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Welcome

Maternity and Children Quality Improvement Collaborative (MCQIC) Perinatal Webinar Series

Building Perinatal Teams

Thursday 1 December 2022

Welcome and introduction

Dr Nirmala Mary (Chair)

MCQIC Obstetric Clinical Lead

Healthcare Improvement Scotland

Aims of the webinar

Bringing together ALL members of the multidisciplinary team involved in the care of pregnant women and newborns. The webinar will provide the opportunity to:

- hear more about the concept of perinatal teams and the importance of multidisciplinary collaboration in improving outcomes
- learn from a highly successful perinatal team as we hear from the PERIPrem Project Team, and
- explore the exciting new preterm perinatal wellbeing package resource.

The team here today

Building a perinatal team to support preterm optimisation

Dr Julie-Clare Becher

Consultant Neonatologist

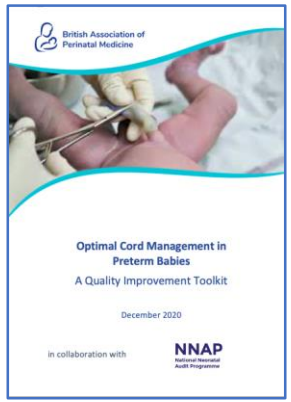
NHS Lothian

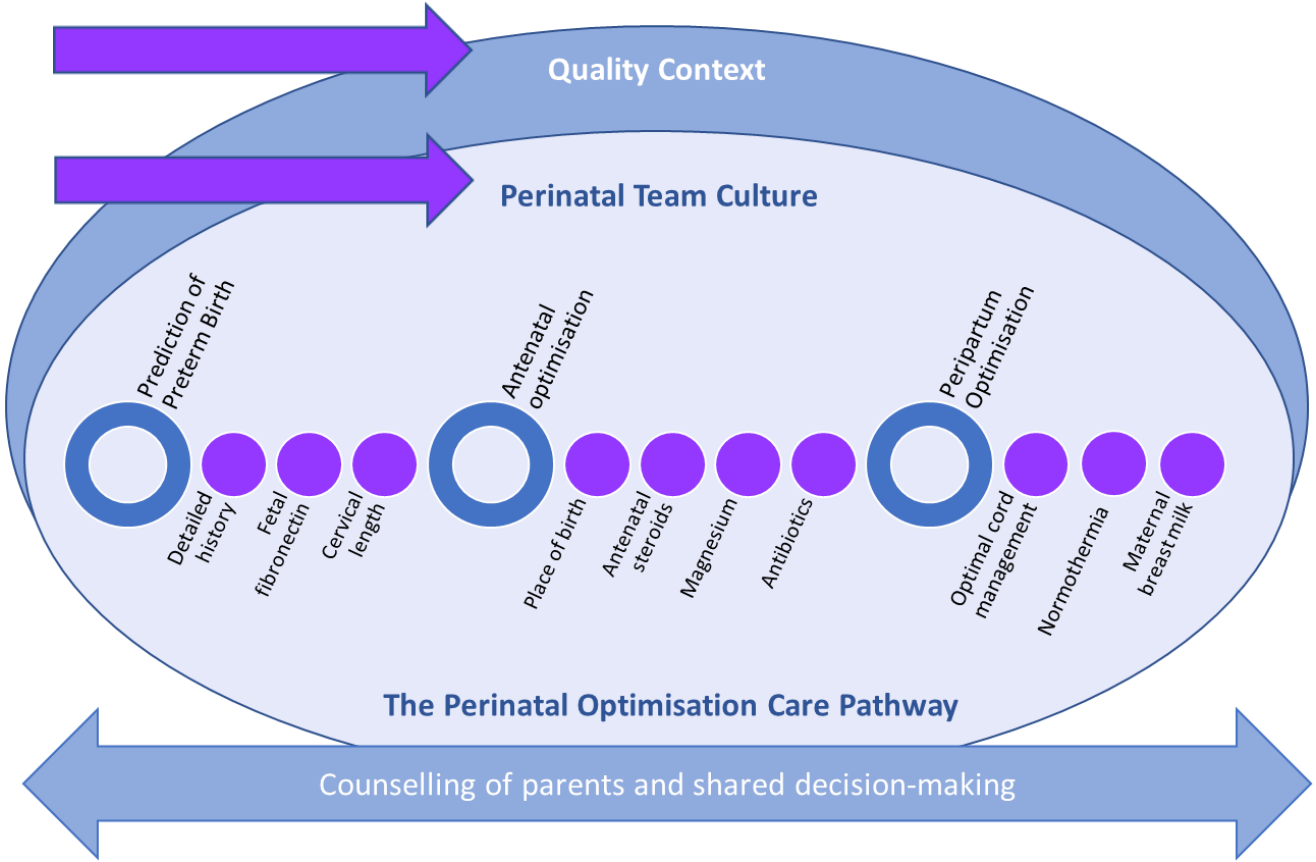
Building Successful Perinatal Optimisation Teams: Improving Team Culture and the Quality Context

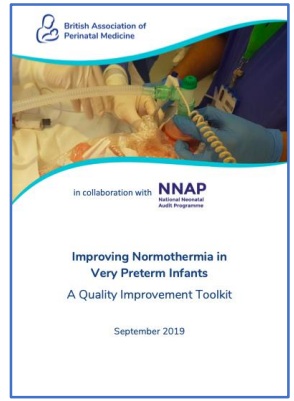
Julie-Clare Becher
Consultant Neonatologist, Royal Infirmary of Edinburgh

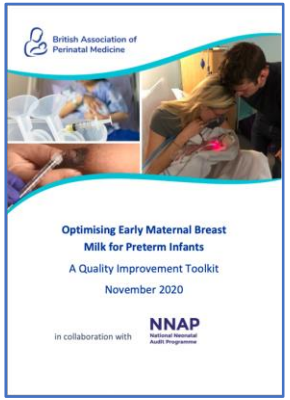
National Patient Safety Improvement Programmes
Maternity and Neonatal

