

**Summary notes of the meeting on
Reducing term admissions to neonatal units.**

Held at Skipton House, London on Monday 3rd November 10:00 – 16:00.

A full list of attendees is available. The meeting benefitted from representation from the RCM, RCN, RCOG, NHSIQ, NHS England, SCN's, ODN's, NPEU and provider organisations.

Background

The NHS England Business Plan 2014/15–2016/17 sets out the key measurables for each of the five domains within the Outcomes Framework. Domain 5, *treating and caring for people in a safe environment and protecting them from avoidable harm*, falls under the responsibility of the patient safety team who are responsible for progress against improvement areas 5.1 – 5.6. Improvement area 5.5 relates to Improving the safety of maternity services with the key measurable being a reduction in the number of admissions of full term babies to neonatal care.

NHSOF 5.5 is essentially a 'proxy' outcome indication, with the true desired outcome being a reduction in moderate & severe harm to term babies, but admission to neonatal care being assumed to usually act as an indicator that harm has taken place.

Infants born at term ($\geq 37^{+0}$ weeks gestation) and admitted to neonatal care form the largest proportion of all babies admitted to neonatal care. A broad level analysis of the primary reasons for admission was commissioned by NHS England and undertaken by the Neonatal Data Analysis Unit (NDAU). This identified that between 2011 and 2013, full-term infants made up almost 60% of all admissions to neonatal care in England. Identifying and addressing those factors which lead to avoidable admissions would avoid separation of mother and infant, prevent unnecessary exposure to infection, and potentially result in significant cost savings to the health service through avoidable expenditure on cot days and treatment. It is important to note that some full term admissions to a neonatal unit are entirely appropriate e.g. severe growth restriction or congenital abnormality, amongst others. This work focuses on unplanned admissions, where care related factors may have played a part; it does not include unavoidable admissions where admission is essential to prevent morbidity or mortality.

Priority areas for improving the safety of term babies

The top 5 reasons for term babies being admitted to a neonatal unit have been identified through analysis of the NNRD as: respiratory disease, infection, hypoglycaemia, jaundice and asphyxia, however the work has been designed to be informed through four additional sources of intelligence:

1. Safety data as informed through reports to the National Reporting and Learning System (NRLS)
2. Claims data as informed by the NHS LA Claims Management System
3. Parent and patient experience
4. Front line clinical expertise from both neonatal and maternity teams, commissioners, researchers and strategic leaders from the Royal Colleges.

In order to better understand the clinical factors behind these admissions so as to inform targeted interventions to achieve a reduction in these areas, NDAU produced a second phase report, containing 248 tables of maternal and infant variables available for further interrogation. Given the enormity of the delivered data, experts have been asked to shape the way in which the results will be further reviewed and disseminated.

The meeting

The meeting opened with an outline of the work undertaken to date followed by a brief group table exercise to ascertain the aims of the working group.

These were identified as:

- Improved understanding of the harm caused through separation of mother and baby
- Improved identification of risk factors for infant morbidity prior to discharge.
- Improved understanding of healthy babies who then become unwell and require admissions
- Understanding what research might be undertaken across the five priority areas to help address these issues.
- Improve understanding of babies who are at risk of becoming unwell and are later admitted to children's wards – where NNRD data will not capture these admissions.
- Improve understanding of the role that hypothermia plays in the top three reasons for admission, specifically hypoglycaemia and respiratory.
- Ensuring the necessary educational components are disseminated and reach those critical to care delivery.

