County Durham and Darlington NHS
NHS Foundation Trust

County Durham & Darlington NHS Foundation Trust

Annual Report for the Neonatal Service

2015

Comprising the University Hospital of North Durham Neonatal Unit

and

Darlington Memorial Hospital Neonatal Unit

with you all the way

Foreword

I have the privilege and satisfaction of writing this foreword to the *first* Neonatal Service annual report for County Durham & Darlington NHS Foundation Trust. I hope that those who have the curiosity to read it will find it both interesting and useful, and as this grows in content, year on year, that it becomes a useful resource for the families served by our service, the Trust, the Northern Neonatal Network and beyond.

The production of this report would not have been possible without the drive and persistence of Sister Jan Klinke, as well as the help offered by Ann Bowes (Service Manager), Sister Janice Ratcliffe and Mark Green (Network Data Manager).

As well as presenting the expected statistics, such as number of births and admission rates, we hope to add depth by including and highlighting past successes, on-going projects, challenges and future ambitions, such that the reader will begin to appreciate the day to day workings of the service, and understand our priorities and motivations.

Any comments and suggestions for future reports will be welcomed, as we strive to make this report truly useful and interesting.

Dr Mehdi Garbash

Paediatric Consultant and Neonatal Lead

County Durham & Darlington NHS Foundation Trust

Service profile

There are 24 special care (level 1) cots – 12 of these in the neonatal unit at University Hospital of North Durham (UHND) and 12 in the neonatal unit at Darlington Memorial Hospital (DMH).

These sites are over 22 miles apart and because of this the service covers a large geographical area.

Both units provide continuing special care for babies born after 30 weeks gestation, and in addition provide short periods of intensive care and high dependency care when necessary.

Transitional care, where babies remain with their mothers during care delivery, is provided on both sites, in conjunction with our midwifery colleagues.

Early, supported discharge of babies from the units and from transitional care is also made possible as neonatal nurses can offer home visits and telephone support as part of a community outreach package.

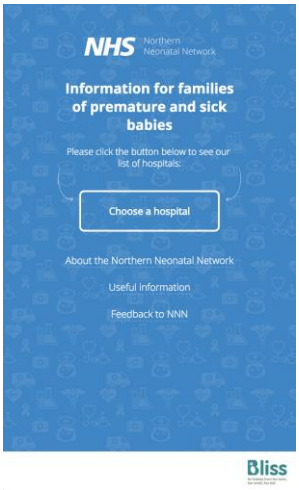
The units are staffed by a team of paediatric doctors and neonatal nurses. We have access to physiotherapists, occupational therapists, speech and language therapists, audiology, and other specialties as needed.

We are part of the Northern Neonatal Network and as such we partner with the other providers of neonatal services in our region so that babies are cared for in the most appropriate setting for their needs and as close to home as possible.

Northern Neonatal Network App

More information on our neonatal units and background information for parents with babies in our care is available via the *free* Northern Neonatal Network App, available for Apple and Android (iTunes and Google play stores).

Anonymous feedback can also be left via this App.



Philosophy of care

We provide a supportive and nurturing environment for babies who have been born too soon or too sick, who are vulnerable and who may have complex needs.

Care is to be centred on the family and we therefore focus on the importance of building this relationship, before delivery if we can. Each baby is an individual, so we implement individualised care plans that take account of the needs of the baby, as well as family wishes, and ensure that these plans are continually evaluated and updated. We invite the family to deliver care where this is possible and offer support and training to do this where this is needed.

Facilities available at Darlington Memorial Hospital

Parent's sitting room, two family rooms, breastfeeding room/support

Facilities available at University Hospital of North Durham

One en-suite family room, breastfeeding room/support

UNICEF Accreditation

Over the past 4 years our service has worked closely with the maternity and community services within our trust to successfully attain full UNICEF Baby Friendly Initiative accreditation.

UNICEF Baby Friendly awards are based on a set of interlinking evidence-based standards for maternity, health visiting, neonatal and children's centres services. These are designed to provide parents with the best possible care to build close and loving relationships with their baby and to feed their baby in ways which will support optimum health and development.