The Perinatal Optimisation Care Pathway







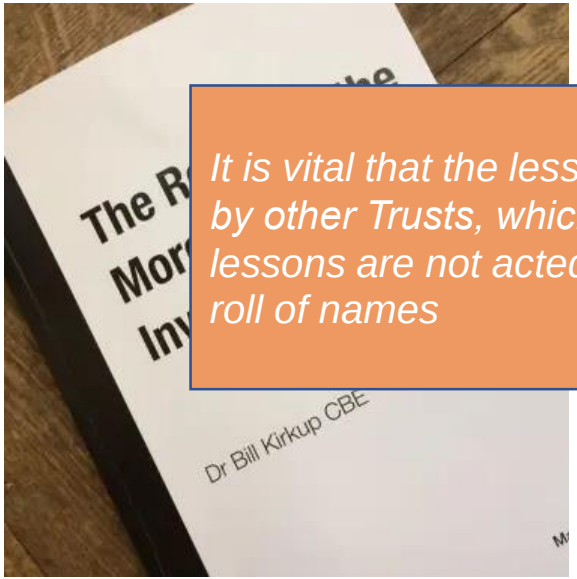


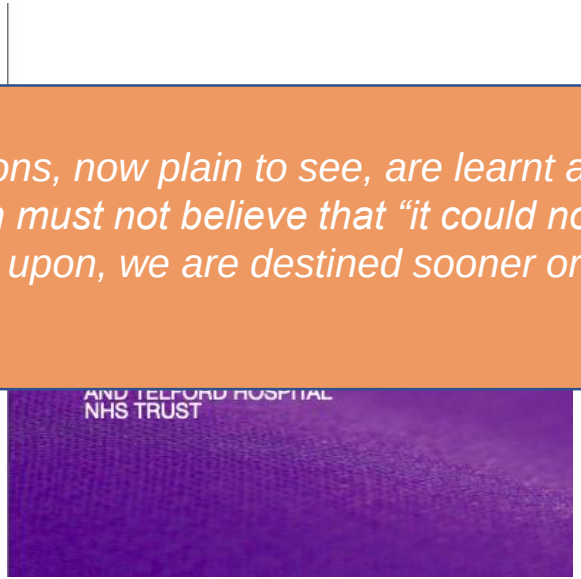
www.bapm.org/pages/104-qi-toolkits

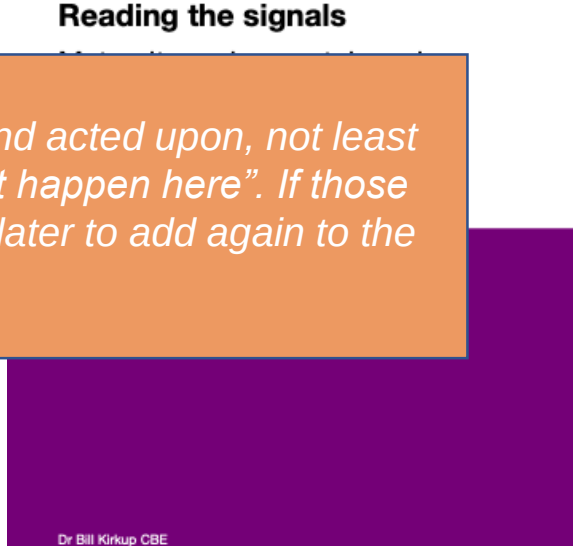
National drivers for improving culture and context

Recommendations

- Listening to patients, being compassionate, ensuring shared decision-making
- Improving standard of investigations with implementation of action plans
- Establishing clinical leadership and leadership in patient safety and quality
- Multidisciplinary training across teams and sites and within networks
- Fostering skill in managing complexity, care pathways, risk assessment
- Optimising teamworking: silo working, tribalism and poor behaviours

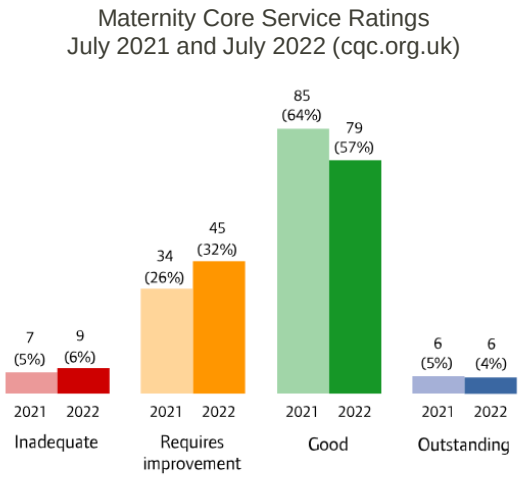






It is vital that the lessons, now plain to see, are learnt and acted upon, not least by other Trusts, which must not believe that "it could not happen here". If those lessons are not acted upon, we are destined sooner or later to add again to the roll of names

National drivers for improving culture and context



Culture

'the way *people think* around here'

'the way *things are done* around here'

intangible

nebulous

complex

deeply ingrained

multi-level

slow to change

hard to change

Perinatal Optimisation Culture

Multiple inter-related sub-teams

Care of woman and baby

Prolonged episodes of care

Complex care pathways

Different departmental locations

Different geographical locations

Deferred cord clamping

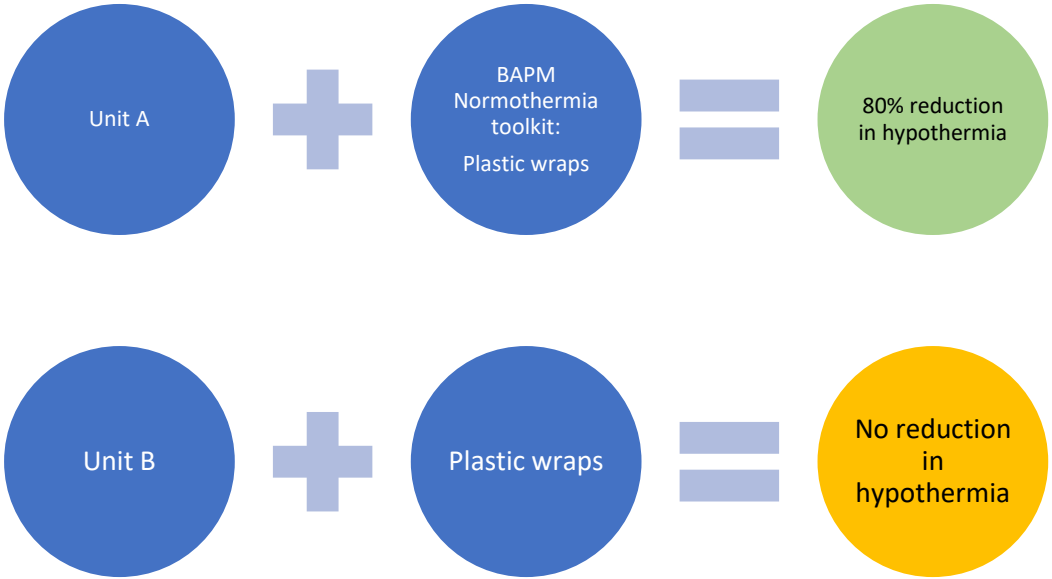
Not about the kit…..

