North Cumbria Integrated Care NHS Foundation Trust

Special Care Baby Units Annual Report 2018

Cumberland Infirmary

and

West Cumberland Hospital

Contributors

The compilation and production of this annual report on 2018 for both Special Care Baby Units in Carlisle and Whitehaven would not be possible without the contribution of the wider team and support by all colleagues. I would like to express my sincere special thanks to below members of the team for their invaluable contribution to complete this report.

Lesley Brown	Ward Manager, SCBU, CIC
Claire Peters	Ward Manager, SCBU, WCH
Lan Ruddick	Lead Information Analyst, Family services, NCIC
Vicky McLaughlin	Clinical Audit facilitator, NCIC

Abbreviations and Terminology

1	ARNI	Advanced Resuscitation of the Newborn Infant
2	ATAIN	Avoiding Term Neonatal Admissions into Neonatal Units
3	BagerNet	Neonatal clinical data & summaries
4	BFI	Baby Friendly Initiative
5	CIC	Cumberland Infirmary, Carlisle
6	CPAP	Continuous Positive Airway Pressure
7	EPLS	European Paediatric Life Support
8	HDU	High Dependency Unit
9	LMS	Local Maternity Systems
10	MAGIG	Maternity Guidelines and Information Group
11	NCIC	North Cumbria Integrated Care NHS Foundation Trust
12	NICU	Neonatal Intensive Care Unit
13	NIPE	Newborn and Infant Physical Examination
14	NLS	Neonatal Life Support
15	NNAP	National Neonatal Audit Programme
16	NNN	Northern Neonatal Network
17	NeTS	Northern Neonatal Transfer Service
18	ROP	Retinopathy of Prematurity
19	SCBU	Special Care Baby Unit
20	TC	Transitional Care
21	WCH	West Cumberland Hospital

Introduction and Scope of Neonatal Services

The Special Care Baby Units (SCBU) at North Cumbria Integrated Care NHS foundation (NCIC) trust are part of the Northern Neonatal Network (NNN). The newborn care at NCIC is provided on 2 hospital sites; Cumberland Infirmary, Carlisle (CIC) and West Cumberland Hospital, Whitehaven (WCH). SCBU at CIC provides care for the infants born at 30 weeks' gestation and beyond. SCBU at WCH delivers care to the newborn infants born from 32 weeks' gestation. Whenever possible, in utero transfer is arranged for the extremely preterm deliveries in line with agreed Network patient pathways.

Both SCBUs provide high dependency care (HDU care) for the babies who require non-invasive ventilation e.g. High flow oxygen, CPAP support. Both units also provide a brief periods of neonatal intensive care for the babies requiring stabilisation, endotracheal intubation and invasive ventilation pending transfer by the neonatal transport team. The Network's dedicated neonatal transport team "NNETs" (Northern Neonatal Transfer Service) has ensured a high quality 24/7 provision to move babies around the region according to the clinical need.

SCBU at Cumberland Infirmary was nurse led with consultant support with plan of moving to 24/7 consultant lead care by 2019. The unit current bed capacity is 8 with low to medium dependency cots. The West Cumberland Hospital SCBU is supported by 3 tiers of doctors (junior doctors, middle grade paediatricians and consultant paediatricians). The current bed capacity is 9 cots with 3 HDU beds.

Key clinical staffs in Cumberland Infirmary

1. Dr Ben-Hamida, Consultant Community Paediatrician and Clinical Lead in general and Community Paediatrics, Lead for Cystic Fibrosis & Honorary Lecturer to The University of Central Lancashire (based in Workington Community Hospital).
2. Dr P.Whitehead, Consultant Paediatrician, Lead for Diabetes.
3. Dr G.Jones, Consultant Paediatrician, Named Doctor for safeguarding children, special interest in paediatric nephrology.
4. Dr O.Kehinde, Consultant Paediatrician, RCPCH College tutor, special interest in paediatric epilepsy.
5. Dr S.Sikkander, Consultant Paediatrician, special interest in Diabetes.
6. Dr K.Berankova, Consultant Paediatrician, special interest in paediatric respiratory medicine.
7. Dr S.Arjunan, Consultant Paediatrician, Lead for Paediatric Assessment Units.
8. Lesley Brown, SCBU Ward Manager.

