The Northern Neonatal Network

An Operational Delivery Network

Annual Report 2017-18

The Northern Neonatal Network. Our year 2017-18 at a glance

- The Network has invested a significant effort in supporting the reconfiguration of neonatal intensive care on the Tees across the two current Neonatal Units at James Cook University Hospital (JCUH), Middlesbrough and the University Hospital of North Tees. In line with the Royal College of Paediatrics & Child Health (RCPCH) Report of 2015 recommendations, this will eventually see all intensive care centred on the JCUH Unit. The first phase of this was completed in September 2017 and over the last 12 months; the aim has been to complete the process. At the time of writing this Report, this is now imminent, with a number of nurses and the remaining consultant neonatologists transferring to help facilitate this.
- The Network's dedicated neonatal transport team "NNETs" (Northern Neonatal Transfer Service) has continued to develop and ensure a high quality 24/7 provision to move babies around the region according to clinical need. The team has recruited the nurses needed and is focussing on training up the Advanced Neonatal Nurse Practitioners (ANNPs) who will oversee the transfers once competent.
- Every Neonatal Unit in the Network underwent a Peer Review in late 2017. The process was facilitated by the National Quality Surveillance Team, who have overseen similar reviews in other clinical areas in the past. The Network helped support this process and the training of Peer Reviewers who were then able to undertake Reviews in other network areas.
- In May we facilitated a one-day Parent Workshop, with attendance from across the Network. Aiming to have an open and honest conversation with families who had used our neonatal services, the focus was on how we could "make and do things better" and we had some excellent suggestions we will be looking to take on board and improve the way we engage with parents and families in future.
- Our strong emphasis on the training and education of our staff continued and we had a very busy year offering a wide range of training days, workshops, our 4th successive Foundation Toolkit from the FINE (Family & Infant Neurodevelopmental Education) programme and also featuring our very successful 8th Annual Conference Network. As a result, well over 200 staff benefited from opportunities to access free opportunities in order to gain new skills and knowledge that will directly benefit their practice and help them achieve professional revalidation.
- The Network has played a key role in supporting the development and maturing of the three regional Local Maternity Systems (LMS) across the region, ensuring neonatal issues and priorities are discussed and delivered according to their remit. This has included producing draft quarterly LMS Data Reports, summarising key metrics of particular maternity focus and helping to highlight variation in performance that can be discussed and addressed.
- We have continued to facilitate quarterly Network meetings with a varied programme that allows us to discuss issues of importance, including a dedicated meeting at which learning outcomes from local death reviews can be shared, with the aim of improving practice, reducing mortality and minimising morbidity, as was agreed with NHS England in line with national recommendations.

Introduction by the Northern Neonatal Network Host Sponsor Chief Executive – Ken Bremner

The NHS continues to change, develop and evolve amidst significant challenges across the system. Locally, this has seen the two neighbouring Trusts in Sunderland and South Tyneside collaborate closely, seeking to improve services for their populations and this has resulted in the extensive work we call "Path to Excellence". We all recognise the need to provide services that are of the highest possible quality but also sustainable for years to come. Networks like the Northern Neonatal Operational Delivery Network (ODN) are a key partner in this process and we have appreciated their input over the last year into some difficult conversations in helping to make this happen. In the same way, the Network continues to provide input into ongoing reconfiguration across the region.

This has resulted in a now-imminent change to neonatal services on the Tees being completed, which will mean that as per the RCPCH Review recommendations from August 2015, all neonatal intensive care will be concentrated on the James Cook University Hospital site. This will build on the previous work that saw babies less than 27 weeks gestation cared for there, but mean that the final step in this process will be completed. It has been no mean feat to achieve and it is testament to all the dedicated health care professionals involved that it is now close to completion, as the challenges and changes required to implement this were significant. It is no exaggeration to say that the way this has been agreed and implemented can act as a potential exemplar for successful reconfiguration of services elsewhere and the Network role as an independent resource and source of clinical expertise has been central and welcome throughout.

It is a pleasure to see how the Network has also managed to maintain a focus on other key areas such as supporting the training and education of our neonatal staff, helping developing and equipping them to provide the very best care possible. The annual programme that is put together provides excellent opportunities for development and another initiative that the Network created (the Sam Richmond Scholarship) and promotes, once again had a very worthy winner that this Report highlights. I hope this will receive similar support in the future and look forward to presenting the next winners with their trophy in 2019. In the meantime, I am confident that the Network will continue their core work and focus on their remit and I commend this annual report as a reflection of the difference they make.

Foreword by the Northern Neonatal Network Board Chair – Deborah Jenkins

It seems a very long time since we started discussing service reconfiguration across our region, but as I look back over this year it is notable that there has been a real shift in progress. Our colleagues in the South of the region are working productively together to create strong shared services across Teesside.

It has been a difficult year for colleagues in South Tyneside as they have begun the process of merger with Sunderland, but we see new partnerships and

collaboration emerging. The transport service is up and running, and the expansion of the RVI unit is still supported despite changes in commissioning infrastructure.

I think nobody would pretend that we are working in easy times. Although those of us who work in the NHS are notorious for declaring that we've never had it so bad, there are new complexities, shortages, and political undercurrents that probably do make this a particularly challenging environment. It is a tribute to all the people who work in our units across the North East and Cumbria that they remained passionately committed to caring for the most vulnerable babies in our communities and their families. That passion and commitment continues to show itself not only in a pride in good service but also in a thirst for improvement, and I am delighted that so many colleagues have taken part in Network events throughout the year.

As ever, I am particularly grateful to Martyn and the Network teams, who despite various types of adversity have managed to push forward our programme of courses and events, ensure that we have taken full part in consultations and policy developments, and secure great representation for us on a national stage.

We can be proud of the quality of our services. Let's make 2019 a year in which we can demonstrate that we are able to overcome politics and financial constraints to concentrate on what we care about most - babies and their families.

Report from the Northern Neonatal Network Manager - Martyn Boyd

Much of the Network's time and energy over the last 12 months has necessarily been heavily focused on the challenge of implementing the reconfiguration of neonatal services across the Tees. This has not been easy, but we finally made real progress in September 2017, with the care of all babies less than 27 weeks gestation being cared for at James Cook University Hospital. North Tees will continue to care for babies over this age, but the plan is from September 2018; all intensive care will shift over. At the time of writing, this is now imminent.

It has been a very challenging process and this is the culmination of recommendations first made in August 2015 by the Royal College of Paediatrics & Child Health (RCPCH) following their independent Expert Review. Although progress on this aspect of their report has been a little slower than we first anticipated, I think it actually reflects the complexities involved in implementing what is actually a very significant change in the provision of neonatal services across the two neighbouring Trusts. However, in the last 12 months there has been a much more concerted effort and truly collaborative approach amongst all the senior staff involved and the difficult conversations that had to be worked through are now bearing real fruit and everybody is now working towards the final phase. Once this has been achieved, the overall aim of providing the very highest quality neonatal care in

a safe and sustainable way on both sites as per the RCPCH proposals will be complete. Next year's Annual Report will allow us to look back and reflect on the changes and how they have affected workloads, occupancies, nurse and medical staffing and other clinical factors.

Taking the RCPCH Report as a whole, I think it is appropriate to reflect on just how much has been achieved in the time since it was published. We now have a fully funded and supernumerary dedicated neonatal transport team in NNeTS and Rob Tinnion outlines the main areas of progress they have made over the last year in a separate section later in this Annual Report. If we add in the imminent changes to NICU services on the Tees, it amounts to a significant amount of change and improvement, as well as investment by NHS England.

However, there still remains more work to do and the focus is shifting to creating much needed extra capacity at the RVI in Newcastle. Successive annual assessments undertaken by the Network have highlighted the urgent need for this, as at times of peak activity, local mothers who have booked and would normally deliver at the RVI are having to be transferred to the other NICUs across the Network on a regular basis – either in utero, or also ex utero once babies have been delivered due to lack of cots there. This is a real priority and Lisa Jordan (NHSE Commissioner for neonatal care) outlines this as an area of increasing focus and we have already had some detailed discussions about how this can be funded and facilitated. General agreement has been secured, but the actual process in delivering this is mostly about the logistical challenges of where the extra cots needed can actually be accommodated at the RVI (and this has also been agreed and supported in principle by the Trust) and the recruitment of the extra nurses needed to staff them and thus enable them to become operational. At the time of drafting this Report, real progress is being made and we are collectively very confident that extra capacity can be created in the way it is urgently needed. We continue to invest a great deal of time in this as it remains the number one priority area for us and also a key aspect in attempting to address the final aspects of the RCPCH relating to the last suggested changes to patient pathways across the RVI and Sunderland as without this, it is impractical, if not impossible.

It remains something of a frustration that the National Neonatal Review is still only in draft form and has not been released. It seems that the plan is for a number of "regional events" to be facilitated by the NHSE team tasked with delivering the final Report, allowing discussion of the draft version to take place and then any feedback given at these to be collated and incorporated into the published version. Whilst this is a sound idea, it is also disappointing that the process has taken so long, bearing in mind that the preliminary discussions and planning took place in the summer of 2016 and the data gathering was completed (with significant ODN input) later that year. The original hope had been to enable the high level recommendations to be released by the end of 2016 too, but this seemed to be wildly optimistic and a more detailed approach to it has been taken. We do hope that final publication happens in the very near future and whilst the draft contains some excellent recommendations, until the Report is signed off by the NHSE Programme of Care Board for Women & Children, we are unable to incorporate any of it into our own Network plans, although we do look forward to this in due course.

As was proposed and highlighted in last year's Report, all our 11 Neonatal Units underwent a "Peer Review" for the very first time during late 2017, in line with every other NNU in England and facilitated by the National Quality Surveillance Team (NQST). This was based on a set of "Quality Indicators" that had been drafted and agreed nationally, mostly referencing existing standards such as BAPM. The DH Toolkit (2009) and BLISS Baby Charter Standards. A team of Peer Reviewers made up of neonatal staff and lay representatives and supported by NQST officers then assessed Units and their service provision and facilities against these. Initial feedback was provided at the end of the day of assessment, highlighting both "areas for improvement" and of serious concern, as well as examples of good practice, before a final report was drafted. This required action plans where issues had been raised and they were fed back at Trust Board as well as Network level too.

I think it is fair to say that the experience was variable and some of the way the Reviews were conducted seemed subjective and dependent on the Peer Reviewers themselves. Some staff across the Network themselves trained to be Peer Reviews and were on teams across the country, confirming that similar issues occurred elsewhere, so it appears to have been a systemic problem, not just one our own Units experienced. There were some particular problems where teams were made up of neonatal staff based in very different neonatal units to those they were tasked with reviewing – such as from very large regional NICUs reviewing some of our smallest SCBUs, which operate under very different staffing models for example. The application of the standards in a relatively subjective way from this perspective occasionally led to variation and focus on issues that were not highlighted elsewhere. Such an

approach did lead to some challenging conversations and thankfully, some of the final reports did reflect taking some of this constructive feedback on board. The general consensus at Network Board level when debrief discussions took place that it seemed a useful and productive idea in principle, but some of the subjective assessments led to more inconsistency than was expected, so the end result was something of a missed opportunity. That said, some of the areas highlighted by Review teams did prove helpful in reflecting known and existing issues and challenges, particularly in terms of staffing pressures and support for parents and the facilities available to them and the action plans drafted endeavoured to address these. The Network fed this back to the NQST and it is hoped that future Peer Reviews may incorporate some of the suggestions to improve the process for all involved.

One highlight of the year was a very successful Parent Engagement Day that the Network facilitated in May at Lumley Castle. The aim of this was to have an open and frank conversation with parents of babies who have been cared for on our neonatal units across the region and see how we might improve things both in terms of care and facilities/support available to them as well as how we could provide better mechanisms for taking their views on board as a Network. Nearly thirty attended and many brought their "graduate" babies and their siblings along. The day was chaired by our own Deborah Jenkins and several staff from the Network (some of who very kindly helped provide crèche facilities) and the NNUs were key to making it the success it was.

It started with some very messy but enjoyable artwork that everybody joined in and which the children particularly enjoyed. It was also very helpful to have a significant "dads" presence and this provided a useful opportunity to them to discuss issues that they experienced during their babies stay that few had the chance previously. Some excellent breakout sessions and group work provided a whole host of new ideas , thoughts and suggestions and the Network is exploring how to adopt the ones we feel are "quick wins" as well as those that are more challenging, but equally important. We also hope that this might lead to future such events and other opportunities to engage in a meaningful way with parents and improve our neonatal services moving forward so watch this space!