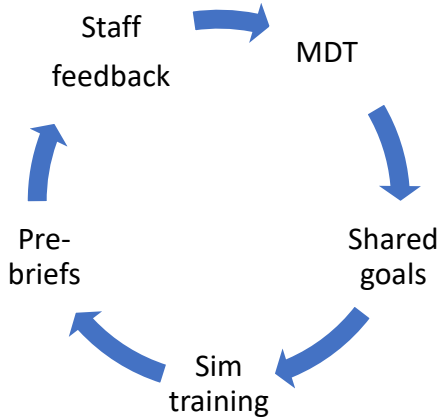
It’s about the culture

- Working together and alongside each other
- Supporting our colleagues
- Having shared goals and developing pathways
- Understanding of all optimisation interventions
- Looking at data together and celebrating success

Quality Context: ‘readiness for change’

Admission Hypothermia:



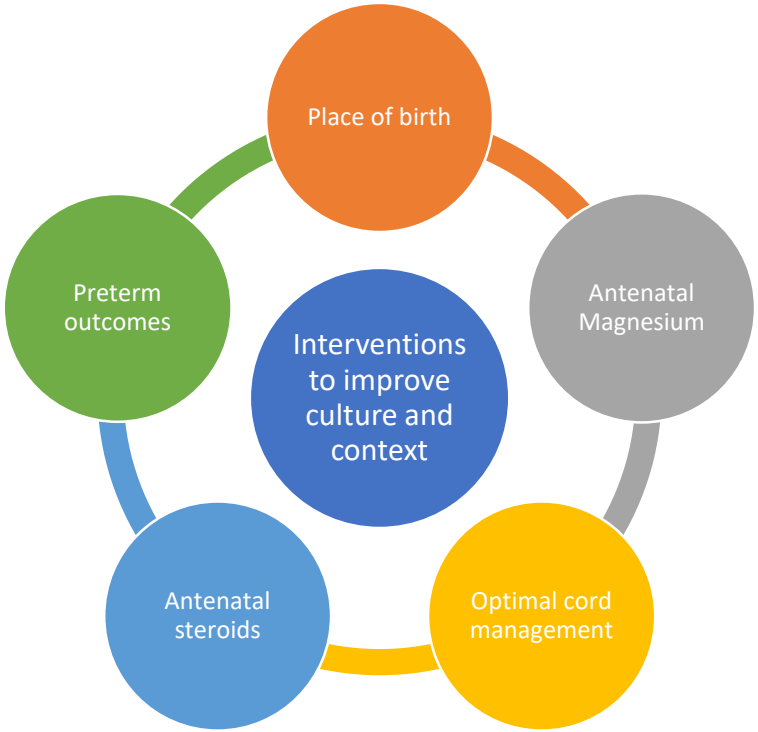


- 3 month junior neonatal doctor project
- Led by a consultant with no QI training
- In a labour ward undergoing a refurb

Culture and/or Context?

Good culture without quality context	Quality context without good culture
• Good teamworking without training in QI • Enthusiasm for change but without data • Risk reviews underway but unsupported with allocated job plan time • Perinatal otpimisation guidelines in all sites but they differ across network	• Risk review meetings which focus on blame • Safety huddles without psychological safety • Perinatal mortality meetings with poor attendance and punctuality • Quality Leads who are out of touch with frontline pressures • Simulation programmes for medics only

Context and culture: what is the evidence in Perinatal Optimisation?



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Building Successful Perinatal Optimisation Teams: Improving Team Culture and the Quality Context

- Resource to support the BAPM/NNAP Perinatal Optimisation toolkits
- Collaboration with MatNeoSIP
- Representation from:
  - Parents
  - Members of the wider perinatal team including all levels of unit, transport, anaesthetists, trainees (those who are involved in perinatal optimisation only)
  - HSIB, NTG, PERIPrem

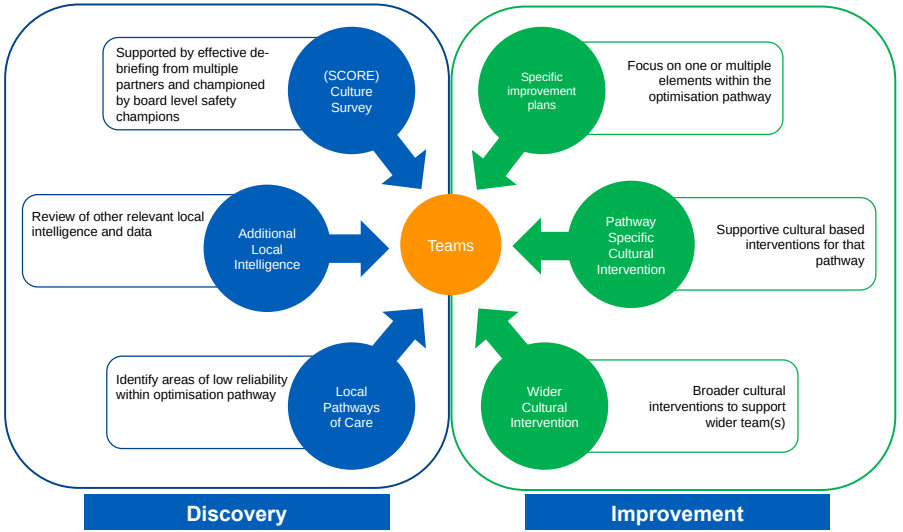
British Association of Perinatal Medicine

National Patient Safety Improvement Programmes
Maternity and Neonatal

Building Successful Perinatal Optimisation Teams: Improving Team Culture and the Quality Context

