National Neonatal Audit Programme (NNAP): Recommendations, case studies and resources on 2022 data

Area of care: Outcomes of neonatal care

National recommendation(s)	Actions for local quality improvement	Case studies
Neonatal networks should review their rates of adverse outcomes (mortality, BPD, NEC, bloodstream infection and preterm brain injury), and develop locally prioritised action plans to respond to these results with their **constituent neonatal units,** and: • share these with **Neonatal Network Boards, Local Maternity and Neonatal System (LMNS) Boards** (and devolved nation equivalents), and with **Trust/Health Board Governance Boards** via ward-to-board **Maternity or Neonatal Safety Champions.** • work with their **constituent neonatal units** to ensure that all services have a plan in place to validate their data entry for outcomes such as necrotising enterocolitis, bloodstream infection, and preterm brain injury.	**Neonatal units** without assured data entry for outcomes such as NEC, bloodstream infection and preterm brain injury should develop plans, in time for the final deadline for the submission of NNAP 2023 data, to deliver enhanced completeness and quality of data. Neonatal units should use the following resources to support this work: NNAP 2023 Audit measures guide NNAP webinar: Checking and validating your NNAP data: What you need to know Gale, C. et. al. Brain injury occurring during or soon after birth: a report for the national maternity ambition commissioned by the Dept. of Health Neonatal units should ensure there is a named lead for serious incident review with designated time to liaise closely with obstetric and maternity colleagues, in line with the recommendation made in the UK Neonatal Partnership Board report - National Reviews of Maternity and Neonatal Care: Supporting the perinatal team to implement recommendations. This is to ensure that timely and transparent incident investigations occur and result in shared learning.	Snuggle and PEEP – Increasing use of non-invasive respiratory support and reducing bronchopulmonary dysplasia rates Emma Liggett (ANNP), Kirsty Lomax (ANNP), Ailish Davis (ST2), Doone Boorman (3rd year medical student), Adekunle Sobowale (ST4), Hannah Spierson (Consultant Neonatologist) Neonatal Unit, Bolton Hospital NHS Foundation Trust. Implementing a care bundle to reduce the incidence of severe intraventricular haemorrhages in a UK tertiary neonatal intensive care unit, Dr Audrienne Sammut, Consultant Neonatologist, University College London Hospitals, NHS Foundation Trust

Area of care: Optimal perinatal care

National recommendation(s)	Actions for local quality improvement	Case studies
NHS England, Scottish and Welsh Governments should ensure that pre-term birth is optimally managed by a multidisciplinary team by: · ensuring that preterm birth lead teams (including an obstetrician, neonatologist, neonatal nurse and midwife) are commissioned at all neonatal services, · requiring that **Integrated Care Systems (ICS), Health Boards in Scotland and Local Health Boards in Wales**, ensure that all neonatal services take a perinatal team approach to design and delivery of care that includes parents with diverse backgrounds and diverse experience of neonatal care, · ensuring that **perinatal teams** conduct reviews of preterm birth cases to identify opportunities for improvement to maximise quality of care, and the delivery of the interventions identified by national improvement initiatives.[1,2,3]	**Preterm birth lead teams** should use new NNAP frequent reporting tools and quality improvement methodology to understand the proportion of babies receiving perinatal care interventions in their service and network, to identify opportunities for improvement to maximise quality of care, and the delivery of interventions identified by national improvement initiatives.[1,2,3]	Optimal timing of antenatal corticosteroids to improve outcomes in preterm birth Health Innovation Oxford and Thames Valley (formerly the Oxford Academic Health Science Network – Oxford AHSN) Eileen Dudley, Senior Programme Lead & MatNeoSIP Lead Patient Safety Collaborative, Health Innovation Oxford and Thames Valley Michelle East, Lead Midwife, Governance & Quality, Bucks Healthcare & MatNeoSIP Regional Midwifery Clinical Improvement Lead