We continue to place a very high priority on the training and education of our staff and the separate reports elsewhere highlight the achievements in this respect during 2017-18. The Network has an ongoing commitment to ensuring that all our neonatal staff are equipped to provide the very highest quality care possible and stay fully up to date with the latest skills and knowledge within our specialty. We still support the post-registration QIS modules for nurses with 2 "core" days at which other staff are always welcome as a refresher and to enable them to reach revalidation. All our training days evaluate very highly and are well appreciated by those who attend, whilst we recognise it is increasingly difficult to offer protected study leave to do so, but by pledging to keep all such events free to those who attend as long as we have the funding to do so, we aim to maximise attendance as far as possible.

That said, we do struggle to reach certain groups of staff within certain units, so the ongoing support and encouragement of managers and clinical leads is key. The highlight of the year continues to be our Annual Conference and this year we enjoyed our 8th such event as a Network. The standard of topics and speakers remains very high and once again we got a very good mix of nurses, medics and AHPs of various grades and seniority from across every NNU and we look forward to our imminent 9th Event, this year (2018) at the new venue of the Clarion (formerly the Quality) Hotel in Bolden. I am sure it will again prove to be a resounding success and we can highlight this in next year's Annual Report.

In the last Annual Report, I highlighted the emergence of Local Maternity Systems (LMS) and also the national Maternity & Neonatal Health and Safety Collaborative (MNHSC). Over the last 12 months, the Network has

endeavoured to play a key role in both to represent the neonatal voice in these maternity-driven and headed initiatives. The three LMS in our region (West, East & North Cumbria; Northumberland, Tyne, Wear & Durham; Darlington, Teesside, Hambleton, Richmond & Whitby) have been tasked with delivering the recommendations from the national maturity review's "Better Births" Report and there are some key neonatal elements to this so the Network has appropriate representation and involvement on their Boards and have them reflected in their LMS Plans. These bodies are now starting to mature and we look forward to continuing or collaborative work with them all over the next year too.

The MNHSC has focussed on trying to hit the national targets of reducing the rates of maternal deaths, stillbirths, neonatal deaths and brain injuries that occur during or soon after birth by 20% by 2020 and 50% by 2030 – although the latter target has now been brought forward to 2025. Every Trust is taking part in this national initiative which is being rolled out in three "Waves", starting in April 2017, in which North Tees was the sole Wave 1 participant from our Network. By April 2020, all will have participated. Again, although the emphasis is on maternity, there are also quality improvement initiatives that have a neonatal focus – for example one of the North Tees programmes is aiming to reduce term admissions due to hypothermia and hypoglycaemia.

The Network is working closely with the regional MNHSC Project Lead (Julia Wood – contracted by the Allied Health Science Network – AHSN) to help deliver this and it will be interesting to see what the other 8 Trusts focus on as they join in Waves 2 and 3, but if this helped to achieve the headline aim and also reduce Term Admissions, keeping more babies with their mothers, it will have been very worthwhile.

The Network has continued its now well-established quarterly days of meetings. These typically begin with a meeting of the Unit Managers that Lynne Paterson chairs and allows a useful forum to focus on nursing issues. We then utilise the rest of the morning to facilitate Death Review meetings – as agreed with NHSE to discuss learning outcomes from the local death reviews held at Trust level. The focus is not so much on the clinical details of the reviews themselves, but what lessons have been learned as a way of sharing learning outcomes and promoting best practice. Participation is generally good with input from most Trusts and Units and they are felt to be beneficial. The second MBBRACE-UK (Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK) Perinatal Mortality Surveillance report was published in the second half of 2017 and showed a marked improvement from the previous one. Although as was pointed out in 2016, it relied on historical data, so it was too soon for the learning outcomes shared to impact clinical practice – this will be happening in future reports, so we hope that the perinatal mortality metrics eventually reflect that.

Taking all these achievements into consideration and bearing in mind the challenges outlined above, particularly in respect of the time and focus on the reconfiguration, I think it is fair to say that the Network has managed to deliver on its main priorities as previously outlined in the Workplan for the last year. We will now collectively aim to build on that and see the next one through so that when the next Report is being published, we should hopefully have completed the Tees Reconfiguration and be looking forward to changing our focus in other much needed areas. Our Network Team is small but very dedicated and we work hard to deliver what the Board agree are our priorities and it is testament to them that we can publish this Annual Report as a comprehensive summary of that. I thank all of them for their input and hope you agree they do an excellent job on behalf of all the stakeholders across the region.

Report from the Northern Neonatal Network Clinical Lead – Dr. Sundeep Harigopal

As I write to the report for the seventh Northern Neonatal Annual report, I am pleased to say that the last year has been a very successful year for the network in terms implementing some for plans. We need to continue to build on the momentum to ensure that we continue to deliver equitable, high quality neonatal services in the changing times.

In August 2015, NHSE commissioned an external review (RCPCH) on the recommendations of the Northern Neonatal Network to move the neonatal intensive reconfiguration across the network. The review made three key recommendations - 1) Independent 24 hour neonatal transport service 2) Reconfiguration - Teesside to have one neonatal intensive care unit at James Cook University hospital and a SCBU at North Tees. 3) Reconfiguration - RVI to be a quaternary service, Sunderland to deliver intensive service for babies at 26 weeks gestation and above.

I am pleased to say that within a span of 30 months we have managed to implement the first two recommendations. On the 3rd of September 2018, reconfiguration of Neonatal intensive services on Teesside was complete which included designation of a Level 3 centre at North Tees to a Level 1 centre and expand capacity at James Cook. I am in no doubt when I say that the reconfiguration across Teesside will benefit the population on Teesside and wider, by consolidating intensive care on one site. However, the journey was not easy and such a major change could not have been achieved in such a short span of time without the support of many including the specialist commissioners who saw that benefits that such as a change would bring to the babies and families.

The independent network transport service – Northern Neonatal Transport Service (NNeTS) has grown in size and the activity of the service has increased significantly in the last two years. The service has been able to facilitate more timely transport due to the availability of two teams at most times. This is key for maintaining capacity in NICUs.

The next major task for the network is to improve capacity across the northern patch in Royal Victoria Infirmary, Newcastle. An increase in capacity of nine cots in RVI is required to reach adequate capacity for the network and implement the final phase of reconfiguration. I have been in talks with the specialist commissioners and the Newcastle upon Tyne NHS Hospitals Foundation Trust to make progress on this front. The aim would be phase this change.

We continue to face issues with nurse staffing. This has sometimes resulted in cot closure that has a knock on effect in terms of NICUs unable to transfer back well babies to SCBUs. The network is closely monitoring staffing ratios and will provide all the support needed to resolve these issues.

The MMBRACE-UK Perinatal Mortality Surveillance report published in 2018 for the year 2016 showed stabilised and extended perinatal mortality rates up to 10% lower the average in 7 trusts and more than 10% higher than average in three trusts. Although the NNAP reported many areas of good practice there are also areas for improvement included bronchopulmonary dysplasia and antenatal Magnesium uptake. We are now working the Academic Health Science Network and Maternity Network the PReCePT programme to improve our antenatal Magnesium uptake.

I would also like to take this opportunity to highlight some of the other successes. Our network has the least number for babies less than 28 weeks gestation born outside a Level 3 centre and this is despite not having too many transfers. This is a major achievement because the model we have for our network. We have also developed a new website at www.nornet.org which is more up to date and user friendly with all network resources available

including guidelines, reports and data. I encourage people to have a look at it and use it. We are also at the finishing stages of Parental Nutrition standardisation across the network. The Network has always had education as high priority from its inception. We continue to make significant progress in the field though stabilisation courses, case discussions and the respiratory study day and nutrition study day.

Finally, I would like to particularly thank the nursing staff in N Tees who had to go to a period of uncertainly and the general paediatricians and ANNPs who will now be looking after the babies on the SCBU in North Tees. I would also like to thank all my network colleagues and special thanks the network officers for their hard work and dedication.

Report from the Northern Neonatal Network Nurse Lead – Lynne Paterson

Another packed year has flown by and I have been involved in many things in relation to the network and in particular, in relation to neonatal nursing.

At the beginning of the year we pulled together a few members of staff from different units to look at the parents' satisfaction survey (thank you to all involved). We have agonised with this for some time as it is not yet standard across all units and the parents can be asked to complete more than one whilst they are with us. We did look at what needed to be changed and also if we could have this available on different media and to date we have not completed these changes and we are talking about something different all together. Whatever format we finally decide on, needs to meet the needs of parents as well as our teams so that we can use it effectively. So watch this space.

We were fortunate to have the Bliss team come to help us with the Baby Charter. This provided some useful information about what we needed to include in our audits so that we would be likely to apply successfully. To date most units continue to work on this as it is quite a hard task. But some units will hopefully be close to accreditation soon, so well done to all staff pursuing in this.

I had some communication with the commissioners in relation to the current CQUIN standard (community outreach) which was going to be offered to two of the units in the network. Happily this has been taken on by two units, the Royal Victoria Infirmary and James Cook University Hospital and staff are working on improving the neonatal journey from discharge for our families as part of this national agenda. Work from which will hopefully be shared at a network conference in the near future.

I have been plugged into the National Network Lead Nurses Forum, which meets four times a year and as many of you know, took part in the national staffing survey which was rolled out in the summer months. We had 100% return from all networks and subsequently the information from this has been used in presentations, has been included in the national neonatal review and will be published later in the year. Once again thank you to all the unit managers for pulling this together. However, it is likely that more work will be required in the coming year to revisit this and keep it updated.

Like many of you, I undertook peer review training and subsequently undertook some peer reviews in other networks (as well as having my own at my base unit). Whilst I know that the process and feedback has been a bit mixed, I believe that we should look upon this process as being one that is meant to raise our awareness and also help us to work on improving our standards. This can only be a good thing moving forward.

In terms of nursing support I have been involved in teaching and education with the first pre-QIS days rolled out for our specialist students and also the low-high dependency day. Both of which are open to anyone to attend. Feedback from these days has been encouraging and they will continue these, together with the respiratory day, as part of the QIS overall qualification. However, as some of you also know, the funding for this type of education from Health Education England is something that has been and continues to be reviewed and so to this end I have also spent a lot of time meeting with others to look at the possibility of continuing education in another form for the future; possibly an apprenticeship. This has taken a lot of time to work through as the process is not an easy one and has not yet been concluded, so again watch this space to see where this may take us in the future. The ultimate aim for this is that we do not have worry each year about funding for future neonatal nurse education.

Also in relation to staffing, Martyn and I have been involved in some nurse staffing modelling in Cumbria as part of a wider project. We are always happy to help with such things if required locally.

Finally, with my local hat on, I have been involved in the Teesside neonatal reconfiguration culminating with the movement of some cots from North Tees to South Tees in September. This obviously affects me, as it does so many others, locally and regionally. It has been difficult to make these changes and to make sure that everyone is briefed with accurate information; but it has happened and so my thanks go to all who have been involved in the process and everyone behind the scenes who made this happen.

Report from the Northern Neonatal Network Educational Lead – Dr. Richard Hearn

2018 has been my third year as Network Education Lead and has been a year of evolving existing educational events.

The Respiratory study day again ran in February 2018. The revised material from 2017 was further tweaked based on the previous year's feedback. The day was again reliant on volunteer faculty and was supported by Angela Warne and Sara Donnison, Practice Development – RVI. The candidate evaluation was again good and this is testament to the faculty who came on board to provide the teaching.

There is always more work to continue improving this module. It also remains the case that though this is very much part of the University module there is minimal guidance from the universities as to how they want us to approach this. However I feel it is a much more pragmatic piece of learning focused on the clinical needs of the nursing staff than perhaps previously.
The stabilisation course has continued to be the main educational event. We have run 6 courses in 2018.

- 2 at Bishop Auckland for CDDFT
- 1 at Gateshead for STFT/QEH
- 1 at Carlisle for North Cumbria
- 1 at Ashington for Northumbria
- 1 at North Tees

As always there were challenges getting together faculty but there is a good cohort of willing nurses, ANNP's and clinicians both young and less so involved. We sourced from a couple of commercial companies trials of video laryngoscopes and simulation equipment which added real value to the sessions for which they were available.

Case reviews which commenced in 2016 have had no uptake. It is, like last year, my impression that a very large part of this relates to the need to the logistics around the physical need for people to attend these meetings. In the digital age NHS IT remains resolutely unable/unwilling to try and support an efficient and effective means of communicating via video conferencing though perhaps this will change in the future! In the meantime please get in contact if you would like to facilitate a discussion around a case. We have started doing this around neonatal mortality review at a network level and it is a good way to strengthen our clinical governance and share good practice.