- Section 1: Assessing your context and culture:

  - ❖Staff culture surveys (SCORE)
  - ❖Parent and family feedback and surveys
  - ❖Trainee surveys and feedback
  - ❖Performance in Perinatal Optimisation
  - ❖External reviews
  - ❖Miscellaneous mechanisms
    - Local audit
    - SAE themes
    - Recruitment/retention
    - Staff feedback boards and questionnaires



Building Successful Perinatal Optimisation Teams: Improving Team Culture and the Quality Context

Section 2: Implementing improvements

- Improving effective leadership in Perinatal Optimisation
- Safe and person-centred pathways of care
- Effective teamworking, shared goals and positive communication
- Effective and continuous learning from episodes of error, excellence and near miss
- Engagement in audit, benchmarking and research
- Establishing capability and capacity for quality improvement

Building Successful Perinatal Optimisation Teams: Improving Team Culture and the Quality Context

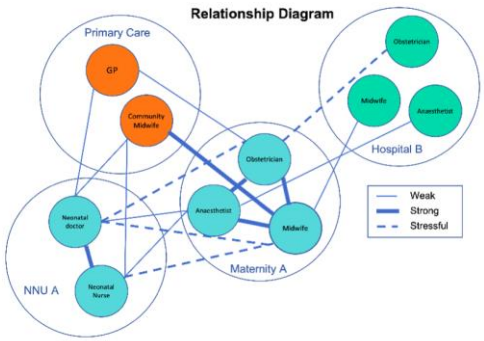
Section 2: Implementing improvements

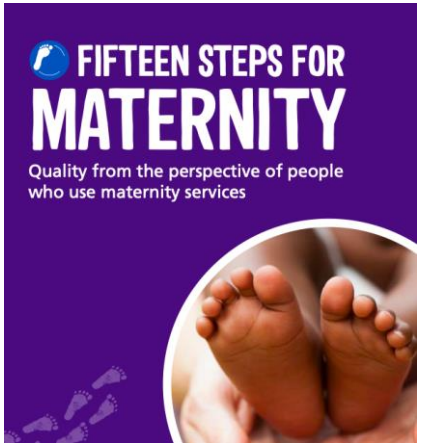
Activities

Solutions

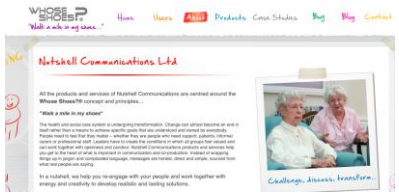
Improvement stories

Activities





Building a psychologically safe workplace | Amy Edmondson | TEDxHGSE



When rudeness in teams turns deadly | Chris Turner | TEDxExeter

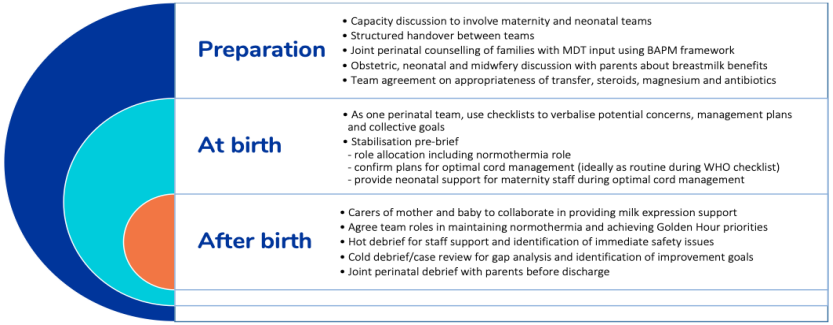
Understanding Person-Centred Care

Consider the following clinical situation and the role of the individual members of the perinatal team in her care:

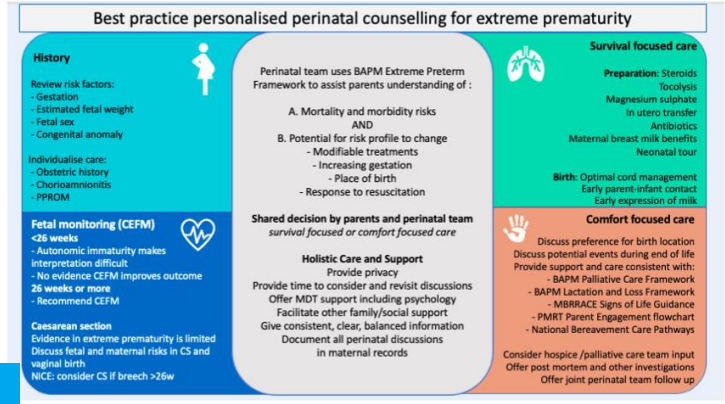
Ruth is 43 years of age, in her third pregnancy and presents to maternity triage at 23+2 weeks gestation with preterm ruptured membranes. This is an IVF pregnancy and Ruth has experienced two miscarriages previously. The baby is breech presentation on ultrasound.

a. What should the individual members of the perinatal team communicate to Ruth about perinatal outcomes, optimisation, and planning for birth?
b. How might Ruth's individual circumstances influence her priorities and the interventions considered?
c. How can person-centred care be facilitated in this case, and across the perinatal pathway?

Fostering shared goals in preterm birth



Developing a perinatal team approach to counselling



A model to enhance trust engagement:

Local Maternity and Neonatal Systems (LMNS)

- Both Maternity and Neonatal systems established in every board (NHS England)

Trust Safety Champions

- To meet regularly with clinical teams to understand Perinatal Optimisation priorities
- To meet regularly with Trust board to escalate locally identified issues (NHS England)

Trust Perinatal Quality Surveillance Model

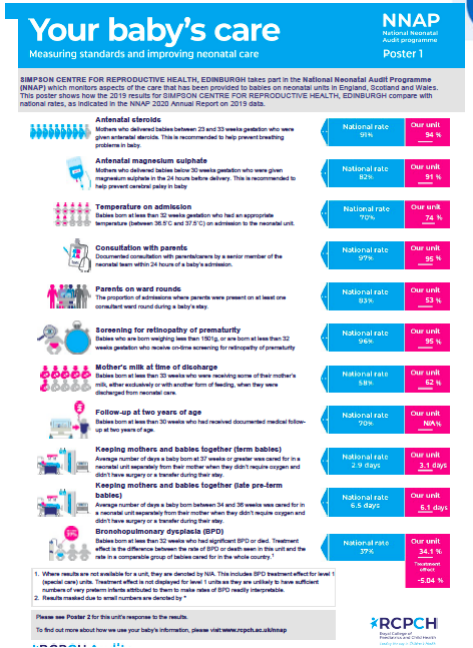
- Ensure the PQSM includes Perinatal Optimisation outcomes (NHS England)
- Raise awareness to the Trust board of the importance of high quality perinatal services in relation to long term outcomes

