

**NEONATAL MORTALITY RATE (NMR) IN VERY LOW BIRTH WEIGH INFANTS (VLBWI).  
COMPARISON BETWEEN NEONATAL NETWORKS FROM SPAIN (SEN1500) AND JAPAN  
(NRNJ)**

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**Background:** We showed crude and adjusted NMR to be significantly lower among VLBWI cared at the NRNJ than in SEN1500 (ESPR 2010). Differences were also found in outcomes like infection, Necrotosing Enterocolitis (NEC) and severe Intraventricular Haemorrhage (IVH<sub>3,4</sub>).

**Aim:** To analyse therapeutic interventions and factors related to differences in NMR between these networks.

**Methods:** Risk/protective factors, complications and outcomes of VLBWI admitted to SEN1500 (7,006 infants, 63 NICU's) and NRNJ (8,695 infants, 69 NICU's) during 2005-2007 were compared. Non-parametric tests and logistic regression models were performed to predict adjusted NMR. Kaplan-Meier and Cox models were performed to estimate Relative Risks (RR).

**Results:** Differences in NMR between NRNJ and SEN1500 remain if immediate, early and late mortality were compared or adjusted for perinatal risk factors [BW, GA, gender, 1- and 5-min Apgar, multiple birth, prenatal steroid use, and major birth anomalies, OR (95%): 6.5 (5.5;7.6)]. Moreover, RR for SEN1500 was 2 (1.8;2.2) that increased to 4.8 (4.3;5.5), when adjusting by same perinatal factors. NRNJ had a lower rate than SEN1500 for the combined rate of infection, NEC and HIV<sub>3,4</sub> (12% vs. 39.7%). Once NMR was also adjusted by these three outcomes, SEN1500 OR decreased to 2.2 (1.8;2.7).

**Conclusion:** In VLBWI, differences in mortality among NICUs from SEN1500 and NRNJ were mainly related to a higher rate of sepsis, NEC and IVH. Quality improvement strategies aiming at those three risk factors seem mandatory.

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