- Align this work with other, existing work streams to avoid duplication
- Improve collaborative working between neonatal and midwifery teams
- Understand the use of early warning score charts in reducing avoidable admissions
- Understand the “other” and “missing” reasons for admission and ensuring data completeness so that these admissions can inform the work more completely. (This is ? achievable through addressing coding/data completeness issues).
- Improving the understanding of the relevance of above information to inputter so that data makes sense and is of future value.
- Improved provision of adequate and appropriate discharge and safety information for mothers and babies.
- Identifying means of working collaboratively across the five focus areas as there are core areas of overlap across some of the groups.
- Sharing of national and local data and resources
- Agreeing a national benchmark to help identify a threshold – possibility of looking at local data to inform this.
- Address variation in admission policies across the country and consider standardisation of admission criteria.
- Sharing and scale up of best practice solutions and resources.
- Identifying the criteria for “avoidable” and “unavoidable”.
- Using national data to help steer the priorities for addressing maternity and neonatal issues.
- Formation of a network or “Community of Interest” to help share and benchmark.
- Consideration of practical next steps, solutions, quick wins to make a difference.
- Work with the RCM to target improvements as informed by nationally collated data and intelligence from Pressure Points publications.
- Education focused on prevention rather than cure
- National steer to drive local practice

Presentations

Eugene Statnikov gave a presentation on the NNRD review of term admissions.

Discussion points following Eugene’s presentation

- NNRD unable to inform staffing levels at the time which would give a more complete picture
- Only outlines primary issues, no detail – however >250 data tables available for further analysis which could offer more detail.

- Most people default to using “respiratory” when other detail is also applicable.
- Not enough information about the mother is available on NNRD
- Need to look at both mother and baby factors as to why they are admitted **and** diagnosis on discharge – may be more useful using a discharge diagnosis
- Coding difficult
- Recognise that the system used for coding on Badger net is not perfect and there is currently a piece of work being carried out to improve it.
- Very time consuming to cross reference data.
- Coding on “query sepsis”
- Units where admissions have been looked at very closely using data have seen a reduction in admissions.
- Data is a national snapshot – important to look at local level
- Some reasons for admissions can be due to hypothermia
- One unit reviewed all admissions as incidents found things such as skin to skin not done correctly, more staff on the ground would have helped. Reviewing data enabled the unit to secure funding for further staff.

Michele Upton gave a presentation on what the safety data, as informed by the NRLS, shows in regard to term admissions.

Discussion points following Michele’s presentation:

- Midwives only visit twice/phone up in 10 days – is it possible to look at before and after this initiative – if changes are made.
- No consistency in community midwifery provision across the country
- One area has reduced to visiting on day 3 rather than day 5 as they were seeing a large number of babies with a weight loss.
- Back to basics – midwives are trained in what is normal, lack of skills in identifying the sick neonate.
- Student midwives don’t get the same exposure as previously.
- Educate parents and empower them
- Breast feeding support needs to be improved.
- Concerns about local reviews of serious safety incidents – subject to local influence, shift blame around – maybe look at peer reviews between Trusts
- Accountability to be put in place at senior level
- Need to get the basics right

Jeanette Beer gave a presentation on what the Litigation data, as informed by the Claims Management System, shows in regard to term admissions.

Discussion points following Jeanette's presentation:

- Litigation costs – feel that lawyers make money and can drag things out to make money.
- In interests of NHS to resolve quickly.
- Claimants costs can be massive. Example of case where claim was for £5,000, cost NHS £2,000 and claimants costs came to £38,000!

Mr Kalisperas then presented a moving account of his family's journey with their son Vasili who has suffered profound brain injury as a result of kernicterus.

Discussion points following Mike's presentation:

- Empower the patient – they need to be educated, listen to parents they know what they are concerned about.
- Despite raising concerns re colour, lack of feeding, no community visit. Minimum should be to provide advice saying to telephone if concerned or go to A&E / call 111.
- Back to basics – can do a lot without money
- Post care psychological counselling non-existent, family need some post event support
- Would like to see it as a Never Event – this won't solve the problems but will raise awareness.
- Change the term to “toxic jaundice” for when counts are high – call it what it is.
- Had to wait five hours for blood from Birmingham, delays

The role of the Safety Thermometer has demonstrated a reduction in harm where these have been implemented. There have been calls for the development of a bespoke Neonatal Safety Thermometer with this being a possible future resource for impacting on the reduction of avoidable term admissions. Kurt Bramfitt outlined the development of the thermometer and its role in improving safety.

Discussion points following Kurt's presentation:

- Difficulty in implementation change
- Will be complex to get so many systems measured with one tool

A Newborn Early Warning Trigger and Track tool has been developed through BAPM. Sue Turrill presented an outline of the development of the tool and discussed the potential for its use as a resource for supporting the reducing term admissions work.