Foundation (Pre QIS) study days were ongoing led by Lynn Paterson this year. These are another element of the high quality free educational events offered by the network and I hope we are able to continue supporting these in the future.

There is a wealth of experience in our medical, nursing and allied professions within the region and I would be keen to hear of any suggestions for future educational sessions and would encourage anyone to make contact with myself or Martyn Boyd with suggestions.

Report from the Northern Neonatal Network Data Manager – Mark Green

Work undertaken in the last year

Continued to provide Annual Network summary and performance report based on Unit's meeting of BAPM recommended staffing levels for each Unit, feeding into Network Workforce Strategy.

Quarterly summary of Unit activity levels across HRG/Care levels according to NHSE requirements, supplied to CSU for anonymising & copying to Trusts for validation.

Producing quarterly monitoring of pathways and exception reporting of any incidence in the quarter when the pathway was not followed.

Continuing to support for the Network Transport Team, producing timely reports that reflect the activity undertaking by the team.

LMS reports published highlighting appropriate maternity care metrics that influence neonatal outcomes and sent to teams for feedback.

Ongoing - explore the possibilities of ongoing PMS data input and reporting according to agreed processes to meet Network needs and support Death Review discussions (local & Network).
Assisted Unit data leads with requirements to enable compilation of annual reports.
Produce Network Parent Survey reports and fed back to managers & leads.

Assisted in the migration of existing content to new professionally designed and hosted website as current provision is no longer fit for purpose or providing required functionality for users and editing access for Network officers.

Providing support for Badger users across Network.

Routine data collection and ad-hoc requests.

Future and ongoing work

Provide timely, accurate and validated Quarterly NNN Staffing Reports to each Unit

Continue to support and equip Units/Trusts to move towards National Specifications and recommended minimum staffing levels

Support Commissioner activity data requirements

Monitor agreed Network patient pathways and other metrics to ensure appropriate care is provided according to Unit level of care

Publish quarterly detailed Reports utilising Network Parent Feedback forms

Collaborate with Maternity CN to equip obstetric colleagues with data highlighting appropriate maternity care metrics that influence neonatal outcomes

Provide supportive role to individual Units for Badgernet data entry and reporting to optimise usage

Support the three Local Maternity Systems (LMS)

Enhance Network website

Report from NHS England Specialised Commissioner – Lisa Jordan

Neonatal services continue to be a priority area for the North East and North Cumbria Specialised Commissioning hub with a continued commitment to implementing the recommendations of the 2015 Royal College of Paediatrics and Child Health Independent Review (RCPCH) of Neonatal Intensive Care Units.

Service reconfiguration

We are continuing to make progress towards achieving the recommendations of the Independent Review, which include the reduction of the number of centres providing intensive care services from four to three. From September 2017, The James Cook University Hospital became the only centre in Teesside to provide care for babies born under 27 weeks. In January 2018 we began working closely with North Tees and Hartlepool Hospitals NHS Foundation Trust and South Tees Hospitals NHS Foundation Trust, as well as the Network, to ensure that from September 2018 all babies born under 30 weeks in the Teesside area will be cared for at The James Cook University Hospital.

Clinical evidence suggests that caring for babies born before 27 weeks and those in other higher risk category groups, born before 30 weeks' (e.g. sick, more mature babies requiring prolonged intensive care) should be concentrated in relatively few centres.

By concentrating these services in fewer, larger centres we can ensure that expert and experienced staff treats sufficient numbers of cases to maintain a safe high quality service and move towards the national standards.

This reconfiguration of services will ensure a sustainable safe model of care for these babies where the expertise and resources can be concentrated to provide the best possible outcome for babies born under 30 weeks. These are the most high risk babies who are born extremely prematurely and are in need of the most intensive care including respiratory support and 1-1 specialist neonatal nursing care. University Hospital of North Tees will continue to provide care for babies born at over 30 weeks' gestation.

We are in discussions with The Newcastle Hospitals NHS Foundation Trust regarding the expansion of the Neonatal Intensive Care Unit at the Royal Victoria Infirmary, as per the RCPCH Report recommendations.

National Initiatives

NHS England is supporting two national programmes of work aimed at improving Neonatal Care across England.

The Avoiding Term Admissions in Neonatal Units (ATAIN) programme, led by NHS Improvement, is focused on ensuring maternity and neonatal services to work together to identify babies whose admission to a neonatal unit could be avoided and to promote understanding of the importance of keeping mother and baby together when safe to do so. We have begun working with the Neonatal Network and our Neonatal units to understand what this means for the North East and North Cumbria.

The Action on Neonatal Mortality programme was established in 2017 in response to the MMBRACE-UK report on perinatal mortality in 2015. The programme asks Local Maternity Systems and Neonatal Operational Delivery Networks to take specific actions and steps towards reducing neonatal mortality. We are working with the Network to understand:

- How the network plans to ensure a consistent and high quality approach to local reviews for trusts that may be rated red or amber in the upcoming MBRRACE-UK report
- How the network is implementing the Perinatal Mortality Review Tool, and ensuring lessons are learned across the network and wider area.

This work will continue into 2018-19 and beyond.

Sam Richmond Nursing Scholarship – Winner for 2017-18, RVI Bereavement Team

The RVI Neonatal Bereavement Team with their Award and trophy
L-R Amy Wenn, Sasha Stephenson, Kristina Anderson, Vicky Graham, Jane Couch, Sarah Stephenson (Team Lead), Brenda Toole

We established and formally launched the annual Nursing Scholarship, in late 2014 and our first winners announced in early 2015. Named in memory of the late Dr Sam Richmond, who worked as a Consultant Neonatologist in Sunderland for many years, the main aim of setting up the award was to foster innovation by encouraging nursing staff to develop new ideas as to how neonatal nursing care can be improved. From the outset we involved Sam's widow Liz in the initiative after she gave it her wholehearted backing and she has continued to take a keen interest in it ever since, meeting with the winners to present their trophy and hear about their work.

The Scholarship comprises two separate aspects - a prize of £1000 that the winner can use towards their proposal and also a trophy that Liz had specially commissioned by the Sunderland Glass Centre. This gets engraved with the winners name and year on and they get to keep it for 12 months until the next Scholarship is awarded.

The winners for 2017 were a team from Newcastle's Royal Victoria Infirmary Neonatal Intensive Care Unit. Entitled "Memory making in end of life care – include siblings to offer complete family centred care", the team are focussing their work on identifying ways to support siblings following the loss of their brother or sister and offer the opportunity for personal keepsakes to remember them by. The hope is that this will give the child the opportunity to feel involved in their journey and also a feeling of importance at a time when they are often overlooked. Recent research by a team also based at the RVI for the "Purple Butterfly Project" highlighted that this was an issue following loss in twin or multiple births, which helped prompt this new initiative to try and address this.

Martyn Boyd, Manager of the Northern Neonatal Network said 'We again had some excellent entries for the Award we ran in late 2017 and the Neonatal Bereavement Team from Newcastle was the judges winning choice. We look forward to following their progress as their work progresses. Part of this will include a presentation at our 9th Annual Network Conference in September. We hope that what the Team achieve could be taken on and adopted by other baby units across our own network and beyond in the way that siblings are supported when they lose a baby brother or sister, a really important area of neonatal care that is rarely focussed on."

The RVI Team receiving their Award and trophy from Ken Bremner, Dr Majd Abu-Harb, Martyn Boyd & Liz Richmond

Network Annual Data Report 2017-18

The Northern Neonatal Network continues to focus on providing high quality data and reports, principally via very well established quarterly Reports. These are compiled for both the Network itself, and more recently the three Local Maternity Systems (LMS) that serve our region and which are now starting to develop and mature and get to grips with their core remit, supported for neonatal issues by us. We have made small revisions to these Reports but continue to adapt them as we get feedback and suggestions to make them as timely, relevant and useful as possible.

These Annual summaries provide another opportunity to focus on both the preceding 12 months data, but also for the initial charts below, the rolling 3-year averages that we introduced a few years ago, as we fell they continue to give a better illustration of some of the high level trends in these key statistics whilst still illustrating and allowing for the variation that could be expected from year to year. We have pretty much replicated the tables and summaries used last year's (2017-17) annual reports, but will have a discussion in the coming 12 months as to whether next year's report could benefit from a bit of a makeover and revision to better reflect the main issues that the data we use and hold and the metrics they inform provide – particularly for highlighting clinical variation and outlier Neonatal Units.

We still believe that taken collectively, these tables and charts do provide a useful summary of the main metrics that we need to concentrate on and allow a discussion at both Network and Unit level to determine what quality improvements can be made to try and address variation where this exists and can be demonstrated, with the aim of sharing and spreading best practice.

In general, there have been slight falls in both the number of live births and admissions to neonatal units over the last 12 months as the below tables show. The 3-year rolling averages for births show a similar picture, so the Network continues to buck trends in others areas of high population growth – in fact there have been consistent year on year falls for several years now. By contrast, the total number of intensive care days rose, whilst high dependency days were pretty static and special care – and *total* care days have fallen. However, there are varied pictures across individual NNUs – the RVI continues to have increasing number of IC days, whist changes in the others seem to reflect the early impact of the NICU reconfiguration process and it will be interesting to see what the further impact of the changes amounts to in next year's Report.

Unit	Live Births								
	Financial Year					3 Year Average			
	13/14	14/15	15/16	16/17	17/18	13-16	14-17	15-18	% diff
RVI	7387	7339	6969	6592	6564	7232	6967	6708	-3.7%
JCUH	5383	4987	4740	4995	4586	5037	4907	4774	-2.7%
North Tees	3259	3099	3092	2996	2771	3150	3062	2953	-3.6%
Sunderland	3267	2998	3097	3203	3246	3121	3099	3182	2.7%
Cramlington	2425	2127	3068	3171	3251	2540	2789	3163	13.4%
QE Gateshead	1748	1844	1820	1875	1883	1804	1846	1859	0.7%
South Tyneside	1397	1311	1330	1231	985	1346	1291	1182	-8.4%
UHND	3004	3193	3087	3038	2859	3095	3106	2995	-3.6%
Darlington	2249	2192	2201	2027	1974	2214	2140	2067	-3.4%
Cumberland	1696	1729	1731	1660	1587	1719	1707	1659	-2.8%
Whitehaven	1292	1239	1177	1270	1202	1236	1229	1216	-1.0%
Network	33107	32058	32312	32058	30908	32492	32143	31759	-1.2%

Table 1 – Live births by year plus rolling 3-year averages

Unit	Unit Admissions								
	Financial Year					3 Year Average			
	13/14	14/15	15/16	16/17	17/18	13-16	14-17	15-18	% diff
RVI	761	787	728	725	779	759	747	744	-0.4%
JCUH	452	486	441	458	484	460	462	461	-0.1%
North Tees	331	334	376	429	394	347	380	400	5.3%
Sunderland	363	336	330	327	323	343	331	327	-1.3%
Cramlington	337	295	310	340	345	314	315	332	5.3%
QE Gateshead	220	252	248	262	247	240	254	252	-0.7%
South Tyneside	96	92	98	93	105	95	94	99	4.6%
UHND	251	253	233	273	275	246	253	260	2.9%
Darlington	232	187	229	226	179	216	214	211	-1.2%
Cumberland	233	207	225	219	213	222	217	219	0.9%
Whitehaven	173	140	174	147	137	162	154	153	-0.7%
Network	3449	3369	3392	3499	3481	3403	3420	3457	1.1%

Table 2 – Unit admissions by year plus rolling 3-year averages

Unit	Intensive Care (IC) Days								
	Financial Year					3 Year Average			
	13/14	14/15	15/16	16/17	17/18	13-16	14-17	15-18	% diff
RVI	2787	2683	2262	2308	3011	2577	2418	2527	4.5%
JCUH	1381	1301	1401	1072	1268	1361	1258	1247	-0.9%
North Tees	1057	992	1126	1041	659	1058	1053	942	-10.5%
Sunderland	856	883	1066	834	631	935	928	844	-9.1%
Cramlington	32	71	37	33	36	47	47	35	-24.8%
QE Gateshead	16	21	22	21	17	20	21	20	-6.2%
South Tyneside	5	8	13	18	5	9	13	12	-7.7%
UHND	34	56	51	31	27	47	46	36	-21.0%
Darlington	44	29	44	49	24	39	41	39	-4.1%
Cumberland	28	20	32	25	12	27	26	23	-10.4%
Whitehaven	27	23	20	15	20	23	19	18	-5.2%
Network	6267	6087	6074	5447	5710	6143	5869	5744	-2.1%