Key Clinical Staffs in West Cumberland Hospital

1. Dr S. Pennington, Consultant Paediatrician, RCPCH College tutor.
2. Dr A .Kona, Consultant Paediatrician, special interest in Paediatric Emergency.
3. Dr M. Hussain, Consultant Paediatrician with special interest in Neurodisability.
4. Dr Holt-Davies, Consultant Paediatrician with special interest in Diabetes.
5. Dr Y.Aung, Locum Consultant paediatrician, special interest in paediatric Cardiology & Neonatal Lead for NCIC.
6. Dr S.Tan, Consultant Community Paediatrician.
7. Dr K. Eapen, Specialty Doctor in paediatrics.
8. Dr D. Sailer, Specialty Doctor in paediatrics.
9. Dr V. Thomas, Specialty Doctor in paediatrics.
10. Carole Parker, Advanced Paediatric Nurse Practitioner.
11. Claire Peters, SCBU Ward Manager.

Northern Neonatal Network

Northern Neonatal Network (NNN) is an Operational Delivery Network (ODN) operating across the North-East and Cumbria. It is one of the largest neonatal ODNs by geographical area and currently comprises 3 Neonatal Intensive Care Units (NICUs) and 8 Special Care Baby Units (SCBUs). The NNN provides support and guidance to all neonatal units in the region. The core principle is “To give the highest possible standard of safe, effective care to babies and their families.”

Neonatal stabilisation workshops are organised and run on a yearly basis in Cumbria by the NNN; alternating between Cumberland Infirmary and West Cumberland Hospitals. The teaching comprises a combination of lectures, workshops and simulation scenarios and enables staff who undertake the stabilisation of sick and premature babies that require care at one of the NICUs to maintain and improve the skills and provision of safe care prior to transfer. There are quarterly Network meetings which are both Clinical in nature as well as the Board meetings, and regular NNN visits to both SCBUs and NICU peer review feedback sessions.

The NNN network manager circulates both our SCBUs’ quarterly performance reports, BAPM standard staffing reports and other appropriate reports. The SCBU reports and both units performances including updates and challenges are regularly looked at and discussed in quarterly NNN meetings across the region. The feedback and learning points from the quarterly NNN meetings is also shared across the Trust.

Highlights for 2018

There are emergence of the Local Maternity Systems (LMS) and also the national Maternity & Neonatal Health and Safety Collaborative (MNHSC) over the last year. The NCIC has endeavoured to play a role in to represent the neonatal voice in these maternity-driven and headed initiatives. We as NCIC (West and North Cumbria) is one of the LMS in our NNN ODN region & have been tasked with delivering the recommendations from the National Maternity Review's "Better Births" Report 2016. We are now starting to mature and looking forward to continuing the collaborative work with local maternity colleagues as well as within the region.

Audits and Quality Improvements

1. National Neonatal Audit Programme (NNAP) is running continuously and progressing on schedule. NNAP supports the professionals, families and commissioners to improve the care and service provided by the units. They are recognised as a very useful tool for our neonatal units, and provide a near real time representation of data and performance as realistically as possible. They include detailed unit activities, the reports on clinical indicators against the national CQUIN and NNAP standards and also summaries on non-clinical indicators of the units' performance. These reports are analysed and discussed locally and make appropriate action plans to achieve the best possible service provision.
2. An audit on the management and treatment of Neonatal sepsis in SCBU (April 2018) was completed with evidence of compliance with standards and action plans. The audit questions focused on the indications, diagnosis and management of the neonatal sepsis and their compliance with the current NICE guidance.
3. MBRRACE perinatal mortality surveillance report for North Cumbria University Hospitals NHS Trust for year 2016 was completed in December 2018. The key findings, conclusions, recommendations and action plans were shared and discussed with the maternity safety and quality colleagues.
4. An audit on term admissions to SCBUs (January 2017 - June 2018) was recently completed, with recommendations and action plans. It looked in to the primary reasons for the term neonatal admissions to SCBUs, identified the modifiable factors and helped identified the learning points for developing the provision of transitional Care (TC) services across the trust.