The feedback received from UNICEF throughout the assessment process was extremely positive for our neonatal service, and to build on our success we are hoping to work towards the UNICEF neonatal award in the future, which will focus on and assess neonatal services independently.

We have fostered close relationships with our colleagues in maternity and health visiting to give support to each other and ensure care remains consistent. Staff from both neonatal units attend breastfeeding training every three years, delivered by the Trusts infant feeding co-ordinators, and yearly updates delivered by the infant feeding lead for neonates. The yearly update covers breastfeeding and hand expression and any neonatal specific issues that have been highlighted.

BLISS

The Bliss Baby Charter focuses on providing the best possible family-centred care for premature and sick babies - putting our parents at the centre of their babies care. Family centred care is important to our service as research has shown that it is hugely beneficial to babies and their parents. It can lower a baby's stress levels, promote better health, shorten hospital stays and reduce hospital readmissions. It helps parents bond with their baby and improves their confidence as a parent.

The service is undertaking the Bliss Baby Charter audit, allowing us to assess the quality of family-centred care we provide and identify areas for improvement. We have made numerous changes since completing the initial audit, aiming to increasingly involve families in their babies care – especially when weighing, dressing, transitioning to a cot – and have supplemented our information packs.

A Bliss family support group has been created in the Durham area and has been running since September 2015. As well as acting as a play group for babies, the group offers parents and relatives the chance to socialise and share advice with others who have had similar experiences. We have recently also held a Christmas party for families and feedback so far has all been positive.

Moving forward we plan to replicate this group in the Darlington area.

Developmental care

It is important to create an environment that minimises stress to the infant, while providing a developmentally appropriate experience for the infant and family. Interventions aim to support the developing behaviours of individual infants, enhance their physiological stability and protect the baby's sleep rhythms while promoting growth and maturation.

These interventions include optimal handling and positioning measures, reduction of noxious environmental stimuli and providing cue based care.

Several staff have attended the Foundation Toolkit Study days that are held regionally. We are in the process of obtaining a supply of Mini-Cuskis to help reduce noxious stimuli as well as helping with bonding and attachment. We are working on reducing noise levels and lighting levels on both units, in accordance with developmental care guidelines.

Transitional care

The neonatal service promotes transitional care as this enables many babies to remain with their mother on the postnatal ward, while still receiving a higher level of input than would normally be expected following delivery. Care is delivered by neonatal nurses, midwives and paediatricians.

We do not have a limit on the number of babies that can be cared for in this way.

Babies suitable for transitional care arrangements include:

- babies born after 35 weeks gestation weighing at least 1800 grams who have been assessed by the paediatricians as suitable to be nursed on the postnatal ward
- babies born after 35 weeks gestation, weighing at least 2000 grams
- babies requiring regular blood glucose monitoring, such as babies with diabetic mothers
- babies requiring treatment for possible infection
- babies requiring treatment for neonatal abstinence syndrome
- babies recently discharged from special care facilities

The numbers

The following tables present the data with respect to neonatal service workload. We have included statistics from the last 3 years for comparison purposes, and envisage that over time we will be able to identify any changing trends that are likely to impact service provision.

Data is regularly collated using Badger and we have extracted data from this source for the purposes of this report.

Regular data is also provided to the Northern Neonatal Network and is available in a number of quarterly and annual reports. This information can be accessed via the link below:

http://www.nornet.org.uk/Data

Abbreviations/Definitions	
Badger	The national neonatal dataset collection system
SCBU Special care baby unit	Provides special care facilities for local population, as well as some high dependency and intensive care for shorter periods
DMH	Darlington Memorial Hospital
UHND	University Hospital of North Durham
Live birth	Baby born alive regardless of duration of gestation
Stillbirth	Death before delivery, over 24 weeks gestation
Inborn	Born in or en-route to DMH/UHND
BAPM 2011	British Association of Perinatal Medicine classification
Intensive Care (IC)	In our context, when a baby receives mechanical respiratory support via tracheal tube or any day with an umbilical arterial line, umbilical venous line, peripheral arterial line, insulin infusion, chest drain, prostaglandin infusion, repogle tube or silo for gastroschisis
High Dependency Care (HD)	In our context, when a baby does not fulfil the criteria for intensive care, but receives any form of non-invasive respiratory support or any day receiving continuous infusion of drugs, presence of a central venous or long line, tracheostomy, catheter, nasopharyngeal airway/nasal stent, observation of seizures, barrier nursing, ventricular tap
Special Care (SC)	Where a baby does not fulfil the criteria for intensive or high dependency care, but requires oxygen by nasal cannula, feeding by nasogastric, jejunal tube or gastrostomy, continuous physiological monitoring (excluding apnoea monitors only), care of a stoma, presence of IV cannula, receiving phototherapy, observation of physiological variables at least 4 hourly
Transitional Care (TC)	Special care which occurs alongside the mother but takes place outside a neonatal unit, in a ward setting

