Results Table 2 shows the influence of unsuccessful breastfeeding factors in first day after delivery.
Conclusion Maternal causes have the most strength, and educational, hospital, and newborn causes have intermediate preventive relation as unsuccessful maternal breastfeeding factors. Cultural causes have the most strength indirect preventive influence on unsuccessful maternal breastfeeding, but epidemiologic causes have not significant relation with unsuccessful maternal breastfeeding.

PO-0601 WITHDRAWN

PO-0602 WHAT DO PARENTS THINK ABOUT PROBIOTIC USE IN PRETERM INFANTS?

R Sesham, P Clarke. *Neonates, Norfolk and Norwich Univeristy Hospitals NHS Trust, Norwich, UK*

10.1136/archdischild-2014-307384.1241

Background and aim Meta-analyses show that probiotics significantly reduce necrotizing enterocolitis (NEC) and/or mortality in high-risk preterm infants. Since January 2013, our centre has offered a routine combination probiotic (Infloran®) to preterm infants. We provide written parental information and give parents the opportunity to opt out. We wanted to evaluate parents' opinions on probiotic use in preterm infants.
Methods In December 2013 we conducted a postal survey of all 80 sets of parents of the 90 babies given probiotics in the period Jan–Nov 2013 who survived to discharge.
Results No parents have yet declined probiotics in our NICU. Responses were received from 53 parents. Of these, 74% considered it unnecessary to inform parents prior to starting probiotics; 90% had not worried that their baby was being given live bacteria; 88% were unconcerned about possible unknown risks of probiotics; 88% reported their anxieties in the NICU were eased by knowing their baby was receiving probiotic treatment. Almost all (96%) considered that parents of high-risk premature babies born at other units that do not yet offer probiotics should nevertheless still have the right to be informed of the evidence that probiotics reduce NEC and save lives; moreover 64% felt that, given the current evidence, those parents should not only have a right to be informed but should also be allowed the option of probiotics for their babies.
Conclusion Parents informed of the evidence and offered the option of probiotic prophylaxis for their babies appear to understand and appreciate the evidence and enthusiastically embrace probiotic usage.

PO-0603 LACTOFERRIN AND NICU ENVIRONMENT AFFECT FAECAL BACTERIA OF PRETERM INFANTS

[1]M Sherman, [2]J Sherman, [3]V Niklas. *[1]Child Health, University of Missouri, Columbia, USA; [2]Sinclair School of Nursing, University of Missouri, Columbia, USA; [3]Newborn Medicine, Nemours Children's Hospital, Orlando, USA*

10.1136/archdischild-2014-307384.1242

Background and aims The effects of lactoferrin [LF] on neonatal gut bacteria is unknown. We theorised LF has a greater impact on gut microbiota than the NICU environment.
Methods Ten very preterm infants received enteral recombinant human lactoferrin [rhLF], while 11 infants received placebo for the first 28 days of life. We collected a faecal sample on day 21. We sequenced amplicons made from the V1 – V3 region of bacterial 16 S rRNA in faeces. QIIME and mothur processed filtered reads to classify operational taxonomy units [OTUs] with >97% sequence similarity. Statistical analyses used SPSS.
Results Mean faecal OTUs per infant were higher in NICU1 (mean = 63,284) versus NICU2 (48,080, $p < 0.001$). Reasons for higher OTUs in NICU1 were less antibiotics versus NICU2 (mean = 4.7 vs. 9.5 d, $p < 0.002$); NICU1 used early enteral nutrition in NICU1, while infants in NICU2 received more parenteral nutrition ($p < 0.007$). *Veillonella* as a marker of gut microbiome maturity was higher in NICU1 (mean OTUs = 13,146 versus NICU2 = 1909, $p < 0.04$). A placebo-treated infant with necrotizing enterocolitis had 58,071 OTUs of *Enterobacter hormaechei* in the faeces. Infants given placebo had more *E. hormaechei* (mean OTUs = 23,661) versus rhLF-treated babies (mean = 2330, $p < 0.03$). Two neonatal pathogens, *S. aureus* and *Pseudomonas*, were lower in the faeces of rhLF-treated infants ($p < 0.03$ and $p < 0.01$, respectively).
Conclusions rhLF modulates gut bacteria of preterm infants. The NICU habitat also significantly affects the intestinal microbiome. Research must show if bovine LF also reduces faecal pathogens in very preterm infants.