5. At the time of the report writing, there are 3 other neonatal audits progressing on schedule to identify the issues of our SCBUs and the best way forward to maintain the compliance with national NNAP data.

BLISS Baby Family Friendly Accreditation Scheme

1. Both SCBUs are working through the audits and improvements towards full accreditation with BLISS. Both units have achieved 95% compliance against the BLISS family friendly audit in May 2019, awaiting formal assessment and accreditation. The scheme objectives are to help neonatal units deliver a family centred care for families who have preterm or sick newborn infants admitted to SCU or NICU.
2. Both units have completed stage 2 **UNICEF Family Friendly accreditation** in May 2019, and working towards stage 3 achievement. UNICEF BFI accreditation is combined with maternity and community service.

Other Achievements

1. I am pleased to share the good news that West Cumberland Hospital has been identified as outstanding by RCPCH for change between 2016 and 2018 for the audit measure: Is there a documented consultation with parents by a senior member of the neonatal team within 24 hours of a baby's first admission?

2. A few more staff members have successfully completed the ARNI course (Advanced Resuscitation of the Newborn Infant).

3. SCBU has managed to recruit a few new members of nursing staffs.

4. Parent/carer feedback to both SCBU units continues to be outstanding.
5. At the time of report writing, there is a huge success in terms of the medical recruitment to implement the 24/7 paediatric senior cover in CIC.

Challenges

1. **Staffing**: Recruitment of both medical and nursing staffs. The SCU recently recruited a few new nursing staff members. With a few senior Band 7 staff nurses retiring, the current challenge is skills mix and training up Band 6 and Band 5 to more senior

positions. The paediatric consultant rota at CIC ensures 24 hours senior paediatric cover with resident consultants.

2. **Geography:** Cumbria is a large geographical area and timely safe transfers to and from both units require close liaison with the tertiary unit and NNeTS.
3. **Service:** Reducing the term newborn admissions as part of ATAIN national project, is a challenge due to lack of formal TC provision. Development of transitional care on both sites is currently being considered and working towards.
4. **NNAP compliance:** Issues with achieving the national standard NNAP compliance especially in a few areas; for example. 2 years neuro-developmental follow up of the eligible babies and timely ROP screening of eligible babies of are being looked at across the trust level. The plans should be in place and hope to be improving the compliance by the time of 2019 annual report writing.

Clinical Governance

1) **The perinatal mortality and morbidity meeting** was held every 2-3 months to discuss morbidity and mortality of neonatal cases. At the time of the report writing, we hold regular monthly perinatal meetings with the representatives from both maternity and paediatrics; discussing the learning outcomes and modifiable factors.

2) **The Maternity Governance and Maternity Guidelines and Information Groups** (MAGIG) meet regularly. Guidelines are circulated for electronic voting and are ratified in the MAGIG meetings. Learning points and meetings 'minutes are circulated by the maternity governance and child health clinical governance groups.

3) **Resuscitation updates:** NLS update for neonatal and midwifery staff is provided by Consultant paediatrician, Dr Jones (NLS and EPLS instructor). At WCH, Celia Braithwaite, is an NLS instructor who teaches NLS and PROMPT.

4) **Weekly clinical incidents meetings** where clinical incidents are discussed and actions taken and learning shared. In addition, a specific SCBU risk, serious learning events, complaints and complements are discussed in the monthly Child Health Governance meetings as well as Safety & Quality group meetings.

5) **Transitional Care steering group and SCBU development group** holds regular meetings and discuss the plans for SCBUs maintenance and developments.

6) **Guidelines:** SCBU units on both hospital sites have access to Bedside Clinical guidelines produced by the Midlands Guideline Development Group, NICE national guidelines, Northern Neonatal Network guidance as well as local adapted guidelines available on the Trust Intranet. The Clinical Guidelines have been adapted for local use, together with locally developed guidelines.

NCIC SCBUs' Data report

The following tables present the data regarding the workloads on neonatal services across Cumbria. We have included statistics from the last 5 years for comparison purposes. The data is regularly collated using Badger. Regular data is also provided to the Northern Neonatal Network and is available in quarterly and annual report formats. This information can be accessed via the link: http://www.nornet.org.uk/Data and also in BadgerNet.

