between 22+6 weeks and 30 weeks gestation. Babies discharged on home oxygen were ventilated longer (Mean=25.1 days vs 11.4 days) and were discharged a month after the comparison group (mean discharge gestation 43.9 weeks vs 39 weeks). Babies discharged with home oxygen were smaller at birth (25th centile vs 43rd centile, $p<0.05$), but there was no statistical significant difference in their weight centiles from 28 days to 2 years corrected. Both groups show poor growth in the first 28 days on NICU but they regained their birth centile by 4 months corrected. There was no statistical significance between the groups in the number of babies needing at least one Accident and Emergency (A and E) attendance or in-patient admission in the first year. A and E attendances were relatively common but only half resulted in admissions and very few required PICU admission ($n=6$) in the first year. **Conclusion** Although babies on home oxygen were smaller and spent a longer period of time on the ventilator, their weight were similar to their preterm peers from 28 days old with catch up growth by 4 months corrected. Home oxygen requirement did not appear to additionally impact upon the A and E attendances, but the frequency of attendance suggests that improving parent education and enhancing community support for discharged preterm infants might reduce the burden on acute paediatric hospital services.

G207(P) HYPERNATREMIA IN EARLY NEONATAL LIFE- CAN IT BE PHYSIOLOGICAL?

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Aims To monitor serum sodium levels (in mEq/l) in healthy term/near-term infants in early neonatal period. To identify risk factors for hypernatremic dehydration and possible early interventions.

Methods Only healthy term/near-term inborn babies were included. They were examined on days four, seven and ten of life. Blood samples were collected on days four and ten of life, serum was separated and stored at -20°C for subsequent analysis for sodium. Serum sodium was compared with weight loss and different risk factors were analysed for association with hypernatremia.

Results 184 healthy term/near-term neonates were included. Mean serum sodium was 149 ± 6.0 (135–172). Sodium levels were normal (135–145) in 47 (25.5%) neonates; hypernatremia of varying severity was detected in 137 (74.5%). 62 (33.7%) neonates had serum sodium levels between 146 and 150, 62 (33.7%) between 151 and 159, and 13 (7%) had serum sodium ≥ 160 . By day 10 of life sodium levels had normalised in all except one, who was hospitalised on day 5 of life with hypernatremic dehydration. His day 4 serum sodium was subsequently found to be 172. Association of different risk factors with hypernatremia is in the table 1. Signs of dehydration were discernible in only nine patients and all of them had hypernatremia, however, most of the babies didn't have obvious dehydration signs.

Conclusion Mild to moderate hypernatremic dehydration is quite common in early neonatal period and adequate breastfeeding is an effective and safe intervention.

Abstract G207(P) Table 1 Comparison of variables between two groups

	Hypernatremic neonates	Neonates with normal sodium	P-value
Maternal age	30.1 $\pm$ 3.4	28.7 $\pm$ 3.9	0.07
Birth wt	3.09 $\pm$ 0.46	3.11 $\pm$ 0.41	0.77
Symp/asymptomatic	49/88	7/40	0.009
Oliguria	13	0	0.04
Nipple problem	3	0	0.57
Decreased milk production	21	1	0.016
Signs of dehydration	9	0	0.11
Wt loss>10%	13	2	0.36
Daily wt loss>2%	47	12	0.28
Caesarean/Normal	87/50	20/27	0.016
Delivery			
first-born/late-born	50/87	26/21	0.026

G208(P) NEONATAL CONGENITAL HEART BLOCK – MANAGEMENT AND OUTCOME ON CASES ADMITTED TO A REGIONAL NEONATAL INTENSIVE CARE UNIT

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Aim Congenital heart block (CHB)^{1,2} detected at or before birth is strongly associated with maternal autoimmune antibodies, anti -La and anti Ro. The majority of cases are diagnosed between 18–24th weeks of gestation. Most mothers carrying auto-immune antibodies are not aware until their child is diagnosed with CHB. Our aim was to review the presentation, management and outcome of neonates admitted with CHB to a regional neonatal intensive care unit (NICU).

Method We conducted a retrospective case notes review of all infants admitted with CHB to NICU over an 8 year period, 07/2009 to 08/2017.

Results 14 babies, 8 females and 6 males were admitted during the study period. 12 cases were diagnosed during the antenatal period and 2 cases postnatally (including undiagnosed CHB presenting with foetal bradycardia at 27 weeks). All 14 infants were born by caesarean section in view of foetal bradycardia (range 35–90 bpm). The median gestational age was 36 weeks (27–39 weeks) and the mean birth weight was 2442 g (1138 g–3360 g). The reasons of CHB in these 14 babies are explained as follows:

- 10 cases had maternal Anti-Ro and Anti-La antibodies (3 cases of Sjögren's syndrome, 2 cases of Systemic Lupus Erythematosus and 5 cases were asymptomatic).
- 3 cases associated with Congenital heart disease (1 congenitally corrected TGA, 1 Left atrial isomerism and 1 VSD, ASD, PDA).
- 1 case of Long QTc syndrome with KCNH2 genetic mutation

They were admitted to NICU and assessed with 12-lead and 24 hour ECG, echocardiography and electrolyte analysis (Potassium, calcium and Magnesium). 3 infants developed life threatening arrhythmias with pulseless ventricular tachycardia

requiring resuscitation. 6 infants had pacemaker placement in the neonatal period (day 3–21) due to severe bradycardia, heart rate <50 or presence of arrhythmias. One child had pacemaker insertion at age 5 years when her average heart rate dropped to 25–30 bpm.

