



ORIGINAL RESEARCH PAPER

Paediatrics

CLINICAL PROFILE AND DISTRIBUTION PATTERNS OF NEONATAL ADMISSIONS IN A TERTIARY CARE HOSPITAL

KEY WORDS:

Dr. Devangi Kanara

Associate Professor, PDU Medical College, Rajkot

INTRODUCTION

Neonatal morbidity and mortality remain key indicators of healthcare quality, especially in developing countries. Early identification of risk factors such as prematurity and low birth weight is crucial for improving neonatal outcomes. Tertiary care neonatal units receive both inborn and outborn babies with diverse clinical conditions, making it essential to analyze admission patterns for better resource planning.

This study aims to evaluate the distribution of neonatal admissions based on gestational age and birth weight in a tertiary care center.

Aim and Objectives

Aim

To assess the profile of neonatal admissions in a tertiary care hospital and analyze their distribution according to gestational age and birth weight.

Objectives

1. To determine the proportion of inborn and outborn neonatal admissions.
2. To assess the distribution of neonates according to gestational age & birth weight.
3. To identify patterns that may guide improved neonatal care and resource allocation.

MATERIALS AND METHODS

This retrospective observational study was conducted in the Neonatal Intensive Care Unit (NICU) of a tertiary care teaching hospital. Data were collected for 6417 neonatal admissions, including both inborn and outborn babies.

Variables included gestational age categories (>37 weeks, 34–37 weeks, and <34 weeks) and birth weight categories (≥2500 g, 1500–2499 g, <1500 g). Data were analyzed using descriptive statistics.

RESULTS

Total Admissions

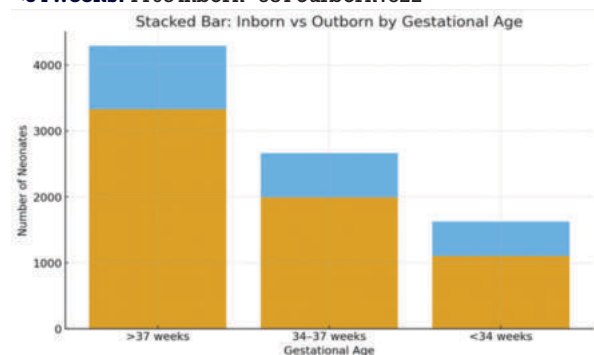
- Total: 6417
- Inborn: 4257
- Outborn: 2160

Distribution by Gestational Age

37 Weeks: 3326 inborn - 2361 outborn : 965

34-37 Weeks: 1988 inborn - 1315 outborn : 673

<34 Weeks: 1103 inborn - 581 outborn : 522



Majority were term neonates (>37 weeks).

Significant proportion (1625) were preterm <34 weeks, indicating high NICU burden.

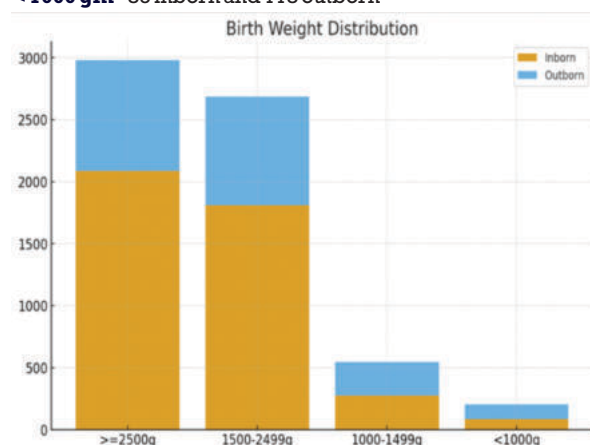
Distribution by Birth Weight

≥ 2500 gm - 2088 inborn and 892 outborn

1500 - 2499 gm - 1810 inborn and 877 outborn

1000- 1499 gm - 274 inborn and 273 outborn

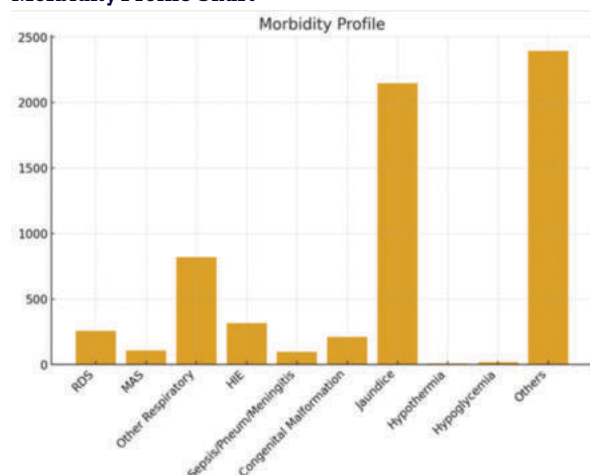
< 1000 gm - 85 inborn and 118 outborn



Approximately 85% of total babies are ≥1500 g.

Which indicates that NICU admissions are largely driven by factors other than extreme prematurity, such as; Birth Asphyxia, Sepsis, Respiratory Distress, Jaundice and congenital Anomalies

Morbidity Profile Chart



CONCLUSION

This study demonstrates that the majority of NICU admissions were inborn and term neonates. However, a considerable number of preterm and low-birth-weight infants contribute significantly to NICU workload. Understanding these patterns helps strengthen perinatal care, optimize NICU resources, and improve neonatal outcomes. Continued monitoring of admission profiles is essential for quality improvement in neonatal healthcare delivery.