



Special Care Baby Unit Northumbria Specialist Emergency Care Hospital

NORTHUMBRIA HEALTHCARE FOUNDATION NHS TRUST

ANNUAL REPORT
2016

Executive Summary

Activity & cot occupancy

- The total number of admissions to SCBU has increased as it serves an expanding maternity service.

Research and Nursing Initiatives

- The SCBU contributes to data collection for multi-centre (portfolio) studies.

Challenges

- The service needs remain under continual review in light of the increased births at NHCFT.

Foreword

This neonatal service annual report is offered as a resource for the trust and the neonatal network. In addition to providing details of the activity captured by Badgernet other details are included to provide insight into the unit's ongoing projects.

We look forward to reviewing the annual reports of comparable Special Care Units within the Network.

George Brooks (Neonatal Nurse Consultant)

Lorraine Munro (Ward Manager/ANNP)

May 2017



Unit Profile

The Special Care Baby Unit (SCBU) at NSECH has 14 cots. The service is part of the Northern Neonatal Network and provides an Advanced Neonatal Nurse Practitioner-led service. Medical oversight and support is provided by Consultant Paediatricians from within NHCFT.

The unit aims to provide care for all babies born at or greater than 30 weeks gestation and 1500g birthweight. Where possible, women at risk of delivery earlier than 30 weeks are transferred to one of 4 designated NICUs within the Northern Region. If a baby is born at Northumbria unexpectedly before 30 weeks, the unit initiates resuscitation and stabilisation services and the infant is retrieved by our regional designated transport service and transferred to the nearest NICU that can accommodate the baby. SCBU facilities include a parent's sitting room, two en-suite family rooms, breast feeding support and written parent information on all aspects of neonatal care.

In partnership with our midwifery colleagues transitional care plans are implemented for babies on the maternity unit with the aim of keeping mother and baby together where possible.

We are very committed to our philosophy of care in that each baby is an individual and is cared for in partnership with his/her family to include physical, emotional, social and psychological needs to facilitate a transition to his/her new home as smoothly as possible. The unit team works closely with the community health care professionals to allow this streamlined approach.

Northern Neonatal Network App

More information on our neonatal unit 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).



Infant Feeding

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.

Throughout 2016 all SCBU nursing staff received further training in infant feeding. Representatives from SCBU have attended study days and conferences provided by UNICEF and we are now considering working towards the UNICEF neonatal award. A significant capital investment has made the availability of breast pumps at every cotside possible.

The number of infants admitted to SCBU who receive any breast milk continues to improve (44.5% in 2015 to 56.8% in 2016).

BLISS

The BLISS Baby Charter audit provided us with the tools to assess the quality of the family-centred care we provide. BLISS awarded the unit with "pledge of improvement" recognition of the work that has been done so far towards accreditation of high quality family-centred care. They supported our efforts by awarding a substantial grant to improve the environment and enhance the experience of families using the unit. Full accreditation is expected in 2017.

The unit won a 'Safe & High Quality Care' award in the local trust staff awards event in recognition of the work completed by the BLISS team on SCBU.

Transitional Care

To improve compliance in transitional care planning, evidence-based, condition-specific care plans were introduced. These included individual documentation for the care of babies:

- Treated for possible infection
- At risk of hypoglycaemia
- Jaundice requiring phototherapy
- Born through meconium-stained amniotic fluid
- Being observed or treated for neonatal abstinence syndrome.

Since their introduction, audit has demonstrated an increase in the quality of record-keeping and compliance with neonatal guidelines when caring for babies at their mother's bedside.

Abbreviations/definitions	
Badgernet	The national neonatal dataset collection system.
High dependency (HD)	Involves care for babies who need continuous monitoring, for example those who weigh <1000g (2lbs 3oz), or are receiving help with their breathing via continuous positive airway pressure (CPAP) or intravenous feeding, but who do not fulfil any of the requirements for intensive care.
inborn	Born in or en-route to a Northumbria maternity unit
Neonatal Intensive Care Unit (NICU):	Larger intensive care units that provide the whole range of neonatal care for their local population and additional care for babies and their families referred from the neonatal network in which they are based, and also from other networks when necessary to deal with peaks of demand or requests for specialist care not available elsewhere.
Intra-Uterine Transfer (IUT)	Transfer of a pregnant woman to a hospital with facilities and capacity to meet the baby's needs should he deliver.
Livebirth	Baby born alive regardless of duration of gestation.
Nasal Continuous Positive Airway Pressure (nCPAP)	Non-invasive respiratory support for the management of mild to moderate respiratory disease
Outborn	Born in another NHS maternity unit and transferred to NSECH for special care
PostNatal Ward (PNW)	
Special care	Provided for all other babies who could not reasonably be looked after at home by their mother. Babies receiving special care may need to have their breathing and heart rate monitored, be fed through a tube, supplied with extra oxygen or treated for jaundice.
SCBU or SCU	Provide special care for their own local population. Depending on arrangements within their neonatal network, they may also provide some high dependency services.
Stillbirth	Death before delivery at >24 weeks gestation
Transitional Care (TC)	Special care which occurs alongside the mother but takes place outside a neonatal unit, in a ward setting.

