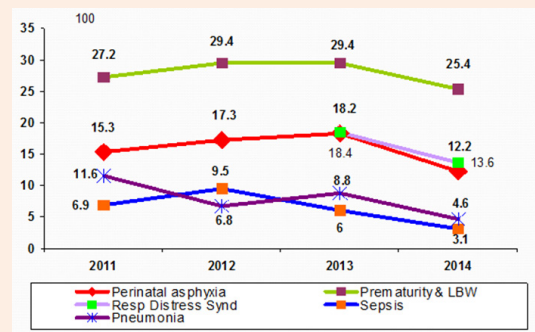


Figure 8: Trend of disease specific CFR (%): 2011-2014.

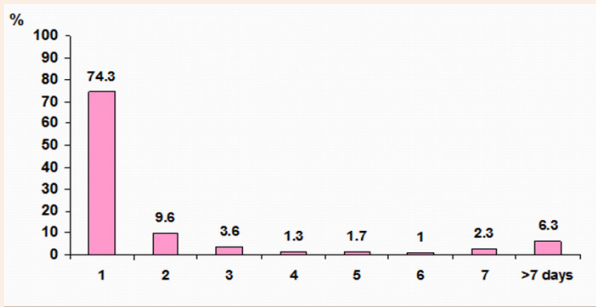


Figure 9: Distribution of age as a proportion of all deaths (n=303): 2014.

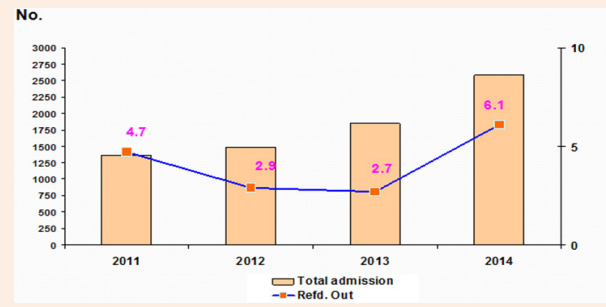


Figure 10: No. of admissions and % of neonates referred out: 2011-2014.

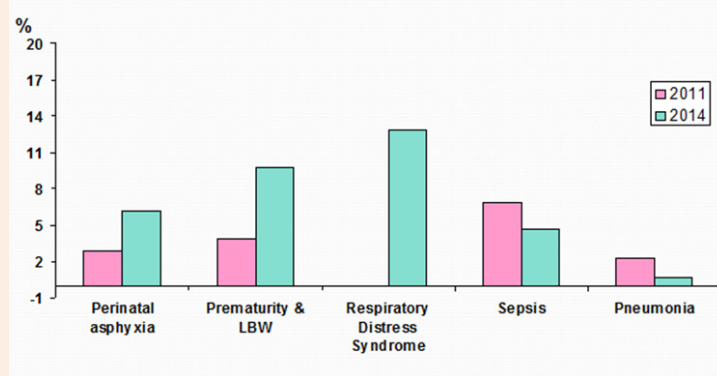


Figure 11: % of cases referred out to other hospital by diagnosis: 2011 & 2014.

### Future Plan

- a) Initiate SCANU at the district hospital (work is going on).
- b) Initiate KMC in pediatric ward (staff have been trained and service will start soon).
- c) Orient the Upazila doctors and nurses for emergency management of neonates and timely referral (initiative undertaken).