[1]NHS England. Saving Babies Lives Care Bundle version 3 (England)
[2]Scottish Patient Safety Programme, Maternity and Children Quality Improvement Collaborative. Preterm Perinatal Wellbeing Package.
[3] Wales Maternity & Neonatal Network. PERIPrem Cymru

National recommendation(s)	Actions for local quality improvement	Case studies
NHS England, Scottish and Welsh Governments should ensure that maternity data flows describe the administration of antenatal steroids, and other perinatal optimisation interventions, and that maternity and perinatal data are linked nationally in order to: • understand rates of timely exposure of preterm infants to perinatal optimisation interventions in the context of the number of women treated, regardless of whether they go on to deliver significantly preterm, • improve reporting of neonatal outcomes of maternity care, in line with the recommendation made in 'Reading the signals'[4] and to support national improvement initiatives.[5,6,7]	**Preterm birth lead teams** should use new NNAP frequent reporting tools and quality improvement methodology to understand the proportion of babies receiving perinatal care interventions in their service and network, to identify opportunities for improvement to maximise quality of care, and the delivery of interventions identified by national improvement initiatives.[1,2,3] •Perinatal Optimisation Pathway Resources (BAPM and BICS) West of England Academic Health Sciences Network, PERIPrem The QUiPP App toolkit Maternity Transformation Programme, Perinatal Culture and Leadership Programme (England only), further information available via login at: https://future.nhs.uk/. The Scottish Patient Safety Programme (SPSP) Maternity and Children Quality Improvement Collaborative (MCQIC) Preterm Perinatal Wellbeing Package	

[4]Kirkup, B. Reading the Signals: Maternity and neonatal services in East Kent – the Report of the Independent Investigation
[5] NHS England. Saving Babies Lives Care Bundle version 3 (England)
[6] Scottish Patient Safety Programme, Maternity and Children Quality Improvement Collaborative. Preterm Perinatal Wellbeing Package.
[7] Wales Maternity & Neonatal Network. PERIPrem Cymru

Area of care: Parental partnership in care

National recommendation(s)	Actions for local quality improvement	Case studies
All **Royal Colleges** associated with preterm perinatal care (the **Royal College of Paediatrics and Child Health**, the **Royal College of Obstetricians and Gynaecologists**, the **Royal College of Nursing** and the **Royal College of Midwives**) should include a focus on the importance of early breastmilk feeding, and guidance on how to support parents to establish and sustain breastmilk feeding, in training relating to intrapartum care, fetal medicine care and perinatal care.	**Trusts/Health Boards** should ensure that, post the COVID-19 pandemic, full, unrestricted 24/7 access for parents to be with their baby is maintained and is central to all decision making in the neonatal service. This will support improvements in the proportion of babies receiving their mother's own milk and facilitate parent partnership in care more broadly.	There are no case studies for this area of care.
	Neonatal units and **neonatal networks** with low rates of breastmilk feeding (within 2 days, at 14 days and at discharge), should: o Ensure they have a dedicated neonatal unit-based lead for infant feeding o Ensure that there is immediate availability of high-quality breast pumps in all neonatal settings.	

National recommendation(s)	Actions for local quality improvement	Case studies
	Neonatal units and **neonatal networks** with low rates of breastmilk feeding (within 2 days, at 14 days and at discharge), should identify opportunities to improve, and use existing quality improvement programmes and resources to support their improvement work, such as: The UNICEF UK Baby Friendly Initiative BAPM Toolkits and resources: Family Integrated Care: A Framework for Practice ·Optimising Early Maternal Breastmilk Feeding for Preterm Infants: A QI Toolkit ·Optimising Early Maternal Breastmilk Feeding for Preterm Infants Part 2 – To discharge and Beyond: A QI Toolkit ·Perinatal Optimisation Passports Bliss resources: · Information for parents about feeding and related aspects of neonatal care ·Emotional and practical support from Bliss ·Bliss Baby Charter (List continued overleaf)	