Board reviews

- Ensure Perinatal Optimisation is on the agenda at the monthly board review of perinatal safety and quality and the LMNS surveillance group (NHS England)

Raise awareness

- Highlight national programmes, toolkits, guidance to Trust boards
  - Encourage Trust board representation at SPSP-MCQIC learning events (NHS Scotland)
  - Engage managers in understanding what is needed to secure financial incentives where Perinatal Optimisation compliance is achieved ie MIS 6-10 (CNST, NHS England)



Appendix 3

Best practice principles for multidisciplinary perinatal team meetings

Appendix 4

Perinatal Optimisation Guidelines

Solutions

Building Successful Perinatal Optimisation Teams: Your Improvement Stories

Improvement Story One
Improving culture through effective clinical leadership

Improvement Story Two
Improving Trust board level support through a Perinatal Safety Champions Team

Improvement Story Three
Establishing shared goals and mental models

Improvement Story Four
Optimising Preterm Labour & Delivery – 'everyone's business'

Improvement Story Five
Obstetric Neonatal Interest Teaching (ONIT)

Improvement Story Six
MDT simulation for improving team performance in optimal cord management

Improvement Story Seven
Improving team culture for junior members of the team

Improvement Story Eight
Neonatal Nurse Shadowing Programme (NNSP)

Improvement Story Nine
Shared Network Learning about Place of Birth

Improvement Story Ten
A novel solution to secure staff engagement in improvement

Improvement Story Eleven
Using optimisation data for improvement

Improvement Story Twelve
Person-centred care in Perinatal Optimisation

Building Successful Perinatal Optimisation Teams

Publication due December 2022

www.bapm.org/quality

Perinatal Optimisation: PERIPrem Project

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Consultant Obstetrician
PERIPrem
Royal Devon University Healthcare
NHS Foundation Trust

Aless Glover

Neonatal QI Fellow
PERIPrem

Perinatal Optimisation

An Obstetricians view

Perinatal Excellence in Reducing Injury in Premature birth:

a bundle of perinatal interventions that will contribute to a reduction in brain injury and neonatal mortality across the South West of England by optimising;

Supporting compliance with the complete bundle for all eligible mothers and their babies born at less than 34 weeks gestation to improve the optimisation and stabilisation of the very preterm infant

Place of Birth

Babies delivered at less than 27 weeks or with an expected birth weight of under 800 grams (less than 28 weeks for multiple births) should be born in a maternity service on the same site as a designated NICU.

[Ref: 1,2,3,4,]

Antenatal Steroids

Mothers who give birth at less than 34 weeks gestational age should receive the correctly timed, full course of antenatal steroids.

[Ref: 2,4,5,6]

Antenatal Magnesium Sulphate

Mothers who give birth at less than 30 weeks gestational age should receive antenatal Magnesium Sulphate.

[Ref: 2,4,5,6]

Intrapartum Antibiotic Prophylaxis

95% of women in established preterm labour (less than 34 weeks gestation) to receive Intrapartum Antibiotic Prophylaxis at least 4 hours prior to birth.

[Ref: 12]

Optimal Cord Management

Babies born at less than 34 weeks gestational age should have their cord clamped at or after one minute.

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Normothermia

Babies born at less than 34 weeks gestational age should have a temperature on admission which is both between 36.5–37.5°C and measured within one hour of birth.

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MBM feeding at 14 days - Units should monitor (and aim to increase) rates of babies born at less than 34 weeks gestational age receiving MBM at 14 days of age.

[Ref: 2,8]

Caffeine

Babies should be started on caffeine as soon as possible (aim within the first 6 hours... NICE says: "starting it as early as possible and ideally before 3 days of age") in all babies:

- Less than 30 weeks gestation (consider 32 - 34 weeks)
- Birth weight less than 1500g

[Ref 9,10]

Probiotics

Babies (less than 32 weeks, less than 1500g birth weight) should be commenced on a multi strain probiotic of choice on the first day of life.

[Ref 11]

Volume Guarantee (VG) or Volume Targeted Ventilation (VTV)

For babies who need invasive ventilation, use volume-targeted ventilation (VTV) in combination with synchronised ventilation as the primary mode of respiratory support.

[Ref 10]

Prophylactic Hydrocortisone

Babies born <28 weeks gestation should receive prophylactic hydrocortisone from day 0 of life.

[Ref 10]

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Prophylactic Hydrocortisone

Babies born <28 weeks gestation should receive prophylactic hydrocortisone from day 0 of life.

[Ref 10]

Perinatal Excellence in Reducing Injury in Premature birth:

a bundle of perinatal interventions that will contribute to a reduction in brain injury and neonatal mortality across the South West of England by optimising;

Supporting compliance with the complete bundle for all eligible mothers and their babies born at less than 34 weeks gestation to improve the optimisation and stabilisation of the very preterm infant

Place of Birth

Babies delivered at less than 27 weeks or with an expected birth weight of under 800 grams (less than 28 weeks for multiple births) should be born in a maternity service on the same site as a designated NICU.

[Ref: 1,2,3,4,]

Antenatal Steroids

Mothers who give birth at less than 34 weeks gestational age should receive the correctly timed, full course of antenatal steroids.

[Ref: 2,4,5,6]

Antenatal Magnesium Sulphate

Mothers who give birth at less than 30 weeks gestational age should receive antenatal Magnesium Sulphate.

[Ref: 2,4,5,6]

Intrapartum Antibiotic Prophylaxis

95% of women in established preterm labour (less than 34 weeks gestation) to receive Intrapartum Antibiotic Prophylaxis at least 4 hours prior to birth.

[Ref: 12]

Optimal Cord Management

Babies born at less than 34 weeks gestational age should have their cord clamped at or after one minute.