Table 3 – IC care days by year plus rolling 3-year averages

Unit	High Dependency (HD) Days								
	Financial Year					3 Year Average			
	13/14	14/15	15/16	16/17	17/18	13-16	14-17	15-18	% diff
RVI	3385	3187	3139	2838	2827	3237	3055	2935	-3.9%
JCUH	1633	1557	1632	1643	1942	1607	1611	1739	8.0%
North Tees	972	1003	1204	1307	1011	1060	1171	1174	0.2%
Sunderland	1168	1437	1041	1210	1051	1215	1229	1101	-10.5%
Cramlington	124	141	124	151	186	130	139	154	10.8%
QE Gateshead	121	101	55	41	61	92	66	52	-20.3%
South Tyneside	29	29	49	38	52	36	39	46	19.8%
UHND	173	227	230	256	135	210	238	207	-12.9%
Darlington	216	151	184	104	77	184	146	122	-16.9%
Cumberland	115	122	111	112	125	116	115	116	0.9%
Whitehaven	65	84	73	95	127	74	84	98	17.1%
Totals	8001	8039	7842	7795	7594	7961	7892	7744	-1.9%

Table 4 – HD care days by year plus rolling 3-year averages

Unit	Special Care (SC) Days								
	Financial Year					3 Year Average			
	13/14	14/15	15/16	16/17	17/18	13-16	14-17	15-18	% diff
RVI	5695	4878	4534	4147	4134	5036	4520	4272	-5.5%
JCUH	4382	4981	3921	4762	3866	4428	4555	4183	-8.2%
North Tees	2949	2829	3219	3234	3306	2999	3094	3253	5.1%
Sunderland	3042	2870	3173	2921	2795	3028	2988	2963	-0.8%
Cramlington	2002	1881	1982	2242	2217	1955	2035	2147	5.5%
QE Gateshead	2148	2415	2141	2327	1769	2235	2294	2079	-9.4%
South Tyneside	997	864	941	972	747	934	926	887	-4.2%
UHND	2380	2060	2245	2454	2476	2228	2253	2392	6.2%
Darlington	2239	1935	2077	2015	1597	2084	2009	1896	-5.6%
Cumberland	2082	1648	1621	1495	1791	1784	1588	1636	3.0%
Whitehaven	1756	1378	1522	1602	1108	1552	1501	1411	-6.0%
Network	29672	27739	27376	28171	25806	28262	27762	27118	-2.3%

Table 5 – SC care days by year plus rolling 3-year averages

Unit	Total Care Days								
	Financial Year					3 Year Average			
	13/14	14/15	15/16	16/17	17/18	13-16	14-17	15-18	% diff
RVI	11867	10748	9935	9293	9972	10850	9992	9733	-7.9%
JCUH	7396	7839	6954	7477	7076	7396	7423	7169	0.4%
North Tees	4978	4824	5549	5582	4976	5117	5318	5369	3.9%
Sunderland	5066	5190	5280	4965	4477	5179	5145	4907	-0.7%
Cramlington	2158	2093	2143	2426	2439	2131	2221	2336	4.2%
QE Gateshead	2285	2537	2218	2389	1847	2347	2381	2151	1.5%
South Tyneside	1031	901	1003	1028	804	978	977	945	-0.1%
UHND	2587	2343	2526	2741	2638	2485	2537	2635	2.1%
Darlington	2499	2115	2305	2168	1698	2306	2196	2057	-4.8%
Cumberland	2225	1790	1764	1632	1928	1926	1729	1775	-10.3%
Whitehaven	1848	1485	1615	1712	1255	1649	1604	1527	-2.7%
Totals	43940	41865	41292	41413	39110	42366	41523	40605	-2.0%

Table 6 – Total cot care days by year plus rolling 3-year averages

Workload: a rolling review

We are now have a total of 9 years of comprehensive Network data from time it was created in early 2010, so the 3-year rolling averages are now quite reliable to show general trends in the metrics tables. We have continued the same format and data summaries in this Report as in the previous few, as it gives a consistent history and useful summary of the main areas of activity and workload by individual Unit and aggregated across the whole Network. This continues to include historical date for "JCUH" which includes all activity from the SCU at the Friarage Hospital, Northallerton up until October 2014 when the SCU there closed and all activity was transferred to the Middlesbrough site. Also, as the SCU at Wansbeck Hospital, Ashington transferred to the new facility at the Northumbria Emergency Specialist Care Hospital, Cramlington in June 2015 but is termed "Cramlington" for ease of referral.

The birth activity data has shown a small reduction over the last year and also the 3-year rolling average, yet a very small increase in the number of total admissions. All care levels are showing a reduction in cot day's activity. Within those statistics, there is significant and rather random variation. North Tees in particular experienced a large rise in admissions, yet had a fall in births. The aim of these tables remains to try and present a comprehensive overview of each Unit's core activity year on year as well as the rolling averages to highlight the trends and how variation on capacity has had a bearing on these key metrics. It will be interesting to see how future reconfiguration of services impacts on this activity, especially the new patient pathways that have been agreed following the RCPCH Report's recommendations for the four NICUs.

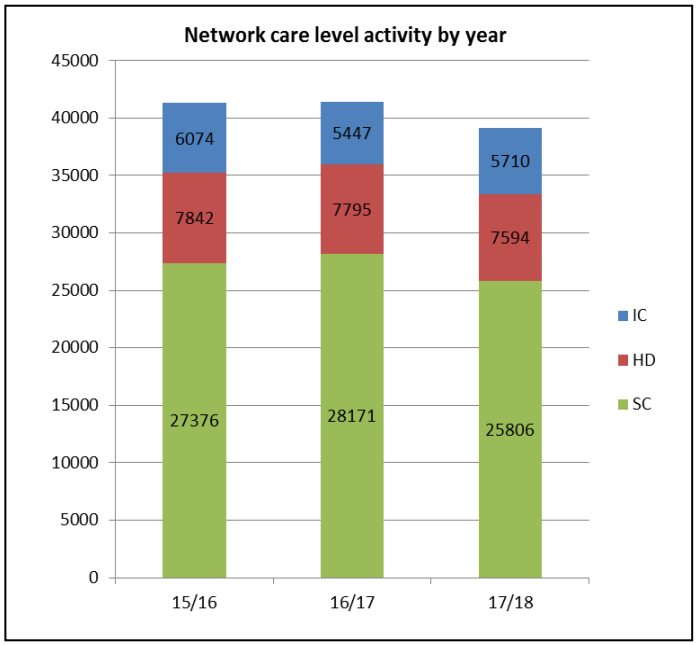


Table 7 –Network yearly network activity at each care level

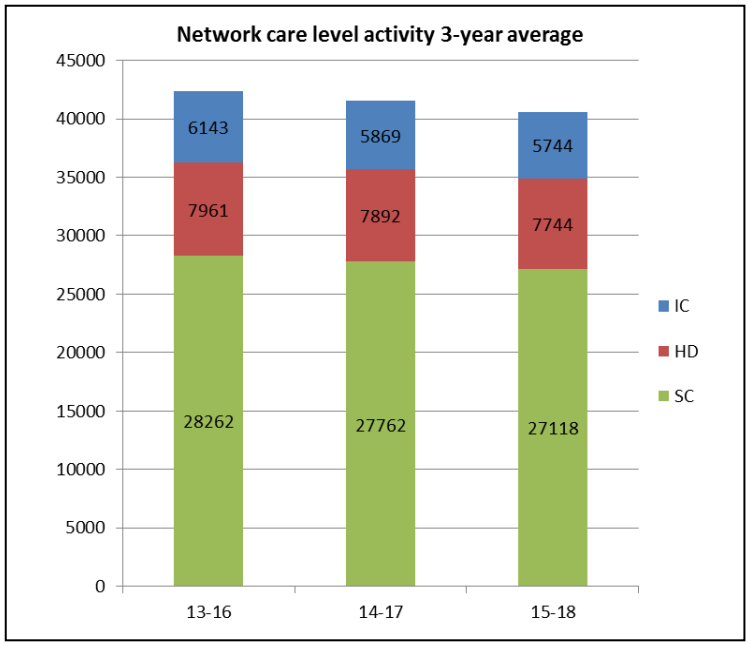


Table 8 – Network rolling 3 year averaged activity at each care level

Table 7 highlights the shift in total cot days by level of care over the last 12 month with a marked increase in IC days, almost static HD days and a quite significant fall in SC days, though interestingly, as Table 8 shows, the three year rolling averages show falls across all levels of activity since 2013-16. However, tables 1 to 6 outline individual Unit activity is examined and this continues to highlight a lot of variation from year to year and unit to unit with little sustained consistent trending.

Table 9 reflects the summaries in Table 3 that summarise the cots days in the four NICUs, whilst Table 10 demonstrates the NICU activity against the "commissioned and funded" IC/HD cots. The general picture here remains that this is again consistently higher than the activity/capacity being funded in the four NICUs, demonstrating the need for extra IC/HD capacity by way of further cots, as the Network Annual Capacity Assessments have clearly shown for several years. Demand for these cots is still outstripping the total supply and only being catered for by maintaining very high average occupancy levels and the ability to flex the SC cot number totals with these in the total Unit capacity. As previous Reports have been clear to highlight, this is neither safe nor sustainable and remains well above the recommended average 80% level specified by the DH Toolkit (2009), BAPM and NICE Standards.

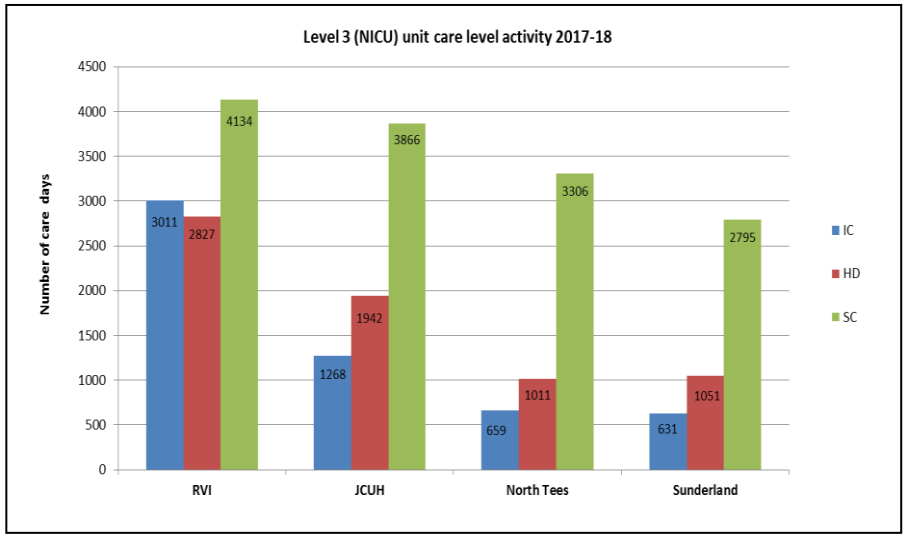


Table 9 – Total cot days by care level for each NICU

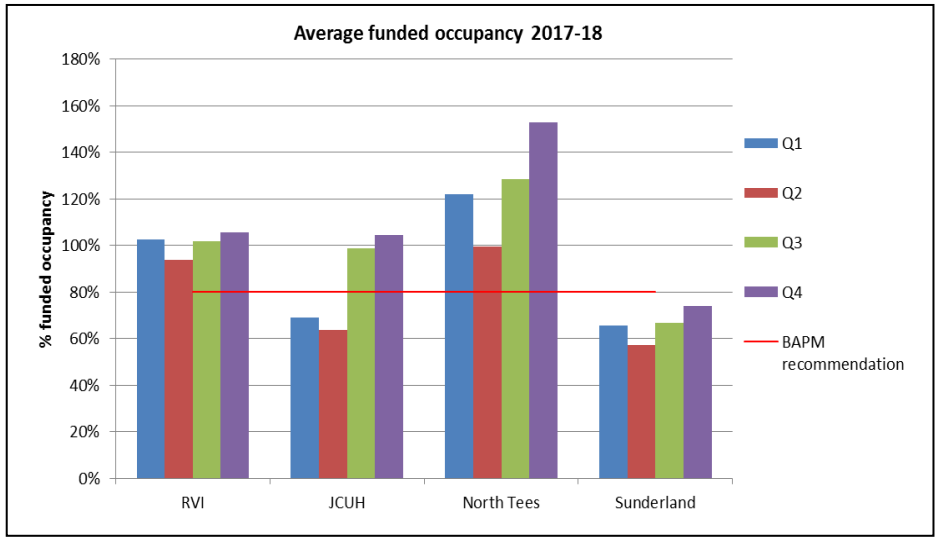


Table 10 – Average occupancy level for "funded" NIC/HD cots

Table 11 opposite shows the average activity by occupancy level for each of the Network's seven Special Care Units (SCUs) by each quarter. These are mapped by using the declared total cots available from each Unit and the total numbers of babies by total cot days, to give an average percentage. Due to the way we calculate these figures, there are times when the actual occupancy levels are significantly higher and also lower than these and at times of peak daily activity the SCUs can be over-capacity.