UNIT ACTIVITY

Extrapolated from Badgernet this data is also submitted to the Northern Neonatal network and is summarised in their annual reports at <http://www.nornet.org.uk>.

Obvious trends include:

- The increase in deliveries at NHCFT has proportionately increased SCBU workload.
- The number of babies admitted >36 weeks gestation remains above network average (5.5% vs. 4.3%).
- A large number of babies continue to be transferred in and out of the unit for clinical reasons and to assist with capacity issues in other units.

	2014	2015	2016
Total number of live births NHCFT	2179	2809	3213
Total number of stillbirths	9	12	11
Total admissions SCBU	301	292	318
In-born at NHCFT	230	284	226
% inborn admitted to SCBU	10.5%	10.1%	7.0%
Transferred into trust	90	56	54
Transfers out of trust	45	42	37
Admissions from the community**	50	25	54

Gestation*	2014		2015		2016	
<26	2	0.66	4	1.36	2	0.62
26-30	23	10.63	20	7.04	35	11
31-36	123	40.8	122	41.7	109	34.2
>36	153	50.83	144	49.31	172	54

*% of SCBU admissions

** This cohort consists of babies <14 days old referred by primary care for feeding problems and /or weight loss or jaundice requiring phototherapy. Babies are usually admitted with their parents into the family rooms available on SCBU. This arrangement has continued following re-location of services.

Admission from Postnatal ward

Throughout this year no risk reports were generated following admission of term babies from the postnatal ward indicating non-compliance to guidelines. This cohort of babies were roughly divided into two groups, those whose condition unexpectedly changed requiring transfer to SCBU for assessment/treatment and a smaller group of babies who “failed” transitional care, despite adherence to care plans devised in agreement with ANNP, midwife and parents. It is worth noting that throughout 2016 no term babies were cold (temp <36.5°C), upon arrival to SCBU from the postnatal ward.

Extra-uterine transfers from SCBU NSECH

7 babies born at Northumbria were <30 weeks gestation. Births <30 week gestation generate incident reports and are investigated via the obstetrics & gynaecology risk management process. A review of these cases indicated that none could have been transferred out before delivery. These infant's mothers all arrived at NSECH in advanced labour or were delivered by caesarean section < 60 minutes after arrival.

The majority of NHCFT booked babies transferred out in 2016 returned to NSECH for continuing care. The babies who do not return to NSECH required cardiac or other surgery or were sick term babies who rapidly improved and were discharged from NICU's postnatal wards. Two sadly died. Several babies were transferred to the RVI to facilitate parent access as they were Newcastle bookings cared for at NHCFT due to cot capacity issues.

UNIT ACTIVITY

Cot activity in days	2012 (BAPM 2001)	2013 (BAPM 2001)	2014(BAPM 2001/BAPM 2011)*	2015 (BAPM 2011)	2016 (BAPM 2011)
Intensive Care (IC)	122	140	152/71	39	33
High Dependency (HD)	99	153	132/154	109	139
IC & HD total	221	293	284/225	158	172
Special Care (SC)	2424	2329	2273/2050	1946	2934
Total NNU	2645	2622	2557/2275	2252	3279
Transitional Care (TC)	435	317	343	337	544
Total Neonatal Care	3080	2939	2900	2589	3823

*BAPM 2011 guidelines used from 2014

The consistently significant number of transitional care days is attributable to efforts to keep babies with their mothers on the postnatal ward and increased vigilance at capturing transitional care activity.

Resp support days	2012	2013	2014	2015	2016
Ventilation no.of babies	15	23	25	23	20
Ventilation no.of days provided	19	23	26	27	28
nCPAP no. of babies	60	58	63	65	67
nCPAP no. of days provided	104	129	111	108	93
High flow oxygen	-	-	-	-	5
HF no. of days	-	-	-	-	18

The intensive care/high dependency workload undertaken by SCBU remains constant. Throughout the UK it is accepted practice that special care units provide some intensive/high dependency care depending on arrangements within the network (DHGB, 2009). Ventilatory support care episodes are instances whereby resuscitation and stabilisation has been completed by the resident nursing team and the baby is subsequently being cared for prior to transfer to other centres for specialist care.

nCPAP concerns non-invasive respiratory support for the management of mild-moderate respiratory distress. Although this is usually effective treatment for the acute phase of neonatal lung disease all cases are considered on an individual basis and where necessary the NICU at RVI are involved as there is the potential need escalation to a higher level of (NICU) care. High Flow Oxygen is delivered via the nCPAP drivers and is an emerging therapy.