PO-0604 EARLY PROTEIN AND CALORIE PROVISION ON A TERTIARY NICU

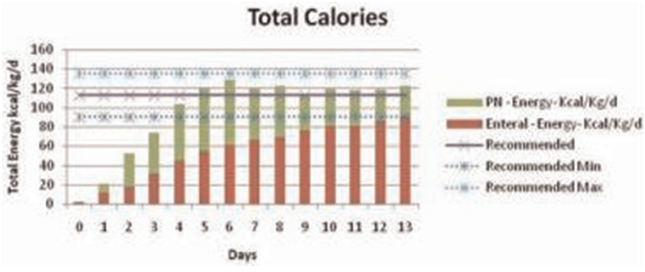
[1]S Shetty, [2]K Tavener, [1]D Kabilan, [1]A Hickey. *[1]Neonatal Unit, Kings College Hospital, London, UK; [2]Paediatric Dietetic Department, Kings College Hospital, London, UK*

10.1136/archdischild-2014-307384.1243

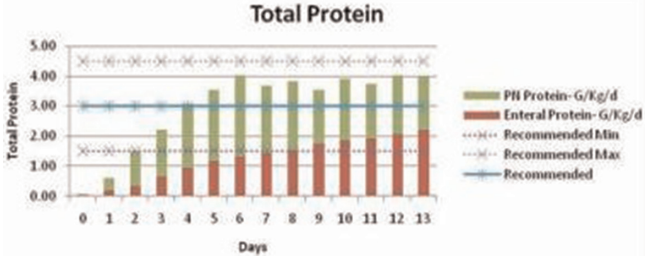
Background and aims Meeting the nutritional requirements recommended by ESPGHAN remains challenging during early NICU care.

We aimed to evaluate local practice and compare provision to recommendations.
Methods In this retrospective study, nutritional data were collected from birth on all neonates admitted to a tertiary referral centre from September to December 2013. Data were obtained from the national database and medical notes.

We assessed enteral and parenteral intake and calculated protein (Grams/Kg/day) and Calories (Kcal/kg/day). Enteral feed data collected included volumes of breast, donor and formula milks. Protein and calorie intake were calculated based on known milk composition values.



Abstract PO-0604 Figure 1



Abstract PO-0604 Figure 2

Subgroup analysis was performed on infants born less than 32 weeks gestation.

Results 40 infants (14 male and 26 female) were studied. Median gestation was 37 weeks. Median birth weight 1847 grams and Median Day 14 weight 1887 grams. 8 infants were less than 32 weeks.19 had enteral feeds only and 21 had enteral and Parenteral Nutrition (PN). No infant had fortifier.

In infants less than 32 weeks, median weight was 772 grams, median protein intake was 2.74 G/Kg/day and median calorie intake was 93.65 Kcal/Kg/day. The majority i.e. 75% were on full feeds of unfortified breast milk by day 14.

Conclusion Protein and Calorie intake met recommendations from day 4 onwards in the whole group but there was a deficit in total calories in a subgroup analysis of the less than 32 week gestation group who were predominantly enterally fed.

PO-0605 A COMPARISON OF CLASSIC VERSUS TRANSFUSION-RELATED NECROTIZING ENTEROCOLITIS IN AN AMERICAN AND POLISH PERINATAL CENTRE

[1]T Szczapa, [1]N Neumann, [1]A Paczesna, [2]J Szczapa, [1]J Gadzinowski, [3]LS Wahidi, [3]K Smelser, [3]MP Sherman, [4]J Sherman. *[1]Department of Neonatology, Poznan University of Medical Sciences, Poznan, Poland; [2]Department of Neonatal Infectious Diseases, Poznan University of Medical Sciences, Poznan, Poland; [3]Division of Neonatology, Department of Child Health, University of Missouri, Columbia MO, USA; [4]Sinclair School of Nursing, University of Missouri, Columbia MO, USA*

10.1136/archdischild-2014-307384.1244

Background and aims Necrotizing enterocolitis (NEC) is the major disease of preterm newborns. The aim was to compare 'classic-NEC' (CNEC) vs. 'transfusion-related-NEC' (TNEC) in a tertiary neonatal intensive care unit in the USA (NICUM) and Poland (NICUP).