The other factor that influences these occupancy levels if the change in declared unit capacity in terms of the available cots, often due to nurse staffing issues. This immediately affects the average occupancy levels. However, none of the 7 SCUs declared any changes in their total capacities during 2017-18.

All the other SCUs for the year 2017-18 were operating at much lower average occupancy levels, although again at times of peak activity (particularly Q4 at Carlisle and Gateshead), some were close to or occasionally over capacity.

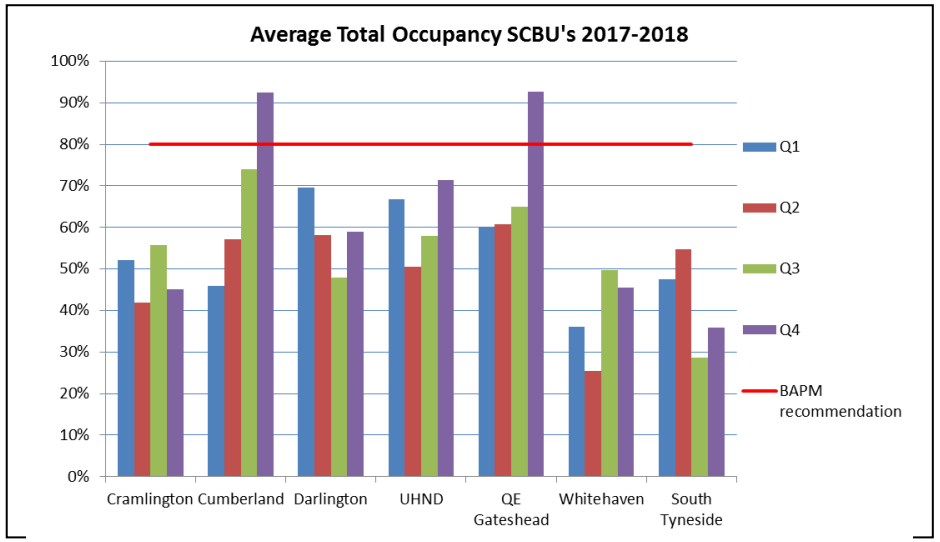


Table 11 – Average SCU occupancy levels by Unit for 2017-18

We have continued to highlight some key "performance indicators" as part of our established regular quarterly reporting process. The main aim of this was to try and allow us to focus on some specific areas for the whole Network and benchmark individual Unit performance to highlight variation, particularly where this already feeds into national reporting such as NNAP (National Neonatal Audit Project).

For this Annual Report, we have again included the average aggregated (so all 11 NNUs) term admission rates as benchmarked against the Network average of 5%. Despite there being a rise since last year, this remains below this target rate, although the trend is upwards and some NNUs struggle with rates well above this level.

However, the "Network" average does compare very favourably with some others across the UK, but this increasing trend upwards needs to be addressed and hence the national ATAIN project aims and work within the Maternity & Neonatal Health & Safety Collaborative (MNHSC) remain key to addressing this and it will be a focus for the Network in the coming years, particularly with the need to increase Transitional Care provision to support this aim.

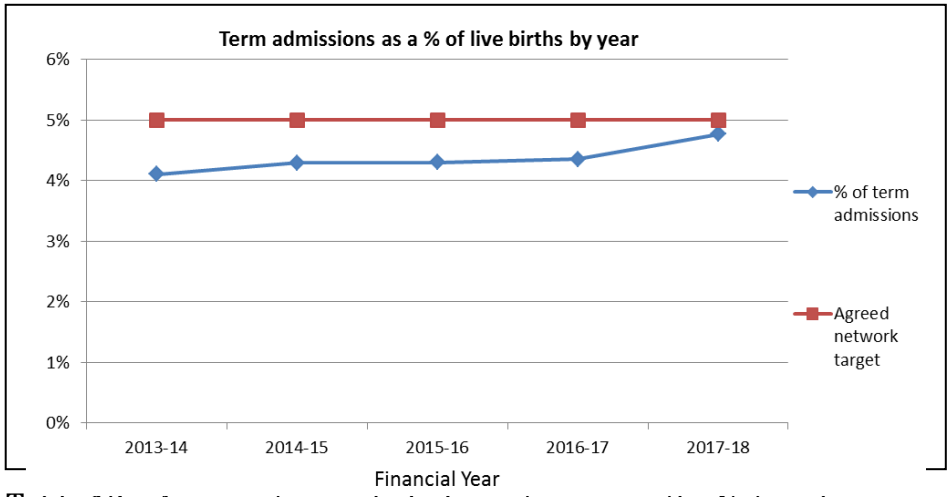


Table 12 – Average term admission rates across the Network

NNAP Audit indicators

We have continued to report on a quarterly basis the now well established and accepted NNAP data obtained. This is taken directly from the BadgerNet database and reported annually on a fully national basis, with the aim of benchmarking and thus highlighting specific areas that allow performance comparison by both network and individual unit level. This enables interventions to be planned where improvements can be made, as well as highlighting areas of excellence and best practice.

As can be seen from the tables opposite and below, performance varies but what we are ideally looking for are ongoing improvements – such as the percentage of babies being admitted with temperatures in the acceptable/desired range. Where these are found to be outside the range, action can and should be taken to improve these rates.

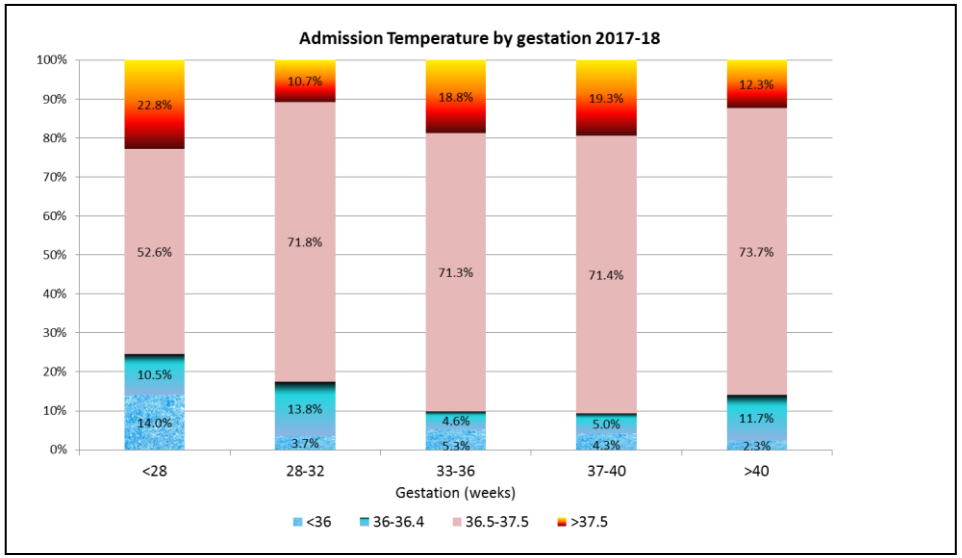


Table 13 – Network admission temperatures by gestation (NNAP measure)

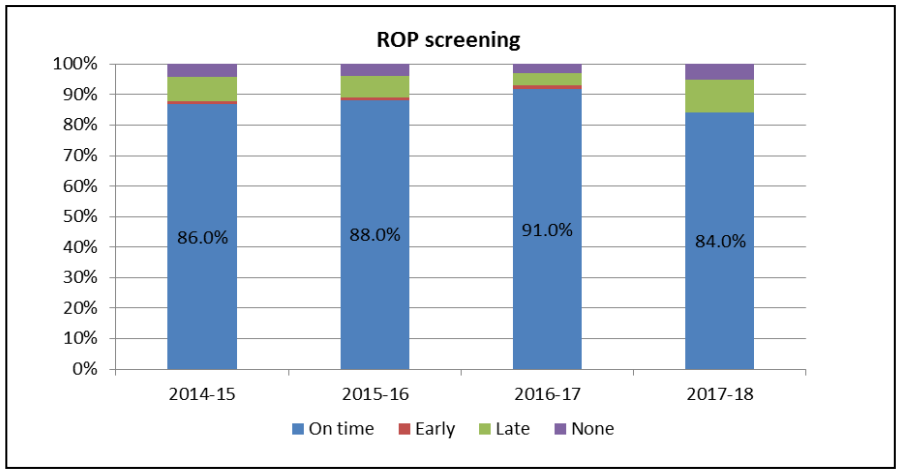


Table 14 – Network ROP screening rates (NNAP measure)

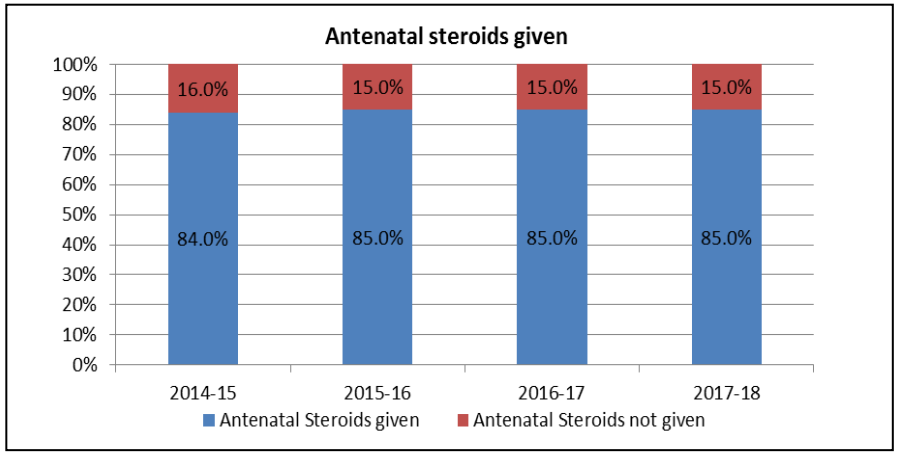


Table 16 – Network Antenatal steroid administration (NNAP measure)

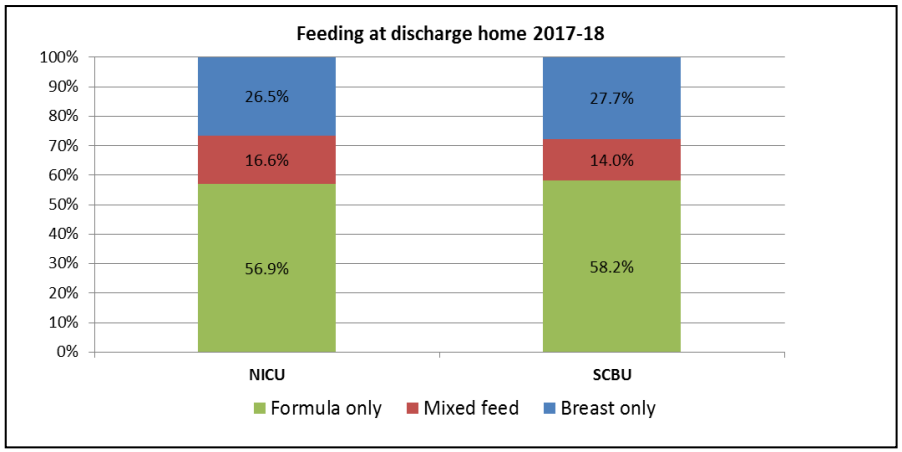


Table 15 – Network feeding method at discharge (NNAP measure)

Tables 14-16 are taken from the NNAP Report for 2017 that uses 2016 data - , which is the most recently published. All the data is taken directly from BadgerNet by NNAP and then used for the key indicators that they report on. The tables on this page highlight how the Network performs on some of these. As can be seen, there has been good progress with improving ROP screening, but the antenatal steroid administration rates have been stubbornly static.

A lot more detail is available in the full NNAP Reports available via their website, including performance on an individual Trust/Unit basis and also benchmarking against other comparable Units (NICU with NICU, SCU with SCU etc.). NNAP also performance report on some of their measures, identifying outliers and this is then used to bring about improvements where necessary. The Network continues to compare favourably on most metrics with other neonatal networks, although for Breast milk at discharge and BPD, we do struggle and compare much more poorly, so much is still to be done.

