



Abstract 818 Graph 1 Box and Whisker Plots of LOS

Conclusion Our data for length of stay LOS for following neonatal surgery compare favourably to historical data. Our data show a wide variation in lengths of stay; we believe that median LOS with ranges will enable us to give more detailed information to families at diagnosis.

These data allow more detailed planning of resource allocation when planning admissions of these often complex babies.

819 THE EFFECT OF NEONATAL UNIT CARE LEVEL AND VOLUME ON MORTALITY, DISCHARGE, AND TRANSFER: EVIDENCE FROM ENGLISH HOSPITALS

doi:10.1136/archdischild-2012-302724.0819

¹S Watson, ¹S Petrou, ²W Arulampalam, ³N Modi. ¹Warwick Medical School; ²Department of Economics, University of Warwick, Coventry; ³Academic Neonatal Medicine, Imperial College London, London, UK

Background s/aims: In the US a low volume of admissions is associated with higher mortality in very low birth weight (VLBW) infants leading to recommendations for centralisation of neonatal services. We examined the likelihood of mortality, discharge, and transfer for VLBW and/or < 33+0 week gestation babies in relation to volume of admissions and care level in England.

Methods Competing risks regression, allowing clustering at the unit level, was used with data from the first episode of care. Units were classified by level of care and tertile of volume.

Results Following case-mix adjustment, relative to highest volume level three (highest intensity) units, top-tertile level one was associated with reduced risk of mortality (OR:0.05; CI:0.01–0.35; p=0.002). Level one and lower tertile level two units were associated with increased probability of discharge (eg top-tertile level one,

OR:1.91; CI:1.43–2.55; p<0.001). Level one and level two units were less likely to transfer (eg top-tertile level one, OR:0.49; CI:0.33–0.73; p<0.001). These effects became statistically insignificant once 'high risk' babies (with congenital abnormalities, requiring surgery, and born < 29 weeks gestation) were removed.

Conclusions In this UK study we show reduced mortality in level one relative to level three units, and that this difference is explained by a less severe case-mix in lower level units. The majority of care for high risk babies in England is appropriately delivered by high-level units. In the US the case-mix of high- and low-level units is similar. We suggest a network based approach achieves the benefits of centralisation without the disadvantages.

820 LATE PRETERM DELIVERIES AND NEONATAL OUTCOMES IN MULTICENTRE FRENCH REGIONAL PERINATAL NETWORK

doi:10.1136/archdischild-2012-302724.0820

¹M Le Duin, ²C Tripon, ³K Hussein, ⁴J Cuzzi, ⁴D Lapeyre, ⁴Y Wardi, ⁴F Hay-Findler. ¹Obstetrics; ²Neonatology; ³Pediatric Intensive Care Unit; ⁴University Hospital of Poitiers, Poitiers, France

Objective The objective of the study was to present the neonatal outcomes for late preterm birth by gestational age at 33.34 and 35 weeks in a multicentric neonatal network.

Study Design This was a retrospective analysis of neonatal outcomes of late preterm infants (33, 34 and 35 weeks groups) in 5 neonatal care units with one University Hospital Level 3 NICU in one regional perinatal network during 2010. Data were analyzed using Chi(2), Student's Test, and one way ANOVA test.

Results During 2010, the rate of late preterm birth 299/8718 births: 3.42±0.94% without significant difference between the 5 centres. Rates were 0.62%, 1.35% and 1.46% respectively at 33, 34 and 35 wks. There was 19% of twin pregnancy. Vaginal birth rate (57.6%) was not significantly different between groups. Increased gestational age was associated with decreased antenatal steroid use (80.8%, 47.4% and 20.6% respectively; p=0.001). Neonatal mortality was 2/299 (0.68%). Postnatal transport was low (4.3% at 33, 4.1 at 34 and 5.6 at 35). Respiratory distress decreased (27.8% at 33 vs 8.5% at 34 and 7.9% at 35; p=0.001) without significant difference in the use of surfactant. Feeding problems decreased (20.4% at 33 vs 5.5% at 35; p=0.01). There was no significant difference in gestational age at hospital discharge between groups (37.07±1.3 at 33, 36.9±1.2 at 34 and 37.3±1.1).

Conclusion Compared to recent studies the rate of late preterm delivery in our region was similar. Low rate of postnatal transport showed good organization of the regional perinatal network.

821 AN AUDIT OF THE USE OF PICC LINES IN PRETERM INFANTS (< 33WEEKS) IN A TERTIARY NEONATAL INTENSIVE CARE UNIT

doi:10.1136/archdischild-2012-302724.0821

¹A Noshervan, ¹I Gill, ¹H Walsh, ²S Knowles, ¹A Twomey. ¹Neonatology; ²Microbiology, National Maternity Hospital, Dublin, Ireland

Aim To study the frequency of use, indications for placement and complications associated with PICC line placement in a single tertiary NICU.

Method A prospective review of all the PICC lines inserted over ten-month period. Data was obtained from clinical notes, radiology reports and laboratory results.

Results A total of 71 lines were placed in 53 infants < 33 weeks. 43% (53/131) infants < 33 weeks admitted had PICC line placed. The mean gestational age was 27.7±2.3 weeks and mean birth weight was 1030±332g. The indications for insertion was administration of Parenteral nutrition (86%), Inotropes (11%), and antibiotics (3%). The mean age at insertion was 7±6 days and the average