Term admissions rate still noted to be high with substantial amount of term admission found to be for short observation, which we hope potentially will improve with development of the Transitional care provision. We have at moment noted to be lack of formal record of transitional care days in BadgerNet across site which will need to look at for the next year as NNAP 2020 data will be looking at that data for bench marking.

Cumberland Infirmary	2013	2014	2015	2016	2017	**2018**
Live Births	1697	1748	1695	1708	1636	**1559**
Admissions	243	204	235	231	207	**218**
Term Admissions	114	89	103	126	115	**108**
IC days	29	20	28	27	10	**27**
HD days	90	121	117	131	99	**119**
SC Days	1909	1690	1795	1619	1654	**1820**
NC Days	657	458	522	147	95	**126**
TC days	200	152	139	195	207	**0**

Table 1. Live births and unit admissions for Cumberland Infirmary

West Cumberland Hospital	2013	2014	2015	2016	2017	**2018**
Live Births	1328	1222	1182	1244	1234	**1168**
Admissions	197	146	178	142	142	**144**
Term Admissions	109	61	91	65	72	**56**
IC days	35	17	23	15	18	**21**
HD days	89	60	104	71	126	**99**
SC Days	1773	1568	1490	1513	1188	**1311**

West Cumberland Hospital	2013	2014	2015	2016	2017	2018
NC Days	302	268	159	30	20	1
TC days	0	0	0	0	0	0

Table 2. Live births and unit admissions for West Cumberland Hospital

Cumberland Infirmary	2013	2014	2015	2016	2017	2018
Admissions	243	204	235	231	207	218
Inborn - booked	205	171	189	190	170	174
Inborn -booked elsewhere	2	3	4	5	3	2
Re-admission	16	15	21	18	12	19
Postnatal transfer in	13	10	13	11	17	17
Other*	7	5	8	7	5	6
Gestation						
<26	2	3	2	1	1	1
26-30	17	17	14	14	16	15
31-36	110	95	116	89	75	94
37+	114	89	103	127	115	108
Total	243	204	235	231	207	218

Table 3. Births and gestation breakdown for Cumberland Infirmary

West Cumberland Hospital	2013	2014	2015	2016	2017	2018
Admissions	197	146	178	142	142	144
Inborn - booked	148	114	124	110	105	97
Inborn -booked elsewhere	5	5	10	3	5	13
Re-admission	22	13	25	14	11	16
Postnatal transfer in	4	8	9	10	5	11
Other*	18	6	10	5	16	7
Gestation						
<26	1	3	1	2	2	1
26-30	13	10	17	19	6	14
31-36	73	72	69	56	62	73
37+	110	61	91	65	72	56
Total	197	146	178	142	142	144

Table 4. Births and gestation breakdown for West Cumberland Hospital

*includes un-booked, home admission, Cannot derive

Respiratory Support Days	2013	2014	2015	2016	2017	2018
Cumberland Infirmary						

Respiratory Support Days	2013	2014	2015	2016	2017	2018
Ventilation no. of babies	17	11	17	10	7	**20**
Ventilation no. of days provided	22	13	21	11	8	**25**
nCPAP number of babies	32	39	40	37	35	**40**
nCPAP number of days provided	66	87	85	94	78	**83**
West Cumberland Hospital						
Ventilation no. of babies	18	10	15	13	13	**13**
Ventilation no. of days provided	22	13	20	15	17	**21**
nCPAP number of babies	17	13	21	18	12	**14**
nCPAP number of days provided	42	30	75	52	24	**21**

Table 5. Respiratory support days for NCIC

Reason for All SCBU Admissions	Cumberland Infirmary
Preterm	61
Respiratory disease	50
Monitoring (Short observation)	23
Hypoglycaemia	13
Infection suspected/confirmed	11
Continuing care	20
Poor feeding or wight loss	9
IUGR/SGA	0
Congenital anomaly supsected/confirmed	6
Investigation	1
Social issues/foster care	5
Jaundice	6
Convulsions suspected/confirmed	2
Poor condition at birth	2
Birth trauma/injury	0
Re-admission	4
Cardiovascular disease	1
NAS suspected / confirmed	2
HIE suspected / confirmed	1
Maternal admission / emergency	1
Total Admissions	218