SCBU DMH

	2013	2014	2015
Total number of live births DMH	2288	2181	2227
Total number of stillbirths	9	8	5
Total admissions SCBU	222	207	219
Total Transitional care admissions	234	319	424
% admitted transitional care	10.2%	14.6%	19%
% live births admitted to SCBU	9.7%	9.5%	9.8%

SCBU UHND

	2013	2014	2015
Total number of live births UHND	3006	3145	3082
Total number of stillbirths	13	9	11
Total admissions SCBU	230	267	261
Total Transitional care admissions	378	529	608
% admitted transitional care	12.6%	16.9%	19.7%
% live births admitted to SCBU	7.7%	8.5%	8.5%

Demography of admissions (DMH + UHND)

	2013		2014		2015	
Total admissions	452		474		480	
In-born booked	351		337		371	
In-born booked elsewhere	10		18		9	
Postnatal transfer in	42		45		37	
Re-admissions	68		73		52	
Gestation						
<26	8	1.6%	8	1.69%	9	1.87%
26-30	61	12.9%	57	12%	53	11%
31-36	236	50%	195	41%	210	44%
>36	166	35%	215	45%	208	43%

Activity levels in days (BAPM 2011)

	2013	2014	2015
Intensive Care	98	95	85
High Dependency Care	371	466	373
Special Care	6791	7073	5583
Transitional Care	Not measured	2658	2705
Total	7260	10292	8746

Key points

- Over the last 3 years we see that the total number of deliveries is relatively stable on each of the sites
- The percentage of admissions to SCBU following delivery is consistently below 10%
- There is an increasing need for transitional care which is now delivered to almost 1 in 5 babies following delivery in our Trust
- There appears to be a high level of consistency between sites in respect to admission and transitional care policy, as we would hope
- The proportion of babies born under 30 weeks appears to be relatively stable

Considerations for our next report will include data on number of term admissions and reasons for term admissions to SCBU.

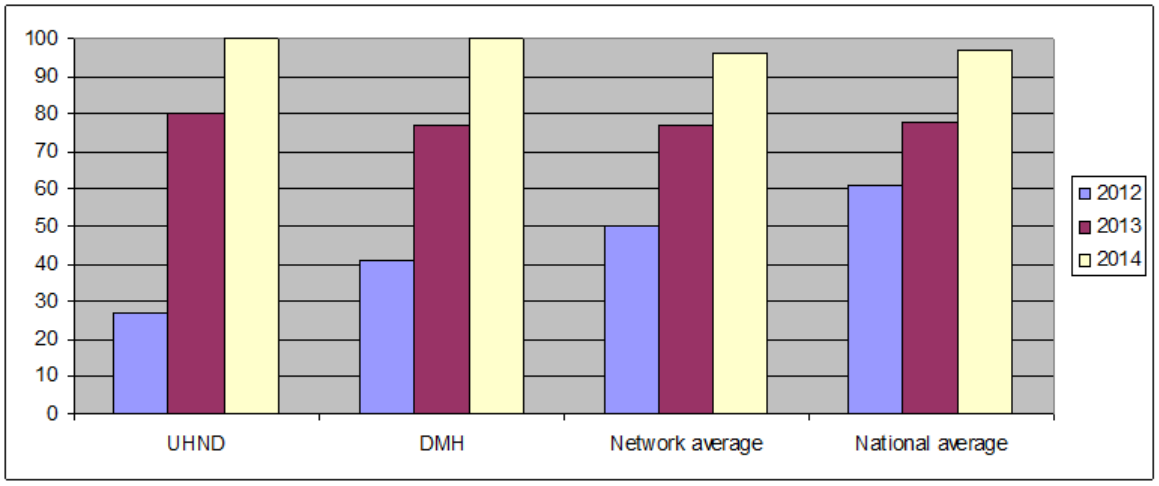
National Neonatal Audit Programme (NNAP)

The NNAP was established to support professionals, families and commissioners in improving the provision of care provided by neonatal services which specialise in looking after babies who are born too early, with a low birth weight or who have a medical condition requiring specialist treatment.