Methods NEC cases from 2008–2012 in USA and from 2010–2012 in Poland underwent review. TNEC occurred at ≤48 h after blood transfusion. The health record categorised clinical, nutritional, laboratory, radiographic and pathologic features. Data analysis used SPSS software.

Results Birth weight, gestational age and gender were the same in the two NICUs. Race was predominately Caucasian at both sites. Blood products and administration were similar for the NICUs. Modified Bell criteria for NEC at NICUM and NICUP averaged stage 2. The Table provides prevalence of CNEC and TNEC as well as other analysed variables.

Conclusions TNEC, a disease seen in various settings, may be a pre-existing condition that blood transfusion unmasks. Chorioamnionitis without fetal infection may activate the immune system and reduce the time to NEC onset. A long period of ruptured membranes (ROM) may create persistent fetal inflammation. Early detection and interventions of fetal states increasing postnatal gut inflammation may be important in TNEC prevention.

Abstract PO-0605 Table 1

Finding	USA(n = 50)	Poland(n = 105)	Statistics
CNEC	31(62%)	69(66%)	p = . 0.65
			p = 0.65
TNEC	19(38%)	36(34%)	
		None (29%)	
	None (36%)	Betamethasone (41%)	
Antenatal steroid	Betamethasone (64%)	Dexamethasone (30%)	
Mean days of ROM			
before delivery	20	4	p < 0.01
Chorioamnionitis	15(30%)	47(44%)	p = 0.08
Mean postnatal day of			
NEC onset	19	12	p < 0.01
			p < 0.02, OR=1.8,
Colitis (Hematochezia)	17(34%)	18(17%)	95% CI [1.1,2.7]
			p = 0.02, OR=1.6,
			95% CI [1,2.5]
Survival after NEC	38(76%)	95(90%)	

PO-0606 RADIOLOGIC INTERVENTION OF PORTAL HYPERTENSION IN AN INFANT WITH DOWN SYNDROME DUE TO DIFFUSE ARTERIOPORTAL FISTULAE

[1]M Uysal Yazici, [2]B Cil Barbaros, [1]B Bayrakci Benan, [3]BK Baysoy Gokhan, [3]GF Gurekan Figen. *[1]Pediatric Intensive Care Unit, Hacettepe University Faculty of Medicine, Ankara, Turkey; [2]Pediatric Radiology, Hacettepe University Faculty of Medicine, Ankara, Turkey; [3]Pediatric Gastroenterology and Nutrition, Hacettepe University Faculty of Medicine, Ankara, Turkey*

10.1136/archdischild-2014-307384.1245

Introduction Portal hypertension isdefined as an elevation of portal pressure >10–12 mm Hg.[1] There are manycauses of portal hypertension including heterogeneous group of diseases due to intrahepatic or extrahepatic etiologies.[2]

Hepatic vascularmalformations usually occur secondary totrauma, percutaneous interventions, neoplasms and cirrhosis. Arteriovenousfistulae may also be congenital.[3]

Patients withDown syndrome might have a reduced riskof vascular anomalies compared with the general population.[4] Althoughvarious vascular abnormalities were described in patients with Down syndrome,arteriovenous fistulae between hepatic artery and portal vein is rarely not reported.

Case report We describe a three month old infant with trisomy 21 (Down syndrome) andarterioportal fistula (APF) associated with extrahepatic portal hypertensionand massive ascites.

Sonographic examination of the upper abdomen showed severe ascites and hepatosplenomegaly. Multiple aneurismatic arteriovenous fistulae betweenhepatic artery and left portal vein were demonstrated by portal Doppler sonography. Celiacarteriography was performed for further evaluation and coil embolization;demonstrating that there were diffuseconnections between left portal vein and main hepatic artery, gastroduodenal artery, second and third branches of right and left hepatic artery (Figure 1A and 1B).

In addition to transarterial interventionpercutaneus transhepatic access to the left portal vein was performed and lefthepatic artery to left portal vein fistulae were embolized with n-butyl 2cyanoacrylate which is a liquid embolic agent. Right hepatic artery and mainhepatic artery were embolized with multiple metalic coils bymicrocatheterization technique. Following the