[Ref: 2,4,7]

Normothermia

Babies born at less than 34 weeks gestational age should have a temperature on admission which is both between 36.5–37.5°C and measured within one hour of birth.

[Ref: 2,4]

Early Maternal Breast Milk (MBM)

Babies born at less than 34 weeks gestational age should receive MBM within 6 hours of birth.

Units should monitor (and aim to increase) rates of first MBM within 6 hours of birth for babies born at less than 34 weeks gestational age.

MBM feeding at 14 days - Units should monitor (and aim to increase) rates of babies born at less than 34 weeks gestational age receiving MBM at 14 days of age.

[Ref: 2,8]

Caffeine

Babies should be started on caffeine as soon as possible (aim within the first 6 hours.... NICE says: "starting it as early as possible and ideally before 3 days of age") in all babies:

- Less than 30 weeks gestation (consider 32 - 34 weeks)
- Birth weight less than 1500g

Probiotics

Babies (less than 32 weeks, less than 1500g birth weight) should be commenced on a multi strain probiotic of choice on the first day of life.

[Ref 11]

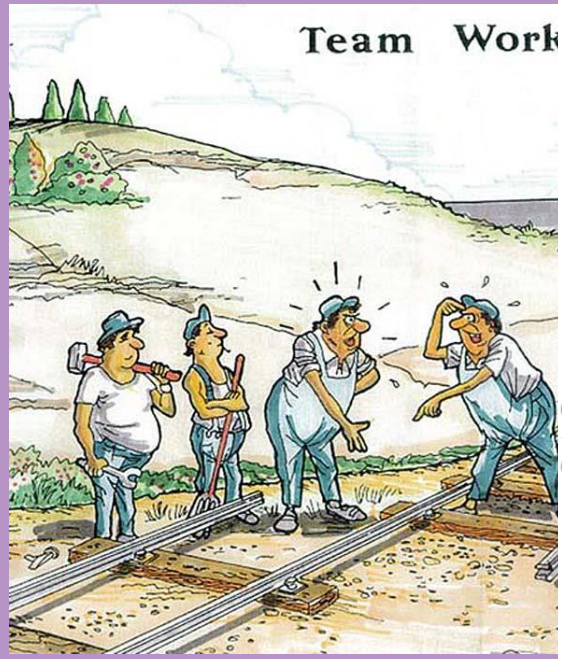
Volume Guarantee (VG) or Volume Targeted Ventilation (VTV)

For babies who need invasive ventilation, use volume-targeted ventilation (VTV) in combination with synchronised ventilation as the primary mode of respiratory support.

Prophylactic Hydrocortisone

Babies born <28 weeks gestation should receive prophylactic hydrocortisone from day 0 of life.

[Ref 10]



THEME FROM "THE A-TEAM"

Words and Music by
MIKE POST and PETE CARPENTER

March ♩ = 120

N.C.

mf

F B♭ C F

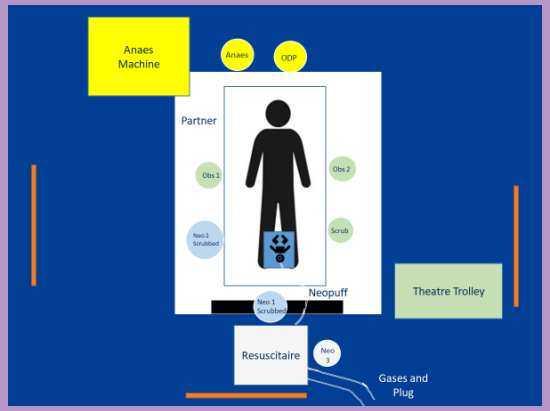
f

E♭ B♭ C F Gm F/A

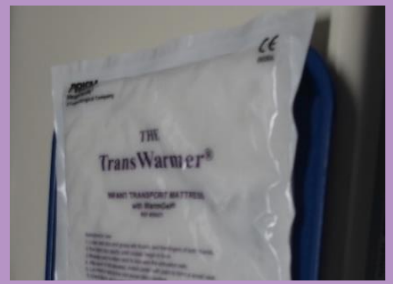
In 2019 < 50 % of our <34 week babies received OCM

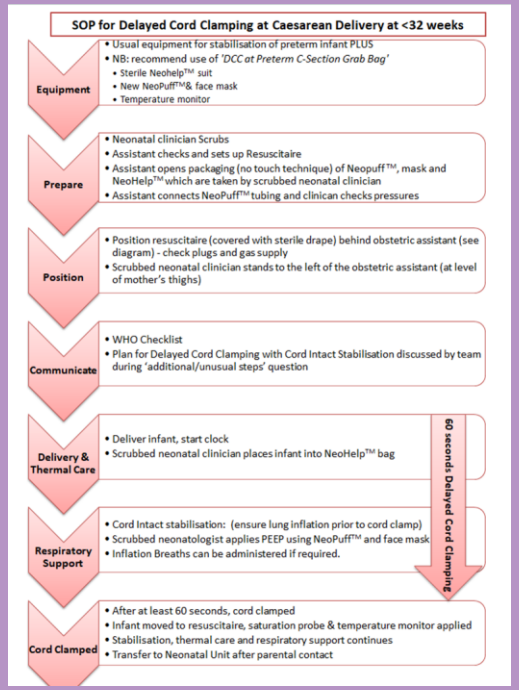

BE ENTHUSIASTIC AS A LEADER. YOU CAN'T LIGHT A FIRE WITH A WET MATCH.