Table 6. Reasons for all SCBU admissions for Cumberland Infirmary

Reason for All SCBU Admissions	West Cumberland Hospital
Preterm	61
Respiratory disease	18
Infection suspected/confirmed	18
Poor feeding or wight loss	6
Hypoglycaemia	4
Monitoring (Short observation)	6
IUGR/SGA	4
Jaundice	4
Continuing care	10
Cardiovascular disease	0
Social issues/foster care	2
Poor condition at birth	3
Congenital anomaly supsected/confirmed	2
Re-admission	1
Failed oximetry testing	1
Convulsions suspected/confirmed	1
GIT Disease	3
Grand Total	144

Table 7. Reasons for all SCBU admissions for West Cumberland Hospital

Reason for Term (37+ gestations) Admissions	Cumberland Infirmary
Respiratory disease	35
Monitoring (Short observation)	20
Infection suspected/confirmed	10
Hypoglycaemia	7
Poor feeding or wight loss	8
Continuing care	2
Congenital anomaly supsected/confirmed	6
Investigation	1
Social issues/foster care	3
Jaundice	5
Convulsions suspected/confirmed	2
Poor condition at birth	2
IUGR/SGA	0
Birth trauma/injury	0

Reason for Term (37+ gestations) Admissions	Cumberland Infirmary
Re-admission	2
Cardiovascular disease	1
NAS suspected / confirmed	2
HIE suspected / confirmed	1
Maternal admission / emergency	1
Total	108

Table 8. Reasons for all term admissions for Cumberland Infirmary

Reason for Term (37+ gestations) Admissions	West Cumberland Hospital
Respiratory disease	13
Infection suspected/confirmed	13
Poor feeding or wight loss	5
Hypoglycaemia	2
Monitoring (Short observation)	4
Jaundice	3
Social issues/foster care	2
Poor condition at birth	2
Cardiovascular disease	0
Continuing care	3
Congenital anomaly supsected/confirmed	2
Failed oximetry testing	1
Convulsions suspected/confirmed	1
IUGR/SGA	2
GIT Disease	3
Grand Total	56

Table 9. Reasons for all term admissions for West Cumberland Hospital

Key Objectives for 2019

1) Works towards the development of the Transitional Care services across the NCIC.
2) Continuing with the provision of the best possible care to families across the region; measured against national NNAP performance data.
3) Continuing working closely together with the maternity colleagues; in accordance to the Local Maternity Systems and the national Maternity & Neonatal Health and Safety Collaborative.

Closing remarks

Both units endeavour to provide high quality neonatal care as per national and regional standards and work closely with the regional NICUs as part of the Neonatal ODN. The reconfiguration of maternity services in North Cumbria posed a challenge but the paediatric department continue with great efforts to recruit to both units to meet national standards.

I produce this report as my first report working as the Neonatal Lead for North Cumbria Integrated Care NHS foundation Trust. The final published report can be accessed via https://nornet.org.uk/reports-data/#1503374024156-00e2e0b9-7179
If you have any comments or suggestions for future reports, please let me know.

Yours sincerely,

Dr Yee Mon Aung
Neonatal Lead
North Cumbria Integrated Care NHS foundation Trust
yeemon.aung@ncic.nhs.uk

Your baby's care

Measuring standards and improving neonatal care

WEST CUMBERLAND HOSPITAL takes part in the **National Neonatal Audit Programme (NNAP)** which monitors aspects of the care that has been provided to babies on neonatal units in England, Scotland and Wales. This poster shows how the 2017 results for WEST CUMBERLAND HOSPITAL compare with national rates, as indicated in the NNAP 2018 Annual Report on 2017 data.

Antenatal steroids

Mothers who delivered babies between 24 and 34 weeks gestation who were given antenatal steroids. This is recommended to help prevent breathing problems in baby.