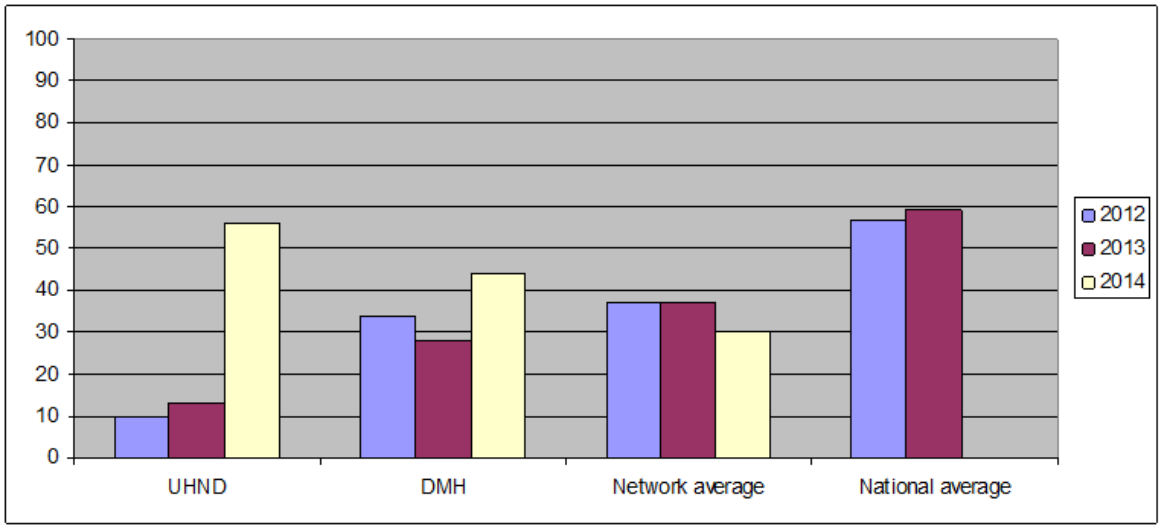
The NNAP measures care based on data provided annually by all levels of neonatal unit. The audit informs action planning at a unit and network level, whilst assisting hospital management, commissioners and policymakers when prioritising future funding and support.

We have seen improvements in some key areas over the last 3 years – namely in Retinopathy of Prematurity (ROP) screening and Breastfeeding rates in preterm babies born before 33 weeks gestation.

ROP screening performed as per national recommendation



Breast milk at discharge for preterm babies born under 33 weeks gestation



As a service we are looking to improve in the following areas and look forward to updating on progress in the coming years:

- data quality – as our results can only be as good as the data we provide
- increasing attention to temperature management during stabilisation
- improved documentation of discussions with families following admission to our neonatal units
- collection of 2 year developmental follow up data for babies born before 30 weeks gestation

Commissioning for Quality and Innovations (CQUINs)

Our service successfully completed a CQUIN for ROP screening in 2014/15 and is currently involved in a further CQUIN with regard to 2 year follow up data.

Transitional care improvement project

Transitional care is a significant amount of activity for our service. Provision of this facility has allowed us to keep our admission rates to our SCBUs low and to also keep term admission rates as low as possible. It has meant that the frequency with which our units are at capacity has been lowered, allowing our maternity service to function on both sites with little interruption.

As the ethos of transitional care is to keep mother and baby together we rely upon a co-ordinated approach from medical staff, neonatal nurses and midwifery staff. To this end we have been looking to improve delivery, and ensure that the level of care provided is as high as possible.