Deaths

Perinatal Statistics (Northumbria)	2012	2013	2014	2015
Total deliveries	2901	2715	2179	2809
Total livebirths	2892	2708	2170	2797
Total stillbirths	9	7	9	12
Early neonatal deaths*	2	3	2	2
Stillbirth rate /1000 births	3.1	3.6	4.1	4.2

*Includes Northumbria booked babies who died at WGH/NSECH.

Neonatal Deaths	2012	2013	2014	2015	2016
In Unit (Birthing centre)	2	2	2	2	
In Unit (NSECH SCBU)	0	1	0	2	2

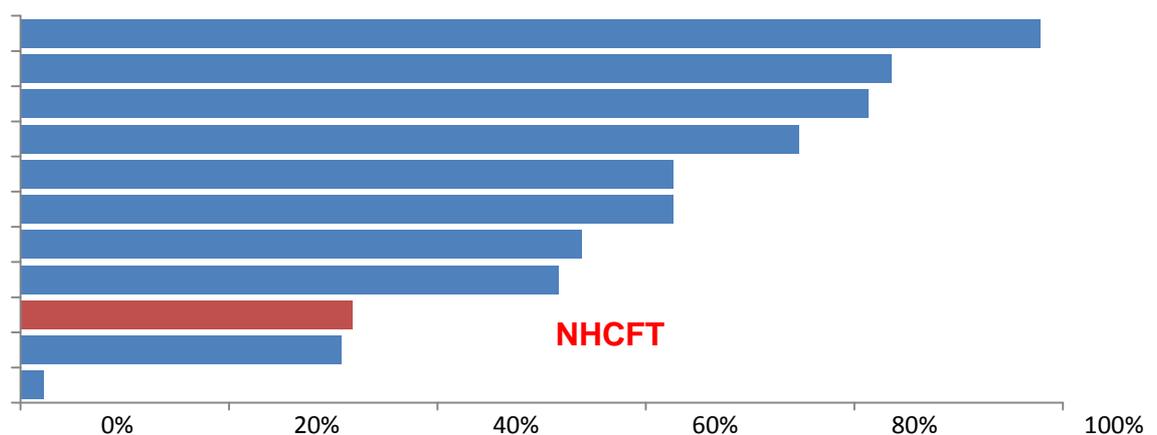
Both babies who died in 2016 were infants diagnosed with hypoxic brain injury on post-mortem and were investigated using internal and external risk management processes. No issues pertaining to their neonatal care were identified.

STAFFING

3 Datix reports were submitted in 2016 reporting inadequate staffing levels they concerned 3 separate shifts. The incidents were caused by an unanticipated escalation of workload.

Monthly statistics are submitted to the network detailing the number and status of nursing staff on each shift. This is then married with the workload using activity details captured on Badger. We are then informed of the number of days each month that we have met BAPM recommendations for staffing neonatal units. Within the neonatal network can compare with other units.

% days that Network met BAPM staffing Jan-Mar 2016



As a matter of urgency this was reviewed and we now sit at 68% (Q1 2017) well within the network average

QUALITY IMPROVEMENT INITIATIVES

Several issues have been reviewed and will need to be monitored in subsequent annual reports.

Acute Transfers A register is maintained of all acute neonatal transfers out of the unit. Cases are then reviewed by the medical and nursing team. Consultants from the transport team visit NSECH to facilitate this.

Family Centred Care Several nurses have attended network training and have introduced practice changes within the unit, promoting parental attachment and enhancing infant comfort.

Breastfeeding Our endeavour to promote breastfeeding reflects the efforts made throughout the maternity unit working towards Baby Friendly Initiative (BFI) status. Indicators for success will be an increase in the number of babies who receive any breastmilk and evidence that more babies are being discharged still receiving breastmilk.

Examination of the Newborn The unit continues to support midwives undertaking the in-Trust examination of the newborn course.

Audit Continuous audits report our obstetric colleagues' adherence to the management of preterm labour guideline to monitor that intra-uterine transfer and antenatal steroid administration is offered to all appropriate women. The SCBU audits are registered within the clinical audit framework to ensure compliance to national guidance such as NICE Neonatal jaundice.

Follow-up of high-risk infants Mechanisms are now in place to ensure all significantly preterm infants born <30 weeks are followed up until they reach 2 years corrected age. This not only provides details of outcomes for this group of infants but ensures developmental problems are promptly identified.

Term Baby Admissions A combined neonatal/obstetric and midwifery group is planned to address admissions of infants born at 37 weeks or greater to the SCBU.