Anaesthetic Team
Theatre Team
Neonatal Team
Parents
Obstetric & Midwifery Team


Anaes Machine
Anaes
ODP
Partner
Obs 1
Obs 2
Neo2 Scrubbed
Scrub
Neopuff
Neo 1 Scrubbed
Theatre Trolley
Resuscitaire
Neo 3
Gases and Plug


OPTIMAL CORD MANAGEMENT
FOR ALL PRETERM INFANTS BORN <34 WEEKS
EFFECTS OF OPTIMAL CORD MANAGEMENT (OCM)
decreased mortality by nearly a third for preterm infants
Number of infants =<28 weeks that need to get OCM to save a life is 20
Fogarty 2018
Careful execution of OCM is essential to maintain neonatal wellbeing. Consider the below:
Perinatal Team Simulation
How to stabilise the infant during OCM
Establish supply of sterile resuscitation equipment
Thermoregulatory care e.g. use a sterile plastic bag
OCM is safe for multiple pregnancies
Jegatheesan et al 2018
Potential contraindications: Haemorrhage, Twin-to-Twin-Transfusion
OCM MULTI DISCIPLINARY TEAM


TransWarmer


SOP for Delayed Cord Clamping at Caesarean Delivery at <32 weeks
Equipment
• Usual equipment for stabilisation of preterm infant PLUS
• NB: recommend use of 'DCC at Preterm C-Section Grab Bag'
• Sterile Neohelp™ suit
• New NeoPuff™& face mask
• Temperature monitor
Prepare
• Neonatal clinician Scrubs
• Assistant checks and sets up Resuscitaire
• Assistant opens packaging (no touch technique) of Neopuff™, mask and NeoHelp™ which are taken by scrubbed neonatal clinician
• Assistant connects NeoPuff™ tubing and clinican checks pressures
Position
• Position resuscitaire (covered with sterile drape) behind obstetric assistant (see diagram) - check plugs and gas supply
• Scrubbed neonatal clinician stands to the left of the obstetric assistant (at level of mother's thighs)
Communicate
• WHO Checklist
• Plan for Delayed Cord Clamping with Cord Intact Stabilisation discussed by team during 'additional/unusual steps' question
Delivery & Thermal Care
• Deliver infant, start clock
• Scrubbed neonatal clinician places infant into NeoHelp™ bag
Respiratory Support
• Cord Intact stabilisation: (ensure lung inflation prior to cord clamp)
• Scrubbed neonatologist applies PEEP using NeoPuff™ and face mask
• Inflation Breaths can be administered if required.
60 seconds: Delayed Cord Clamping
Cord Clamped
• After at least 60 seconds, cord clamped
• Infant moved to resuscitaire, saturation probe & temperature monitor applied
• Stabilisation, thermal care and respiratory support continues
• Transfer to Neonatal Unit after parental contact

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

5-11 Theobalds Road
London
WC1X 8SH
-
Phone: 020 7092 6000
Fax: 020 7092 6001
-

Eligible babies	With data entered	Immediate (<60 seconds) (%)	**Deferred (60 seconds and longer) (%)**	Missing (%)
25	25	1 (4%)	**24 (96%)**	0 (0%)

The result of interest for this measure is 96%. The average result for England and Wales was 43%.

PERIPrem

Perinatal Excellence to Reduce Injury in Preterm Birth

1st December 2022

A multidisciplinary approach to building perinatal teams

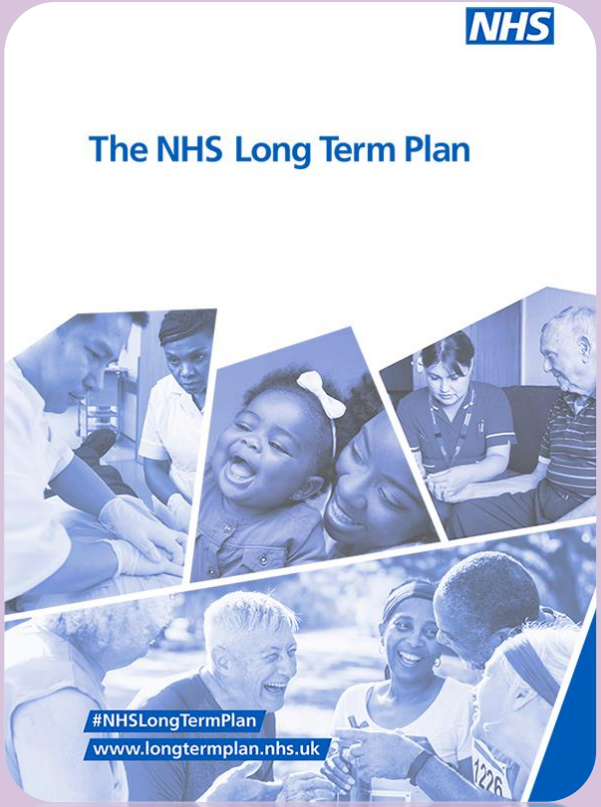
- Understand the **concept** of the perinatal team.
- Appreciate the **importance** of multidisciplinary collaboration.
- Hear from a high-quality perinatal team (case study).

A multidisciplinary approach to building perinatal teams

- **Why, What** and **How** of PERIPrem: - Parental co-design
  - Resources
  - Barriers and Enablers
- **Added value** of team working

Why

Reduce newborn brain injury and death by 25% by 2020, and 50% by 2025



What

Professor Karen Luyt

Clinical-academic neonatologist and Strategic Clinical Lead for PERIPrem

South West Academic Health Science Network

West of England Academic Health Science Network

Dr Sarah Bates

Neonatal Operational Clinical Lead, PERIPrem, Great Western Hospital NHS Foundation Trust