This work has been shortlisted for The Midwives Magazine Award for Team of the Year Award to be announced at the Royal College of Midwives Annual Midwifery Awards ceremony in March 2016. We are delighted to have been shortlisted and to have our commitment to delivering a high quality, effective and efficient transitional care service nationally recognised.

NEST (Neonatal Emergency Simulation Training)

We have been in a position to deliver in situ hi-fidelity neonatal simulation scenarios since October 2015. These sessions are delivered in the neonatal units in Durham and in Darlington. Our plan is to initially deliver 24 sessions in the first year and to then evaluate the training. The aim is to highlight areas of good practice and identify any learning needs in all areas of neonatal emergency care.

Thanks to charitable support we have been able to purchase the latest hi fidelity equipment and to create a joint faculty of nursing and medical staff to develop and deliver the sessions.

Feedback has so far been very positive.

There are plans to also provide drop-in skill update sessions over the next year.

NLS – Newborn Life Support

"NLS trained staff in all units" has been identified as good practice and CDDFT have supported the service in making these courses a priority within the training needs analysis for staff. Currently 95% of SCBU nursing staff within the service hold a current NLS qualification. All medical staff are holders on NLS certification before being allowed to attend deliveries without senior supervision and many midwives are also trained in this set of skills.

In addition to re-certification, the service supports annual updates for all staff with in house NLS trainers who work as band 6 sisters on the units. Our Trust also hosts 4 NLS courses each year which are open to internal and external candidates. We have 3 neonatal sisters registered as instructors and 5 paediatric consultants who also instruct on these courses. All instructors also support the delivery of NLS courses in other units across the Northern Neonatal Network.

RCPCH poster presentation

Over the course of 2014/15 we have been working to improve the provision of care for babies at risk of neonatal jaundice as per NICE guidance. This has necessitated a great deal of inter-disciplinary working and education for different staff groups, as well as provision of handover and assessment tools. This work will be the subject of a poster presentation at the RCPCH annual conference in 2016.

Research projects

The neonatal service acts as continuing care sites for many research trials and studies. Recent examples include BOOST-II, I2S2 and the SIFT trial. Currently we are working on the ELFIN Trial, which is studying whether the administration of lactoferrin prevents late-onset infection in babies born less than 32 weeks gestation. We are preparing for the launch of Baby-OSCAR. This is planned to start in March 2016 and focuses on how ibuprofen can be used for the treatment of patent ductus arteriosus.

With a newly appointed paediatric research nurse and continuing integration with the other units across the region, we hope to further develop our involvement in research projects over the coming years.

Audits

Regular local and national audits are undertaken to benchmark and improve practice and outcomes, by all members of the multi-disciplinary team.

National guidance affords us the opportunity to look at current practice and undertake gap analysis. This has been utilised when newly implemented NICE guidance is issued, namely those for Neonatal Jaundice and Early-onset neonatal infection and on the recommendations of the National Patient Safety Agency with Gentamycin prescribing and administration.

Locally, monthly audit includes case note standards and High impact interventions for Infection prevention and control, in accordance with Trust requirements. The NHS Safety thermometer, a national tool for measuring potential harm and the proportion of patients who are harm free, is also undertaken.

Audits for the coming year include the provision of emergency equipment outside the neonatal unit environment, monitoring of attendance at deliveries, the stabilisation process (golden hour) and term admissions to the neonatal unit. We will also review our neurodevelopmental follow up pathway.

Challenges

Some of the challenges for the next year have already been outlined in the different sections of this report and are particular to a service of our size and configuration.

We strive to continually improve the quality of our data, and begin to take a more detailed look at clinical parameters of interest to enable future service improvement. Some of the areas we would like to report on in future reports are:

- the reasons for admission to SCBU
- the reasons for transfer of babies – whether that be within the Trust or outside the Trust
- the number of term baby admissions and the reasons for their admission
- NEST project feedback and plans

Concluding remarks

Wider difficulties with staff recruitment and retention, as well as potential reconfiguration of services within the region, against a backdrop of financial constraint, ensure a level of uncertainty with respect to the future shape of the service and how this may be transitioned over the coming years. No doubt this will be a challenge, but our core business remains the same.

If you have any comments or suggestions for future reports please contact either:

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Or Ann Bowes, Service Manager ann.bowes@nhs.net