Discussion points following Sue's presentation:

This was highly regarded as being of use in this work going forward. Still in consultation phase but when launched the group will be made aware.

The afternoon session began with an overview of the national platforms which could be used to support this work. These include:

- The NHS England Patient safety Alerting system
- The Patient Safety website which has an existing platform for Maternity and Children and where links and resources can be uploaded for sharing and disseminating information and resources.

<http://www.patientsafetyfirst.nhs.uk/Content.aspx?path=/interventions/deterioration/>

This was followed by a breakout session within the five focus areas with experts tasked with:

1. Identifying priorities and issues within each focus area for action
2. Understanding the existing resources within that focus area for future sharing
3. Identifying additional resource requirements
4. Plan of action/ where do we go from here?

The resulting feedback has been set out under each focus area in a table below. These discussions highlighted several major themes:

1. The risk of duplication of effort where similar work streams are being carried out in various organisations, networks and regions without a cohesive national overview.
2. The enormity of this work programme.
3. The complexity of the work programme
4. The lack of resource at provider level to identify and audit these admissions in order to target, design and deliver improvements.
5. Recognition that although perceived to be a neonatal issue, avoidable admissions are often also as a result of sub optimal maternity care and that a perinatal overview of the issue should be central to understanding the issue and agreeing improvements.

6. The lack of resource within patient safety, who are responsible for this indicator, to support the complexity and enormity of the work programme and the need for a broad healthcare system approach.
7. The recognition that many of the issues are as a result of midwifery capacity, particularly in the community setting.
8. Recognition that some of the key issues are political and will require strategic level input to lever resource for improvements to be seen.
9. The recognition that lasting improvements need to be made at all levels of the healthcare system and not simply at provider level.
10. Need to include and address admissions to paediatric wards which will be significant and are not captured through the NNRD.

Respiratory admissions.

- Are these as a result of elective C/S prior to 39/40?
- Need to educate the public on risks involved with caesareans especially prior to 39 weeks
- Did mothers of babies admitted at >37 weeks and who were delivered by elective C/S prior to 39 weeks receive steroids as per NICE guidance?
- Respiratory is a symptom not a diagnosis
- Is the issue behind respiratory admissions one of hypothermia and inadequate management of skin to skin →keeping babies warm.
- Does inadequate PNW staffing lead to increased admissions where medical teams “fail safe” by admitting knowing that babies will receive the care they need on the NNU as midwifery resource is stretched on the PNW?
- Understanding these admissions should include measurable outcomes such as temperature
- Look at more data with babies admitted with respiratory symptoms (data tables available)
- Dashboard of outcome data which would be shared for driving improvement.
- Working with commissioning →making trusts accountable for these admissions where avoidable.
- Shared learning from serious incidents
- Respiratory distress as secondary diagnosis as can be a symptom of sepsis, hypothermia etc.

- Education and training of both neonatal staff and Maternity Support Workers to prevent these admissions.
- Improving data quality so as to understand these admissions better via Badgernet.

Next steps – respiratory

- Aggregate reviews and RCA to understand issue better.
- Plan audit → questions to network leads
- South central have an excellent dashboard which can be shared

Infection

- Need to know more detail behind “infection” as a reason for admission.
- ?? what proportion of admissions to NICU deemed as infection.
Determine whether admissions are for suspected or proven Sepsis.

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What preceded this? ?maternal history.

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Was NICE guidance followed? RCOG Green top guidelines?

- What was the pathway for that admission? Admission + Management → NNU, TC, PNW, HOME?
- Where are antibiotics given and by whom?
- Understanding the variation in practices, admission policies and management of presumed sepsis.
- Understanding local resource issues in terms of MDT in particular midwifery skills, capacity and training. How much neonatal education is included in current midwifery training?
- Are there islands of best practise nationally?
- What is best practise? Local vs National – should be Patient focused rather than resource driven.
- Consider the introduction of antenatal screening for GBS – would this be cost effective? Would antenatal detection of GBS and appropriate management lead to a decrease in NNU admissions?
- In USA there is an “intermediate” category for babies with suspected sepsis: take bloods, watch and wait.
- Data quality → completeness to give a more helpful picture.