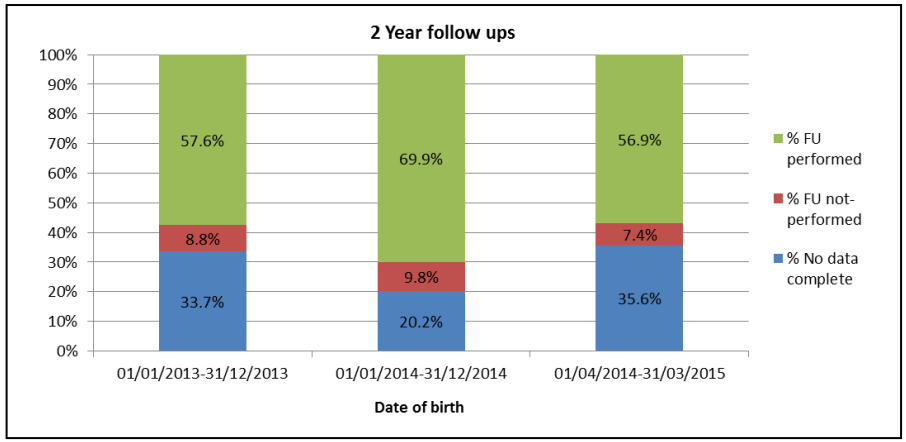


Table 17 – Network 2-year follow-up rates on BadgerNet (NNAP measure)

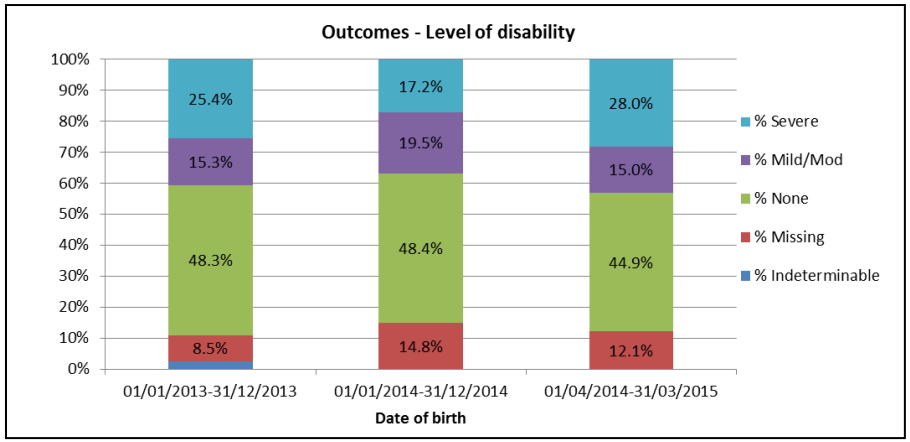


Table 18 – Network 2-year outcomes on BadgerNet (NNAP measure)

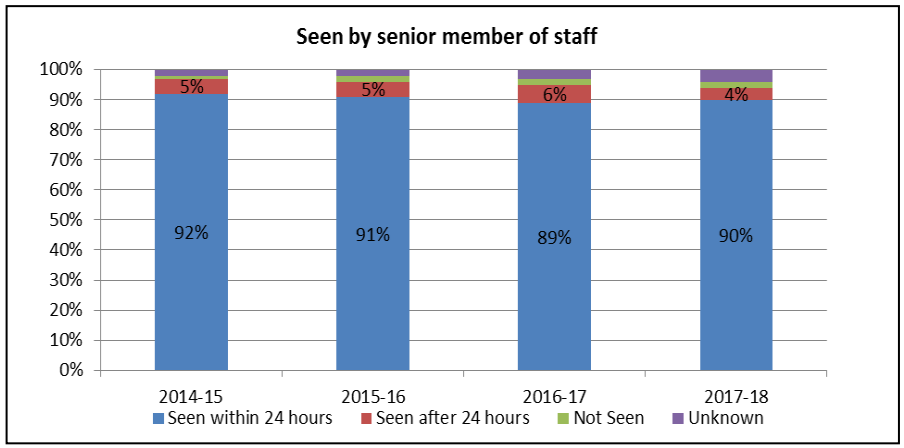


Table 19 – Babies seen by senior member of staff (NNAP measure)

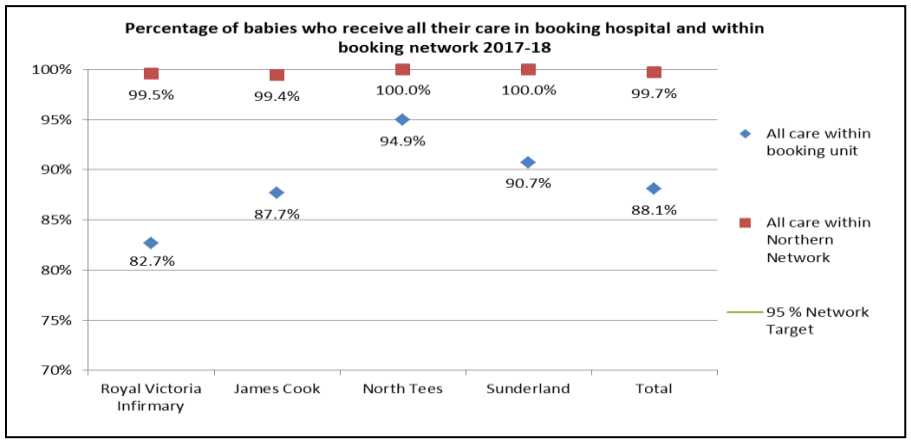


Table 20 – % of babies receiving their care in Network (NNAP measure)

The tables above show the ways in which the Network performance against key measures varies. Unfortunately, after an encouraging rise in the number of 2-year follow-ups being done and the data entered onto Badgernet, there has been a disappointing quite marked fall in 2017-18 (see Table17 – the x-axis refers to the baby's date of birth, hence from a period in the past corresponding to the time the follow-up assessment is required after 2 years) from last year, so this needs to be closely monitored and addressed. There has also been a rise in those babies assessed as having a "severe disability", which will also need to looked at in more detail On a more positive note, the Network continues to have the lowest number of babies transferred out of region for non-clinical (capacity) reasons.

Neonatal Transport – a Report by Rob Tinnion (Transport Consultant)

The last year at the Northern Neonatal Transport Service (NNeTS) has been characterised by a continuing process of consolidation, building on the work done in the first year of service delivery, and strengthening of collaborative working with all our colleagues in the neonatal services across the region. Against a background of ongoing changes to the regional provision of neonatal care and national uncertainty about NHS provision in a turbulent political landscape, we remain positive about both the direction and quality of the service developing at NNeTS.

This 12 months has seen us successfully recruit to fill our remaining three Transport nurse practitioner posts with Sandra, Emma and Jess joining the team. Sandra brings huge experience as a neonatal transport and intensive care nurse, Jess has worked in neonatal surgical and medical intensive care, and Emma has worked as a unit-based nurse practitioner in the region. All three therefore add to the experience and diversity of experience within the NNeTS team and will be starting their advanced neonatal nurse practitioner course in September 2018. Our three NNeTS ANNPs in-post since last year have also progressed well. Katie and Karen are completing their second year of study towards their masters' degree and Danielle has started to transfer the broader skills she has honed in the last year into the more focused transport environment. In addition to this, all three have now passed the Resuscitation Council UK's ARNI course which sets a high bar for both clinical leadership and team-working, and communication with parents in the context of the critically ill neonate.

Our Specialist Transport Nursing Team has also developed over the last year. Alongside their clinical duties, NNeTS specialist nurses are developing their interests and linking into our host Trust and the wider Northern Neonatal Network to develop the service. Examples of these include: development of guidance for parents travelling with their baby; revision and trialing of new forms to capture referral information into NNeTS; improving dissemination of learning and outcomes from governance meetings; streamlining infection control processes; assessment and audit of equipment use and fitness for purpose; and development of a successful approach to supporting Dads who have babies in intensive care. With regret, one of our Specialist Transport Nursing Team moved to a different Trust earlier in the year for personal reasons. While we wish her well in her new role, excitingly it means we currently have one vacancy for a Specialist Transport Nurse to join our dynamic and motivated team. Enquiries about the post are welcomed.

Our team governance process is now well established within the team and integrated into the host-Trust's wider governance framework. At the MDT governance meetings, the team discusses cases in depth cases with challenges or learning which is then shared with the wider team. The specialist nursing team also report on progress in their own areas of interest (such as comfort and end of life care, infection control, developmental and family integrated care) and updates about new or amended guidance/SOPs are shared. We also actively seek feedback on our practice, and specific incidents reported to us by colleagues around the region are investigated, with feedback disseminated to the team at the governance meeting. Feedback from parents has been very positive. The only consistent area for improvement mentioned is around parents travelling. Unfortunately, expectation can be raised at a referring unit about how many parents might be able to travel and with what luggage. As even a simple repatriation is not risk-free, and we have to observe measures regarding safety on the road from unsecured items. In order to address this,

our guidance for parents travelling with NNeTS has been shared with our key unit nursing contacts and will be available on the Network website in due course. We have also enjoyed the opportunity to be present and contribute to governance meetings around the region. These have been both around specific case reviews and also, more broadly, discussing our interactions with individual units and strengthening collaborative working. As always, we welcome the opportunity to help with these governance and education opportunities, and are happy to discuss what potential contributions we can make by contacting the team leads (medical and nursing).

It is a welcome development to see the new Network website up and running. In keeping with the open and transparent ethos of the team workings, we will ensure that our up to date information, policies and guidance is available on the NNeTS section within the new website.

NNeTS' transport activity for the last year has remained as expected. Including intrauterine transport requests and advice calls, the NNeTS contacts via the hotline were 1008 in the year. There is some variation from month to month, though only one transport required transfer out of region as an acute uplift (returned shortly afterwards when space became available in the region). This fact, reflecting a longstanding ethos within the region of not transferring babies out of region if avoidable, is to the credit of all clinicians providing care to neonates and their willingness to support care as close to home as possible. The split of 'acute' uplift to non-acute remained approximately 50% in each category for the total of 711 transport referrals.

NNeTS response times, in collaboration with NEAS, have been maintained and targets for those transports which are deemed time-critical and/or ITU uplifts (by the national benchmarking dataset) are being met (median: 47 minutes to departure from start of telephone call, IQR 38-60, target <60) as is the time to cot side from referral (median: 78 minutes, IQR 60-100, target <210). The breakdown of this type of referral is listed in table 1. In response to requests regarding timing non-urgent referrals (keeping these in- hours) we have seen the majority or repatriation (91%) and outpatient (84%) requests being made during 'office hours'. Around ¼ of all calls to NNeTS are between 8pm and 8am, with 35% of acute uplifts, 37% of HDU and 33% of ITU transfers occurring during these hours. 25% of resource or capacity transfers (where babies are moved out of centres primarily because of lack of beds) occur between 8pm and 8am. Intrauterine transfer requests make up around 24% of the calls to the NNeTS hotline in total. Table 22 shows the activity for the year broken down by receiving and referring centre. There are 17 transfers which are not included in this table as they did not fit one of the destinations, such as two palliative transports and one aborted retrieval from out of region (team turned around due to worsening patient condition). Table 23 shows activity (by referring centre) broken down into the type of transport, acuity (BAPM defined) and operational reason for uplift. There may be more than one reason for transport (e.g. repatriation and capacity) but this information reflects the primary reason for the referral at the time of referral. In the year analysed, a total of 14 referrals were made for PDA ligation (RVI 10, JCUH 1, UHNT 1, SRH 2) with one cancelled due to patient status. I hope this information is useful for individual centres to reflect on whether there are unmet needs locally, and where NNeTS may be able to help. There are ongoing changes in units across the region which will impact intrauterine and extra uterine transport patterns and NNeTS will try to remain flexible and responsive to the demands of these changes. As always, we always prefer to hear as far in advance as practically possibly about the likely need for transport especially if for repatriation or planned work.

In the coming 12 months, there are a few areas in which we would like to make further progress to improve the responsiveness and flexibility of the service. We are in the process of commissioning a third transport trolley with a view to improving the overall responsiveness of the team and the quality of care provided to individual babies on respiratory support, of all types, during transfer. We are also reviewing our referral documentation and working with the IT team at our host Trust to begin what we hope will be a process of digital integration at time of referral into, and eventually including, the subsequent transport episode. We will also continue to make use of the network website to make information about our practice as accessible as possible to all service users.