Our unit 100% | National rate 89%

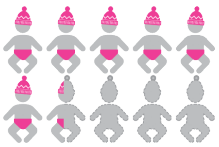
Antenatal magnesium sulphate

Mothers who delivered babies below 30 weeks gestation who were given magnesium sulphate in the 24 hours before delivery. This is recommended to help prevent cerebral palsy in baby.

Our unit 100% | National rate 64%

Temperature on admission

Babies born at less than 32 weeks gestation who had an appropriate temperature (between 36.5˚C and 37.5˚C) on admission to the neonatal unit.



Our unit 67% | National rate 64%

Consultation with parents

Documented consultation with parents/carers by a senior member of the neonatal team within 24 hours of a baby's admission.

Our unit 91% | National rate 95%

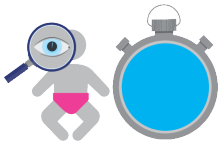
Parents on ward rounds

The proportion of admissions where parents were present on at least one consultant ward round during a baby's stay.

Our unit 70% | National rate 74%

Screening for retinopathy of prematurity

Babies who are born weighing less than 1501g, or are born at less than 32 weeks gestation who receive on-time screening for retinopathy of prematurity



Our unit 75% | National rate 94%

Mother's milk at time of discharge

Babies born at less than 33 weeks who were receiving some of their mother's milk, either exclusively or with another form of feeding, when they were discharged from neonatal care.

Our unit 50% | National rate 60%

Follow-up at two years of age

Babies born at less than 30 weeks who had received documented medical follow-up at two years of age.

Our unit 0% | National rate 63%

Please see **Poster 2** for this unit's response to the results.
To find out more about how we use your baby's information, please visit:
www.rcpch.ac.uk/nnap

RCPCH
Royal College of Paediatrics and Child Health
Leading the way in Children's Health

Poster 1

National Neonatal Audit Programme

RCPCH Audits

Your baby's care

Measuring standards and improving neonatal care

CUMBERLAND INFIRMARY takes part in the **National Neonatal Audit Programme (NNAP)** which monitors aspects of the care that has been provided to babies on neonatal units in England, Scotland and Wales. This poster shows how the 2017 results for CUMBERLAND INFIRMARY compare with national rates, as indicated in the NNAP 2018 Annual Report on 2017 data.

Antenatal steroids

Mothers who delivered babies between 24 and 34 weeks gestation who were given antenatal steroids. This is recommended to help prevent breathing problems in baby.

Our unit 87% | National rate 89%

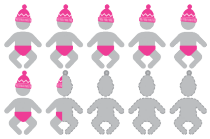
Antenatal magnesium sulphate

Mothers who delivered babies below 30 weeks gestation who were given magnesium sulphate in the 24 hours before delivery. This is recommended to help prevent cerebral palsy in baby.

Our unit N/A | National rate 64%

Temperature on admission

Babies born at less than 32 weeks gestation who had an appropriate temperature (between 36.5˚C and 37.5˚C) on admission to the neonatal unit.



Our unit 50% | National rate 64%

Consultation with parents

Documented consultation with parents/carers by a senior member of the neonatal team within 24 hours of a baby's admission.

Our unit 90% | National rate 95%

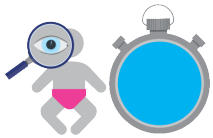
Parents on ward rounds

The proportion of admissions where parents were present on at least one consultant ward round during a baby's stay.

Our unit 60% | National rate 74%

Screening for retinopathy of prematurity

Babies who are born weighing less than 1501g, or are born at less than 32 weeks gestation who receive on-time screening for retinopathy of prematurity



Our unit 78% | National rate 94%

Mother's milk at time of discharge

Babies born at less than 33 weeks who were receiving some of their mother's milk, either exclusively or with another form of feeding, when they were discharged from neonatal care.

Our unit 0% | National rate 60%

Follow-up at two years of age

Babies born at less than 30 weeks who had received documented medical follow-up at two years of age.

Our unit 57% | National rate 63%

Please see **Poster 2** for this unit's response to the results.

To find out more about how we use your baby's information, please visit:
www.rcpch.ac.uk/nnap

RCPCH
Royal College of
Paediatrics and Child Health
Leading the way in Children's Health