- Identification of the sick baby – currently NNU responsibility to provide ongoing training for midwives to maintain skills in some areas.
- NICE guideline – antibiotics for early onset neonatal infection? Had there been an audit of the impact of these on admission rates?
- Need to consider admissions to paediatric wards.
- Length of stay can be increased due to turn around times for screening and assay sampling within microbiology departments.

Next steps - infection

- Need to quantify the problem → who will commission this work? Need further NDAU analysis of infection re admission reason.
- Ascertain use HES to determine paediatric ward admissions for neonatal infection.
- Exchange of good practise – avoiding inappropriate term admissions.
- Local audit required
- Understand pathways
- Shift of resources and scale up of existing
- Education and training → H.C. Professionals → **Involve parents!**

Asphyxia – acute and chronic

General issues:

- Team
- Poor decision to delivery.
- Escalation.
- Team training.
- Task – not knowing guidelines.
- Sharing best practise

Education.

- CTG misinterpretation.
- IA monitoring and testing → antenatal education
- N.L.S → resuscitation and scrutiny
- Antenatal education

Organisational

- Manpower
- 24 hour consultant presence

- Safety culture

Patient Factors

- Growth restriction
- Grow/Gap programmes

Working Conditions

- Cost of K2
- ? RCOG assessment
- Activity vs staffing – one to one care in labour
- Middle grade → staff grade compliance
- Communication

Escalation

- Delivery suite coordination
- Management roles and accountability
- Home birth
- MLU – location of birth

Other

- Resources are there but there need to be made clear that these need to be implemented to ensure a safe labour ward.
- Two theatres
- On-call manager
- Robust external review
- General Resources

Areas for development

Team – MAT team training → standardised team
→ Generic

PROMPT, skills drills, on line training

Equipment – CTG – K2 training → Testing CTG's
→ Address
→ You can ask
→ Senior Obstetric Carer

Education - Locum middle grades

NLS certificate

Adequately trained staff.

Legal CNST standards → locally agreed L.W Paeds.

Instigating ideas - locally agreed policies of necessary training. (Commissioning standards)

Organisation - Fresh eyes

- Escalations

-MLU medicine

- Staffing and translation. → Patient safety red lines

Asphyxia – next steps:

- Plan – three months for wider consultation on actions (see also stillbirth national work).
- Tie in post-delivery e.g. Resus cooling (Share EOE work through Dropbox)
- Tie in human factors thread
- Parallel piece of work being carried out which will hopefully embed some of the things that are being carried out.
- Need to just get on and do it!

Hypoglycaemia

- Pre-hospital care: Parent education - working with NCT.
- Baby friendly initiative working with hypoglycaemia guidelines.
- Accurate measurement. Gas machine Glucose & SBR only done by MW/NN.
- Symptomatic babies should be a direct referral to NICU. Education of the MDT.
- Identifying clinical signs and empowering junior doctors and MWs to understand them.
- E-learning support (multidisciplinary) - educating to local policies and understanding physiology of energy use.
- Feeding support. Nursery nurse champion. Tailor made feeding support to vulnerable baby.
- Continuity of re-enforcing care pathways and incentivising education.
- Transitional care tariff. (Defining normal care).
- Identifying “at risk” mothers. Listening to concerns.
- Focus on keeping mum and babies together.

- Understand incidental hypoglycaemia findings. Misdiagnoses – tends to be a bit of a catch all.

Hypoglycaemia – next steps:

- Need to determine which are “unacceptable” or avoidable admissions as a result of failure of care and differentiate those where admissions are where management has been appropriate but infant requires further intervention.