National recommendation(s)	Actions for local quality improvement	Case studies
	West of England Academic Health Sciences Network, Perinatal Excellence to Reduce Injury in Premature Birth (PERIPrem) PERIPrem Cymru The Scottish Patient Safety Programme (SPSP) Maternity and Children Quality Improvement Collaborative (MCQIC) Preterm Perinatal Wellbeing Package UK Neonatal Partnership Board report - National Reviews of Maternity and Neonatal Care: Supporting the perinatal team to implement recommendations	
	Neonatal units with low rates of breastmilk feeding at discharge should consider developing quality improvement projects involving the multidisciplinary care team and informed by the perspectives of parents with diverse neonatal experiences, to ensure high quality support before and at the time of discharge for the continuation of breastmilk feeding after discharge.	

National recommendation(s)	Actions for local quality improvement	Case studies
	Neonatal units and **neonatal networks** with low proportions of parent involvement in ward rounds and with high proportions of missing data, should address their data incompleteness, and seek to engage in activities to improve their parent partnership in care, such as: ·Co-designing quality improvement activities and projects with parents with both diverse backgrounds and experiences of neonatal care, and actively seek feedback to understand the barriers to involvement in consultant ward rounds and other aspects of their baby's care. ·Seeking to learn from other units and networks who have successfully implemented family integrated and centred care within their services. ·Using quality improvement methodologies and programmes to support their work, such as: BAPM, Family Integrated Care: A Framework for Practice Bliss resources: · Information for parents about feeding and related aspects of neonatal care ·Emotional and practical support from Bliss ·Bliss Baby Charter (List continued overleaf)	

National recommendation(s)	Actions for local quality improvement	Case studies
	·Training and learning to support family integrated care and partnership FiCare – The Family Integrated Care model	

Area of care: Neonatal nurse staffing

National recommendation(s)	Actions for local quality improvement	Case studies
The **UK Government**, **Welsh Government** and **Scottish Government** should ensure that the implementation of fully funded medium-to-long-term NHS-wide workforce plans deliver the recruitment, training, development and retention of neonatal nurses to improve the proportion of shifts with sufficient staffing and therefore improve survival rates and the quality of care in neonatal units.	There are no actions for local quality improvement for this area of care.	Using the NNAP measure for neonatal nurse staffing to support benchmarking, oversight of safe staffing and quality improvement Across the Herts and West Essex Local Maternity and Neonatal System (HWE LMNS). Jacki Dopran, HWE LMNS Neonatal Project Manger, Husnara Begum, Neonatal Manager, Princess Alexandra Hospital, Elvira Baker, Neonatal Matron, & Linda Queijo, Neonatal Ward Manager, Watford General Hospital, Laura Kelly, Neonatal Matron, Lister Hospital, ENHT.

Area of care: Care processes

National recommendation(s)	Actions for local quality improvement	Case studies
There are no national recommendations for this area of care.	**Neonatal services** with low adherence to recommended clinical practices such as non-invasive breathing support and ROP screening should: o use NNAP Online to identify comparable services with better adherence to identify opportunities for shared learning. o use quality improvement methodology and available resources to develop and deliver an action plan to improve adherence in their hospitals. For example, •NICE Quality Standard [QS193]. Specialist neonatal respiratory care for babies born preterm. •Royal College of Paediatrics and Child Health. UK Screening of Retinopathy of Prematurity Guideline. •NNAP ROP Screening Calculator •BAPM, Minimising the burden of bronchopulmonary dysplasia - A BAPM Quality Improvement Toolkit (expected publication Autumn 2023)	More than meets the eye: understanding the impact of guideline changes on retinopathy of prematurity screening performance Dr Julie Martin, Neonatal Clinical Fellow, Prof Rachel Pilling, Consultant Ophthalmologist, Neonatal Unit, Bradford Teaching Hospitals NHS Foundation Trust Use of non-synchronised non-invasive positive pressure ventilation (NS-NIPPV) to reduce extubation failure in preterm infants Dr Amitava Sur, Dr Anshuman Paria & Dr Adarsh Bhulani – Neonatal consultants, Lancashire Women and Newborn Centre