Finally, I would like to take the opportunity to re-iterate our usual service specifications. NNeTS continues to provides a hotline (24/7) for referrals, with 24/7 access to a consultant neonatologist for advice if required. We have,

through the year, managed to usually run two transport teams during daytime hours and one overnight completing acute uplifts; repatriation (including for capacity reasons); and supporting planned surgical or outpatient work (such as PDA ligation) within the Northern region. Our exclusion criteria (i.e. the limitations of the types of babies we can transport) remain the same as always: we are unable to move babies >6kg or >6m old (due to the limitations of incubator transport) and or those with illness or injury outside the scope of 'neonatal' medicine (for example polytrauma or meningococcal sepsis). For babies where the latter is not clear, a discussion with our NNeTS consultant on call is always welcomed. We operate a 'single point of contact' principle for referrals (as does our sister service at NECTaR), so in the unlikely event that an appropriate referral is made to NNeTS which we are unable to fulfil within the required response times, we will liaise with other teams to arrange between someone to move the baby, ensuring best fit for the needs of the patient. After the initial referral phone call to NNeTS, we will not ask you to ring an alternative provider (and we ask you not to do so of your own initiative) as parallel referrals create confusion and may cause delay in providing the transport.

I hope that the network experience of how NNeTS has evolved in this last year matches our perception of what we have achieved. As always, both Beverley and I welcome any input, feedback or ideas from all of our colleagues in the wider network.

Transport 2017-18

Table 21: time critical transfers

Time Critical: Referring centre		Receiving Centre		Type	
NSECH*	**11**	**Freeman**	**3**	**Neuro**	**5**
Darlington	**3**	**JCUH NNU**	**3**	**Surgical**	**10**
Durham	**6**	**North Tees**	**1**	**Cardiac**	**2**
Gateshead	**3**	**PICU RVI**	**2**	**Medical**	**20**
JCUH	**4**	**Sunderland**	**4**		
North Tees	**1**	**Ward 35 RVI**	**22**		
RVI	**2**	**Not moved (other)**	**2**		
South Tyneside	**1**				
Sunderland	**3**				
Whitehaven	**3**				

*includes 2 deaths where NNETS attended, without subsequent transport

The table above and those that follow highlight the main transport activity undertaken during 2017-18 as well as some 5 year summaries. As Table 26 shows, the number of transfers performed by the JCUH team is now zero with all neonatal transfers undertaken by NNeTS. It is also now the case that NECTAR undertake all paediatric/PIC transfers. Whereas in the past, the neonatal teams did some of these.

The total neonatal transport activity for 2017-18 was slightly lower than the record high seen in 2016-17, although this is expected to rise again in 2018-19 as the number of NICUs reduces to 3 when the Tees reconfiguration is completed (September 2018)

		Referring centre											
		Carlisle	**NSECH**	**Darlington**	**UHND**	**Gateshead**	**JCUH**	**UHNT**	**RVI**	**S. Tyneside**	**SRH**	**Whitehaven**	**other'**
Receiving centre	**Carlisle**	0	2	0	0	0	4	5	11	0	3	0	0
	NSECH	0	0	0	0	0	0	2	33	0	3	0	0
	Darlington	0	0	0	6	0	23	6	4	0	0	1	0
	UHND	0	0	2	0	0	13	6	26	1	12	0	1
	Gateshead	0	1	0	2	0	2	2	38	0	1	0	0
	JCUH	1	0	12	6	0	0	5	16	0	0	3	1
	UHNT	3	3	8	8	1	13	0	20	0	1	4	0
	RVI	6	29	10	19	24	24	17	0	8	14	8	1
	S. Tyneside	0	0	0	0	0	0	0	7	0	7	0	0
	SRH	1	2	0	14	3	0	0	15	10	0	1	1
	Whitehaven	0	0	1	0	0	3	4	8	0	1	0	1
	Freeman	0	2	1	1	1	12	5	40	2	9	2	0
	GNCH	4	3	8	7	5	11	2	0	0	5	3	0
	PICU RVI	2	2	1	4	0	2	2	0	1	3	0	0

Table 22: Transport activity by referring/receiving centre (all types of transport)

	Type				**Acuity**				**Primary operational reason for transport**		
Referring Centre	**Medical**	**Surgical**	**Cardiac**	**Neuro**	**ITU**	**HDU**	**SCBU**	**Uplift**	**Repatriation**	**Capacity**	**Outpatient**
Carlisle	11	4	0	2	7	1	9	16	0	0	1
NSECH	34	5	2	6	24	4	19	42	2	2	1
Darlington	33	7	2	1	17	3	23	37	2	2	2
UHND	61	5	2	2	25	18	27	58	9	1	2
Gateshead	26	4	4	1	14	7	14	32	1	0	2
JCUH	75	19	12	0	18	16	72	39	47	19	1
UHNT	43	11	5	3	9	4	49	23	30	2	7
RVI	185	0	37	0	48	20	154	39	110	69	4
South Tyneside	16	2	2	2	7	9	6	18	1	1	2
SRH	41	9	8	0	15	7	36	23	26	6	3
Whitehaven	19	1	1	1	15	1	6	21	1	0	0
Freeman	5	0	0	0	3	0	2	0	4	0	1
other	2	0	0	0	1	0	1	0	2	0	0

Table 23: transport activity by type, acuity and reason for transport from referring centre

