

Unplanned Utilisation of Paediatric Services by Very Preterm Neonates Within a Year of Neonatal Discharge: A Retrospective Cohort Analysis

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Abstract:

Background: Advances in neonatal care have led to increasing survival rates among very preterm neonates (VPNs) discharged home. However, many of these infants have complex medical needs that persist into infancy and childhood, necessitating ongoing care. This transition from neonatal to paediatric services may involve both planned and unplanned healthcare utilization. A better understanding of healthcare usage patterns in this population can enhance patient care and support future planning for both neonatal and general paediatric services.

Aim: To describe the unplanned utilization of acute paediatric care services (APCS) by very preterm neonates (VPNs) in the first year following discharge from the neonatal unit.

Setting: A tertiary non-surgical and non-cardiac neonatal unit, co-located with a maternity and foetal medicine unit overseeing over 4600 livebirths annually and up to 1200 neonatal unit admissions annually, the majority of which are inborn infants.

Methods: A single facility retrospective cohort analysis of neonates born at 22+0 to 32+6 weeks gestation and discharged to our hospital's catchment area from January 1st 2021 to December 31st 2022. Infants were grouped into paediatric attenders and non-attenders and compared for demographic data, duration of neonatal hospital stay and neonatal discharge diagnosis. Among attenders, the frequency, reasons, and outcomes of unplanned paediatric service utilization were analysed.

Results: 56% of the VPNs admitted to our unit were discharged home to our hospital's catchment area and 50.7% presented for unplanned paediatric visits with 68.5% occurring within the first two months of neonatal unit discharge.

Birth weight, birth gestational age, neonatal hospitalization duration and a discharge diagnosis of neonatal chronic lung disease were significantly different between attenders and non-attenders.

Among attenders, 52% attended once while 30.1% had three or more visits. Respiratory conditions were