Jaundice

- Professional – educational and training – supervision
- Share and pool resources – stop looking at things in isolation, what is already out there.
- Political sphere – have as a Never Event
- Communication
- Recognising our roles and responsibilities as a professional personal and explaining this to parents and families when you meet them for the first time.
- Need email dialog going forward to create a written plan – do this in next 3 months.
- Use a tiered system, checks and treat can't look at just one aspect, look at NICE guidance, use a chart to identify jaundice quickly and effectively

Jaundice – next steps:

Needs action at several levels:

- Professionals: Midwifery education, supervision, information sharing with parents.
- Political investment in midwifery resource
- Revisit the way jaundice is viewed - awareness of NICE chart.
- Improving the evidence base towards recognising kernicterus in term babies as a Never Event.
- Recognising the role that parental/patient assumption might play in harm: assuming that mature students are in fact experienced clinicians and the importance of the “Hello my name is....and I am.....” – communication.
- Consider the development of a parent information leaflet

Close of the day:

Following feedback a discussion was held on overriding aspects of the work programme which currently affect progress as well as factors which will need future consideration:

- Definitions of what is considered “avoidable” or “unavoidable”

- Tackling variations in practice as well as admission policies
- Improved understanding of factors behind presenting symptoms e.g. respiratory, infection and hypoglycaemia, where hypothermia may play a part and where symptoms might be representative of more than one condition.
- Lasting improvements in this work programme require political and high level support.
- Additional support to maximise scale up of existing improvements is required from a broad range of stakeholders to include front line clinicians, commissioners, senior leaders, communications and project support.
- A review of professional education for student midwives in relation to care of the newborn with a view to involving health education bodies and Royal Colleges to deliver any agreed and revised programmes of training.
- Improved oversight of working within best practice: NICE guidelines, Professional Colleges etc. RAG ratings.
- Drawing on the use of current technology for information sharing: video/leaflet, social media etc.
- Improved understanding of predisposing risk factors/ triggers
- Sufficient resource for a full scale project with realistic time frames over a 4-5 year period which would include a robust communications strategy.
- The next three months will be focused on agreeing plans of action and strategic networking to agree a way forward at a number of levels, both clinically within the focus groups (via email) and at strategic level, led by the Patient safety team.
- Email contacts for groups need to be set up to allow for sharing, discussion and planning within the focus groups.
- Dropbox folders to be set up for each of the five focus groups with a larger shared Dropbox folder containing all documents for those wanting an overview of the project only or for other groups wanting to understand other work streams.
- Need to align other national programmes which might impact on this work or align with it so as to join up, share and avoid duplication.

Next steps:

National Team:

- MU to summarise meeting and send to attendees for accuracy.
- Dropbox folders to be set up and sent to attendees and those who have stated an interest in the work.
- MU to set out the available data tables for each group and send to each focus group.

- A spreadsheet of all contacts to be updated and sent via Dropbox.
- Meeting to develop the NHS England PS website area for Maternity and Newborn to begin to upload available resources relating to this work to be held.
- Produce outputs document from the meeting to inform national organisations and lever the required high level support for this work.
- Circulate a draft mapping document outlining the existing work programmes which relate to this work so as to avoid duplication and ensure we tie in where possible.
- Circulate a document outlining the existing relationships and collaboration with other organisations highlighting relationships and collaborations already in place as well as those which still need to be developed.
- Work with stakeholders to agree definitions which might help to tackle variations. Need to determine how this is done.
- Ensure existing national data and resources shared and added to Dropboxes
- Leverage strategically to ensure work programme is on agenda at high level in order to ensure working group expertise and input is recognised and change can occur.
- Use this work to influence other related work.

Working group attendees:

- Attendees to comment and verify draft minutes prior to sending to wider interest group for information.
- Take forward agreed next steps and consider level of achievable progress in the next 3 – 6 months using existing resource until more direction from national team.
- Focus groups to consider which data tables they would want to interrogate further and to provide rationale prior to receipt.
- Focus groups to update and circulate mapping document so as to capture all related work programmes so as to avoid duplication and align work streams where possible.
- Consider ways of agreeing definitions which might help to tackle variations.
- Draw on existing resources for sharing and add to Dropboxes /send to national team to do so.
- Consider what will be the most effective ways of working to achieve aims/next steps.
- Use this work to influence other related work. Profile using existing levers in local areas of work.