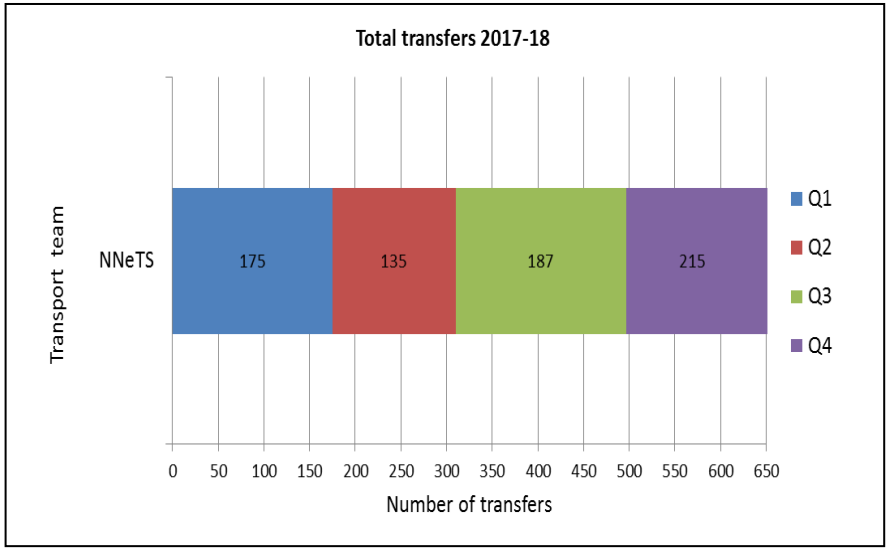


Table 24 – Total transport activity for 2017-18 by quarters

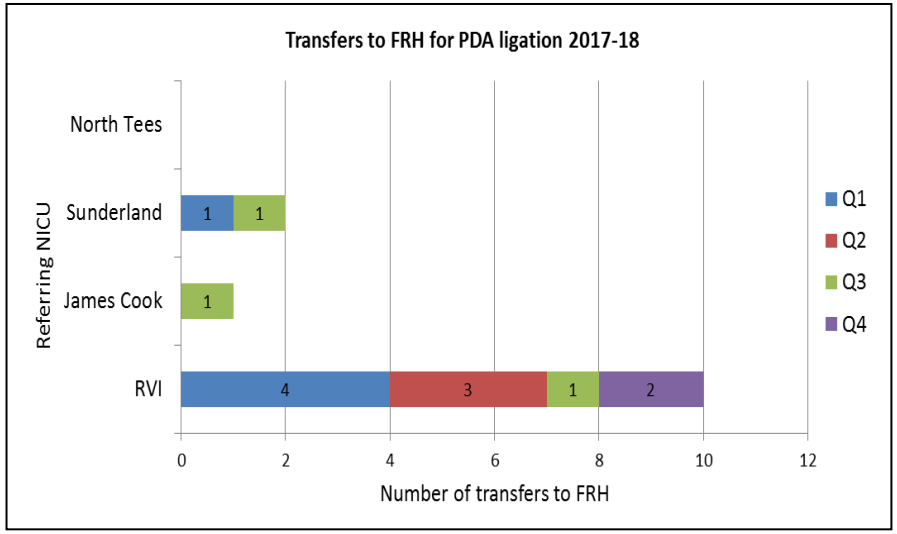


Table 26 – Transfers during 2017-18 for PDA Ligation to the Freeman Road

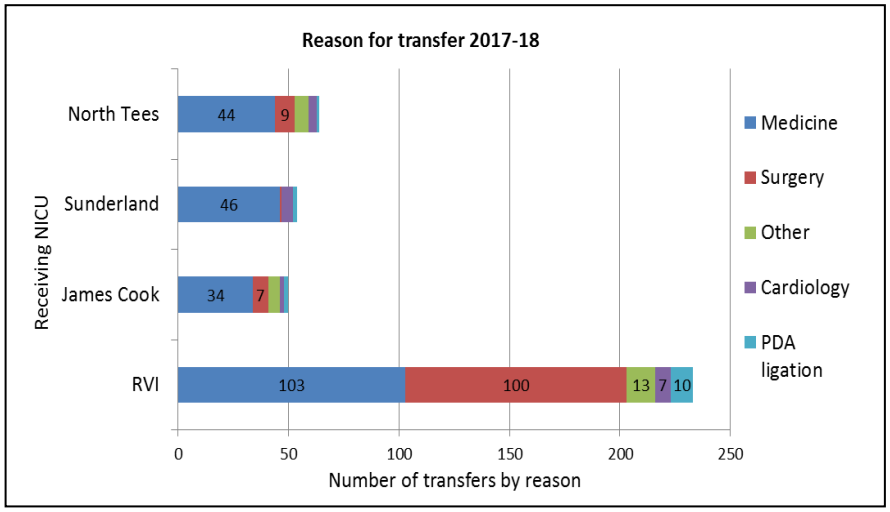


Table 25 – Transport activity for 2017-18 by clinical reason

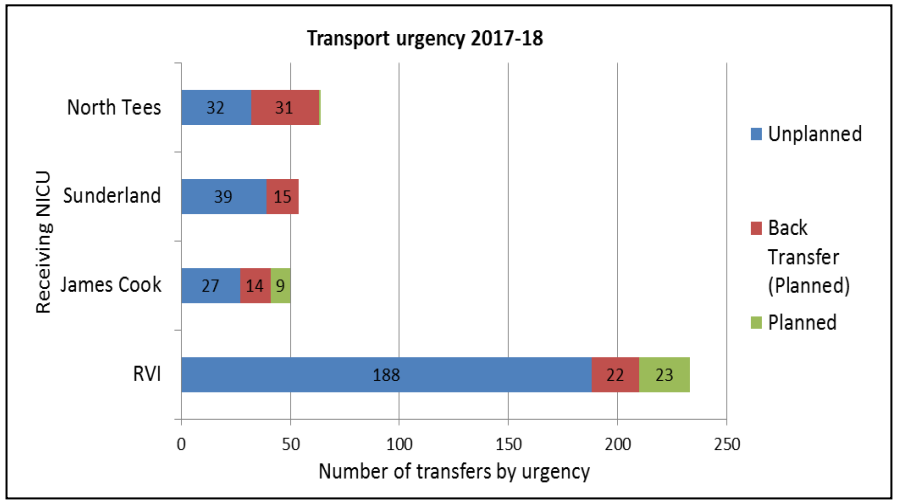


Table 27 – Transport activity for 2017-18 by referral urgency

Transport 5 Year Summary

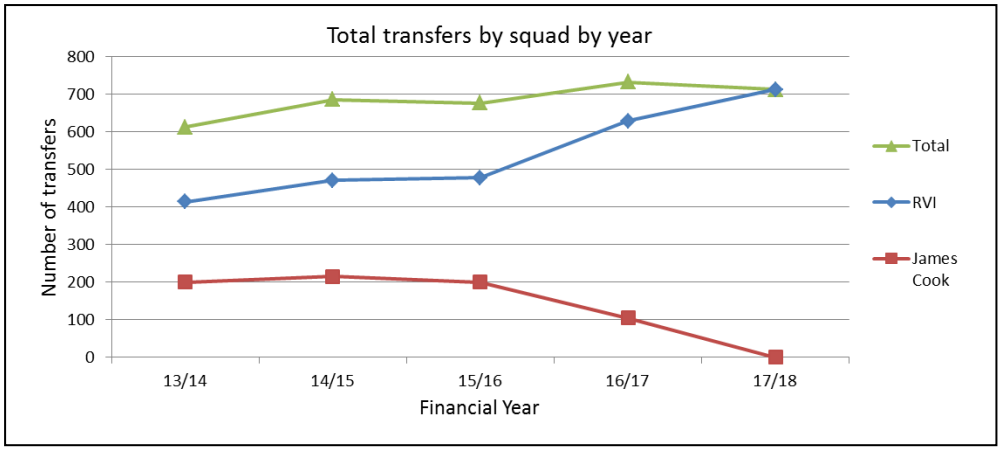


Table 28 – Total Transfers by each Transport Team

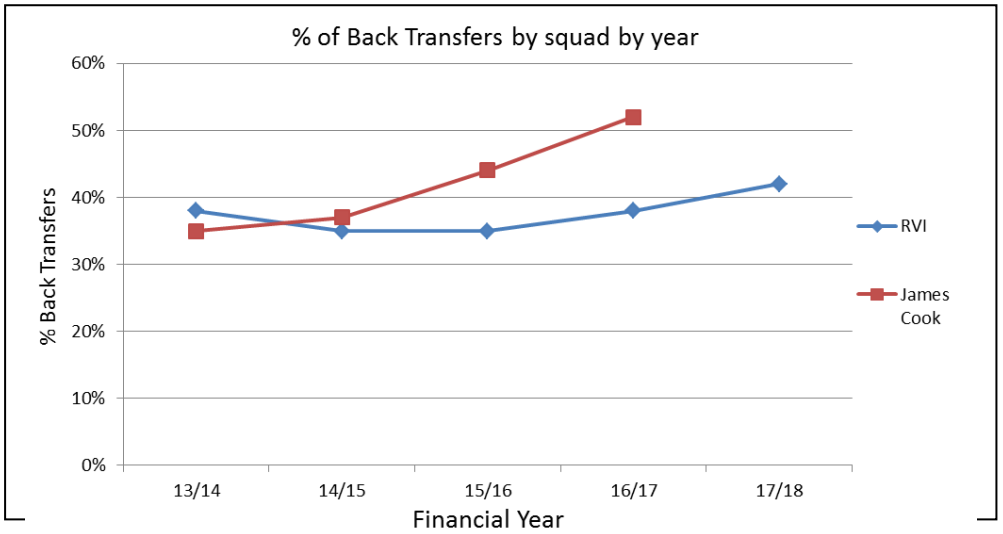


Table 29 – Percentage of back transfers undertaken by Transport Team

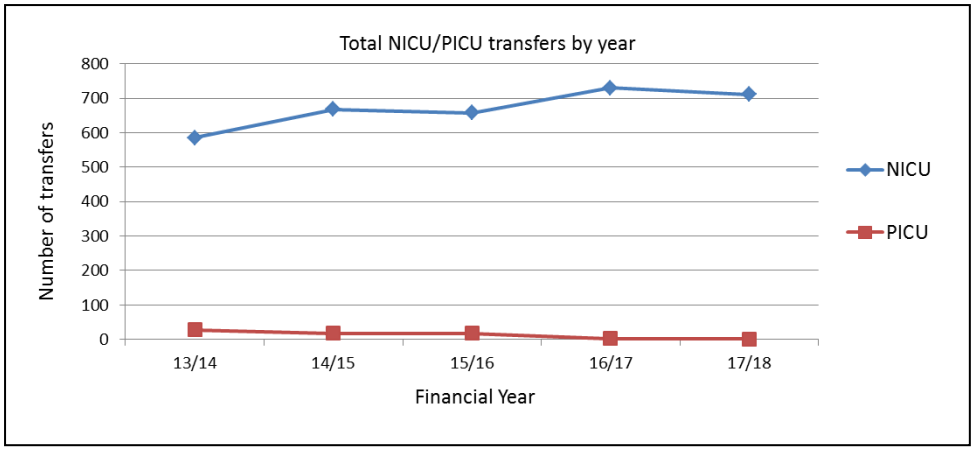


Table 30 – Total Neonatal/Paediatric Transfers undertaken

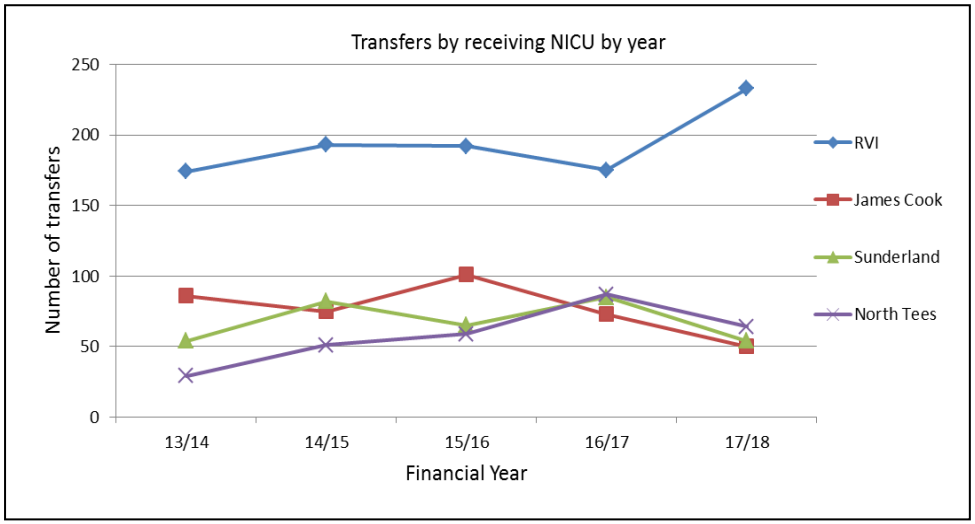


Table 31 – Transfers by receiving NICU

Northern Neonatal Network support for staff Education & Training

The Network continues to place a very high priority and focus on the training and education of staff of all disciplines, roles and levels, right across the region. Dr. Richard Hearn as Network Educational Lead outlines in his own report above some of the main ongoing events and sessions that he runs and supports and these remain very successful and well received and we are looking at more ways to provide new knowledge and skills to our teams.

We also now have a very well-established programme of "core" days that we try to run every year as funding remains available – to date every training opportunity that the Network facilitates remains free to attendees, which is pretty unique in the UK but we feel important to enable our staff to remain as up to date as possible and also help them maintain their professional registrations now that revalidation is compulsory for most health care staff. Over the period 2017-18 these are summarised as follows;

- In April, the 7th Annual Respiratory Workshop was hosted at the Durham Centre. A core day for nurses on the University QIS (Qualified in Specialty) modules, a total of 31 staff attended

- In May, the Network facilitated a one-day study day focussing on neonatal loss and bereavement. This was very well attended, with 46 staff attending on the day.

- Also in May, we hosted a day for over 20 parents to try and focus on how we could better utilise them and their opinions and feedback in a more structured and practical way. This was a very successful day indeed and there were some very useful conversations and we are trying to take the conclusions on board.

- In June we facilitated our 4th successive "Level 1 Foundation Toolkit Course in Developmental Care" at the Durham Centre. This was once again run by Inga Warren and her faculty, enabling another 40 staff from across all of our Neonatal Units to attend. Evaluation from attendees was excellent and Inga is undertaking research to try and assess the impact of the FINE programme across the Network due to the number of staff who have completed this

- In September, the Network piloted a new 2-day "Foundation Training" programme in Sunderland. Designed to give nurses newly qualified and/or new to the specialty a basic grounding in the essentials, it was very well supported and a total of 39 attended. Evaluation was excellent and we hope to establish this as an annual event.

- We hosted a Peer Reviewer training session for 11 people on the same day in September, enabling them to become members of the teams who would Peer Review other neonatal units across the county as part of the National Quality Surveillance Team's programme to assess all units against agreed quality indicators.

- October saw the Network's 3rd Annual Research & Education Workshop: Latest Advances in Neonatal Care" take place, attracting a variety of 30 attendees. Facilitated by Dr Helen Chitty (Consultant Neonatologist, JCUH) this now well established event highlights the latest research projects being undertaken across the Network and beyond.

- In November, the Network facilitated another "Family Centred Care Day" as a core day for QIS students undertaking the Low/High Dependency modules with Teesside & Northumbria Universities.

- December, the Network funded 5 nurses from different Units to attend a national conference focusing on "Establishing Family Integrated Care" in practice, so they could help implement this in their own areas.

- In March 2018, we funded places for eleven staff to attend a Workshop facilitated by BLISS and focussing on their "BBFAS" (Bliss Baby Friendly Accreditation Scheme") in Manchester to equip them with their own applications and improve their Baby Charter compliance.

The Network's 8th Annual Conference took place in September and although the attendance was disappointing and down on the previous year, there was a full and varied programme that covered a wide range of topics, including Transitional care, the ATAIN Programme, The role of hospices in neonatal end of life care and plans for Peer Reviews – which as this Report highlights, took place in the following months. We continue to try and develop a programme that will attract as many staff as possible and early registrations for the 2018 Conference (imminent at the time of this Report!) are very encouraging indeed at a new venue in Boldon.

We continue to try and promote the quarterly "Network Days" that we facilitate as varied learning opportunities for staff, although attendance is usually made up of Unit managers and senior clinicians. This is probably due in large part to the focus for half of the morning being the senior nurses meeting that Lynne Paterson chairs and then the dedicated session where learning outcomes from local death reviews are shared. We also discuss clinical governance issues at these meetings and then usually proceed to use the early afternoons to focus on a clinical issue of particular relevance and importance. During 2017-18, we used these sessions to focus on;

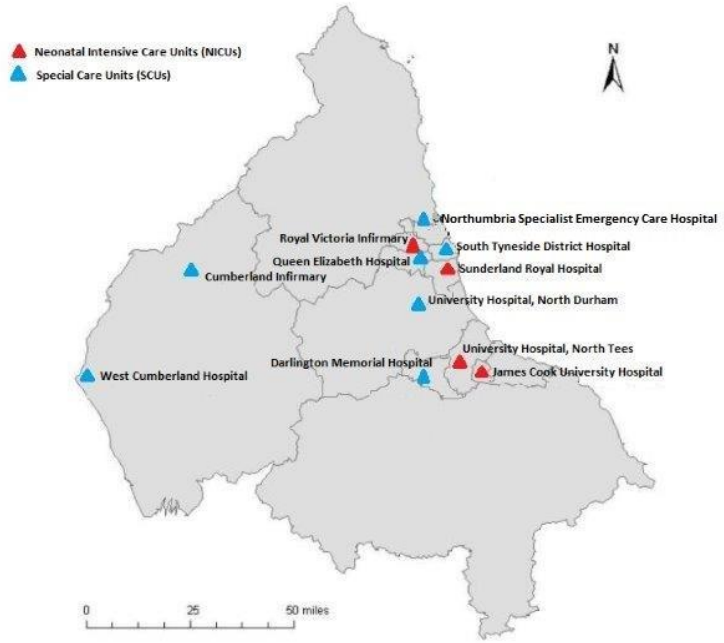
April 2017 – Term Admissions
July 2017 – Clinical Governance and Incident Sharing
October 2017 – Local Maternity Systems; the Network role
January 2018 – Local Maternity Systems; embedding neonatal plans

We will continue to try and create sessions that will be both topical and incorporating some educational content wherever possible on these days as well as meeting agreed Network priorities as defined by our Annul Workplan.

At the time of writing this, there is still uncertainty regarding the longer term provision for QIS ("Qualified in Speciality") training for nurses following their initial qualification, much of it to do with funding and in some other neonatal ODN areas, this has already created significant problems and in some cases the courses no longer running at all. Fortunately to date this is not something that we have suffered, but there are now plans to try and address this by exploring the possibility of creating this essential aspect of nurse education within the new "apprenticeships" schemes that all Trusts have to pay into and which may untap the required funding and stability going forward. Lynne Paterson is heading up discussions for the Network and beyond and hopefully by the time of next year's Report we have more clarity as to where the future lies.

In the meantime, we will try to maintain our current priority of ensuring that we keep our staff as up to date as possible and keep education and training free at the point of delivery while we can fund the days we facilitate. We continue to believe as a Network that this will maintain personal and professional development of our workforce and in turn help equip them to provide the very highest care possible in line with our Network mission statement.

The Northern Neonatal Network – our details



NICU (Neonatal Intensive Care Units)

Royal Victoria Infirmary, Newcastle
Sunderland Royal Hospital
University Hospital of North Tees, Stockton-on-Tees
James Cook University Hospital, Middlesbrough

SCU (Special Care Units)

Northumbria Specialist Emergency Care Hospital, Cramlington
South Tyneside Hospital, South Shields
Queen Elizabeth Hospital, Gateshead
University of Durham Hospital
Darlington Memorial Hospital
Cumberland Infirmary, Carlisle
West Cumberland Hospital, Whitehaven

Network Website – www.nornet.org.uk

Twitter Feed - @NorNetUK

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