Conclusion Congenital heart block is associated with significant morbidity and mortality. In our cohort, indications for pacemaker placement included a neonatal baseline heart rate less than 50 bpm or presence of arrhythmias (Ventricular tachycardia) on 24 hour ECG monitoring.

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G209(P) DELIVERING EVIDENCE BASED PRACTICES IN PRETERM INFANTS; A SINGLE CENTRE AUDIT OF PRACTICE

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Background Large population data including that of the EPICE consortium has shown high variation in implementation of evidence based practices (EBP) among units, and this can explain some of the variation in outcomes observed between units.

Aims To measure the rate of four EBPs in our preterm population and compare performance with large population data from the EPICE cohort.

Setting Level 3 NICU with approximately 8000 births per annum, with 100 births of <1500 g.

Population All live born babies 23⁺⁰ and 31⁺⁶ weeks gestation receiving neonatal intensive care, born between 1 st Jan 2014 and 31 st December 2016.

Exclusions Babies born prior to arrival at hospital and babies who did not survive to NICU admission.

Four EBPs were; Born in an appropriate level neonatal unit for gestation of baby (all babies); Any antenatal steroids prior to delivery (inborn babies); Avoidance of hypothermia, measured by admission temperature $\geq 36^{\circ}\text{C}$ (inborn babies); Early CPAP or intubation and surfactant within first 2 hours of life (If gestation <28 weeks, inborn babies).

Abstract G209(P) Table 1 Comparison of demographic and EBP data

	Our centre	EPICE
Demographics		
Birthweight, mean, g	1217	1224
Gestational age at birth, mean	28 ⁺⁵	28 ⁺⁵
Evidence-based practices		
Born in right place,%	91.4	88.2
Any antenatal steroids prior to delivery,%	91.8	89.2
Admission temperature $\geq 36^{\circ}\text{C}$,%	99.4	74.4
Appropriate respiratory management if GA<28 w, %	100	83
All evidence-based practices eligible,%	88.8	58.3

EPICE- Effective Perinatal Intensive Care in Europe data published population data in 2016

Methods Ethical approval was not sought, as this was a retrospective audit of practice. Data was collected from the electronic medical records system.

Results There were a total of 396 babies admitted between 2014 and 2016, and 333 were inborn. Across all domains, in house practice was higher than that of EPICE, and infants receiving all EBPs were 88.8% vs 55.3% (table 1).

Conclusion Benchmarking against large population data can be valuable in assessing performance and identifying areas for continuous quality improvement.

G210(P) PERINATAL PREDICTORS OF NEONATAL HYPERINSULINISM: LENGTH AND COST OF STAY

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Aims To identify perinatal factors associated with neonatal hyperinsulinism (HI) and to investigate the predictive value of insulin levels and the maximum glucose infusion rate (GIR) on the length and cost of admission for neonatal HI.

Methods In this single-centre study, infants born between 1/1/2012 and 31/12/2015 above 35 weeks gestation, who were admitted for hypoglycaemia were retrospectively identified. Hypoglycaemia was defined as a glucose level <2.6 mmol/L. The infants were divided in two groups: HI and non-HI. HI was diagnosed if there was detectable serum insulin concordant with hypoglycaemia (blood glucose level <3.5 mmol/L) or a glucose requirement >8 mg/kg/min. Maternal and perinatal factors were compared between the two groups. In the HI group, the predictive value of insulin levels and maximum GIR on length and cost of admission was explored.

Results There were 474 babies with hypoglycaemia, 42 of whom were identified as having HI. The HI group more often had hypoglycaemic symptoms (45.5% versus 26.5%, $p=0.009$) and lower median (IQR) glucose levels on admission [1.75 (1.4–2.1) versus 2.10 (1.8–2.4) mmol, $p<0.001$]. The recorded symptoms included an altered level of consciousness, poor feeding, tachycardia, respiratory distress and abnormal movements. The median (IQR) length of stay was higher in the HI group [8 (3–22) versus 3 (2–5) days, $p<0.001$], as was the cost of stay [£5629 (1239–16372) versus £1239 (826–2995), $p<0.001$]. In the HI group, the maximum GIR was positively related to the length ($r=0.831$, $p<0.001$) and cost of stay ($r=0.833$, $p<0.001$). In comparison, insulin levels demonstrated a weaker correlation to both ($r=0.386$, $p=0.006$ and $r=0.390$, $p=0.006$ respectively). Receiver operator characteristic curve analysis demonstrated that the maximum GIR predicted a length of stay >21 days and cost >£16 000 with an area under the curve of 0.93 for both. A maximum GIR >13.9 mg/kg/min predicted an admission length >21 days and a total cost >£16 000 with 88% sensitivity and 82% specificity.

Conclusion Hypoglycaemic symptoms and lower glucose levels on admission were more common in infants with hyperinsulinism. The maximum GIR was a good predictor of the length and cost of care.