NICU

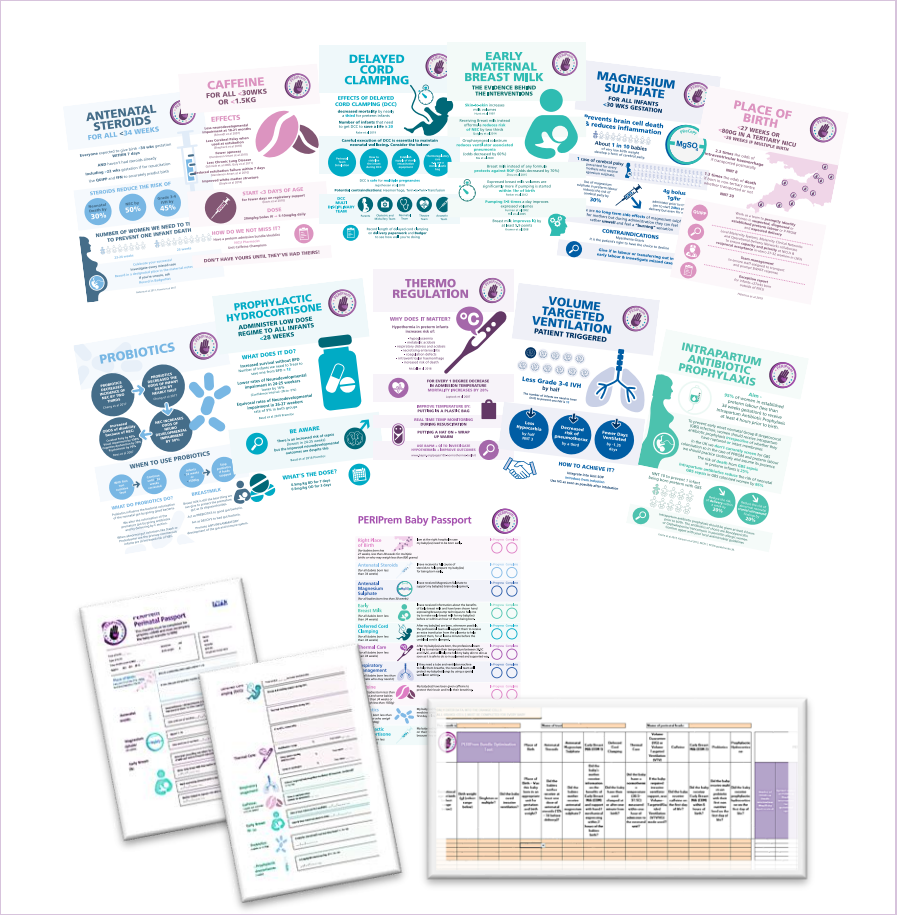
LNU

South West Network

(8% of Births in England)

How

- Parental **codesign.**
- **Multi-disciplinary** team inclusion from design stages
- Cohesive approach with shared **resources.**
- **Funded** £4500 or 90 hours each over the 9-month project implementation phase for two PERIPrem Leads per hospital (a midwife and neonatal nurse).



SOUTH WEST NEONATAL NETWORK

South West Academic Health Science Network

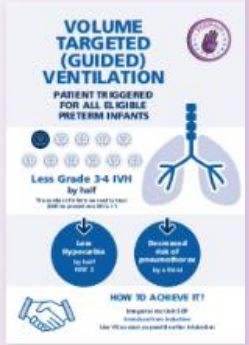
West of England Academic Health Science Network

PERIPrem

Perinatal Excellence to Reduce Injury in Premature Birth

"The evidence base suggests that if all of these interventions in the care bundle are successfully implemented we can potentially reduce brain injury by 50%"

(Dr Karen Luyt, West of England AHSN)



ENDORSED BY THE NNA | ENDORSED BY THE NNA | ENDORSED BY THE NNA

PERIPrem Baby Passport

Right Place of Birth *(for babies born less 27 weeks, less than 28 weeks for multiple births or who may weigh less than 800 grams)*		I am at the right hospital in case my baby(ies) need to be born early.	In Progress ○ Complete ○
Antenatal Steroids *(for all babies born less than 34 weeks)*		I have received a full course of steroids to help prepare my baby(ies) for being born early.	In Progress ○ Complete ○
Antenatal Magnesium Sulphate *(for all babies born less than 30 weeks)*		I have received Magnesium Sulphate to support my baby(ies) brain development.	In Progress ○ Complete ○
Early Breast Milk *(for all babies born less than 34 weeks)*		I have received information about the benefits of Early breast milk and have been shown hand expressing/breast pump techniques to help me try to make early breast milk for my baby(ies) before or within an hour of them being born.	In Progress ○ Complete ○
Deferred Cord Clamping *(for all babies born less than 34 weeks)*		After my baby(ies) are born, whenever possible, the professional team will support them to receive an extra transfusion from the placenta to help protect them, for at least a minute before the umbilical cord is clamped.	In Progress ○ Complete ○
Thermal Care *(for all babies born less than 34 weeks)*		After my baby(ies) are born, the professional team will try to maintain their temperature between 36.5C and 37.5C, and will help me hold my baby skin to skin as soon as it is safe to do so in a planned and supported way.	In Progress ○ Complete ○
Respiratory Management *(for all babies born less than 34 weeks who may need it)*		If they need a tube and ventilator machine to help them breathe, the neonatal team will protect my baby(ies) lungs by using a special ventilator setting.	In Progress ○ Complete ○
Caffeine *(for all babies born less than 30 weeks and some babies born less than 34 weeks or who weigh less than 1500g)*		My baby(ies) have been given caffeine to protect their brain and help their breathing.	In Progress ○ Complete ○
Probiotics *(for babies born less than 32 weeks, or who weigh less than 1500g)*		My baby(ies) have been given probiotic medicine with friendly bacteria in on their first day of life to help protect their gut.	In Progress ○ Complete ○
Prophylactic Hydrocortisone *(for babies born less than 28 weeks)*		My baby(ies) have been given hydrocortisone on their first day of life to help their lungs because they were born very early.	In Progress ○ Complete ○

Evaluation

- Rate of intervention delivery.

- To understand the **barriers and enablers** associated with the PERIPrem approach upon the implementation of a multiple-element standardised bundle through qualitative interviews.

- To establish **the impact of the PERIPrem approach** upon perinatal staff knowledge, skills and confidence in **QI methodology, psychological safety** and **teamwork.**

Evaluation

Quality improvement report

Perinatal excellence to reduce injury in preterm birth (PERIPrem) through quality improvement

Alessandra Glover Williams [1], Sam Tuvey [2], Hayley McBain [2], Noshin Menzies [3], Sally Hedge [4], Sarah Bates [5], Karen Luyt [1, 6]

On behalf of the PERIPrem Steering Group

Correspondence to Dr Alessandra Glover Williams ; alessandra.glover1@nhs.net

What we found

By the end of the implementation phase (July 2020-June 2021):

- Improvements (between 8 and 63%) in the delivery of 10 of the 11 interventions: place of birth, antenatal steroids, optimal cord management, thermoregulation, caffeine, early breast milk, probiotics, prophylactic hydrocortisone.
- Significantly more women and babies (from 3 to 29%) were receiving all the interventions they were eligible for.
- Increase (55 to 78%) in the percentage of interventions women and babies were receiving. (See table below.)

Over the implementation phase

- Improvements in ventilation, early breast milk, multi-strain probiotics and prophylactic hydrocortisone, and a steady improvement in optimal place of birth for the most preterm infants.
- Improved team function, situation monitoring and communication within perinatal teams.

Table: Changes in adherence to the interventions from pre- to post-implementation.

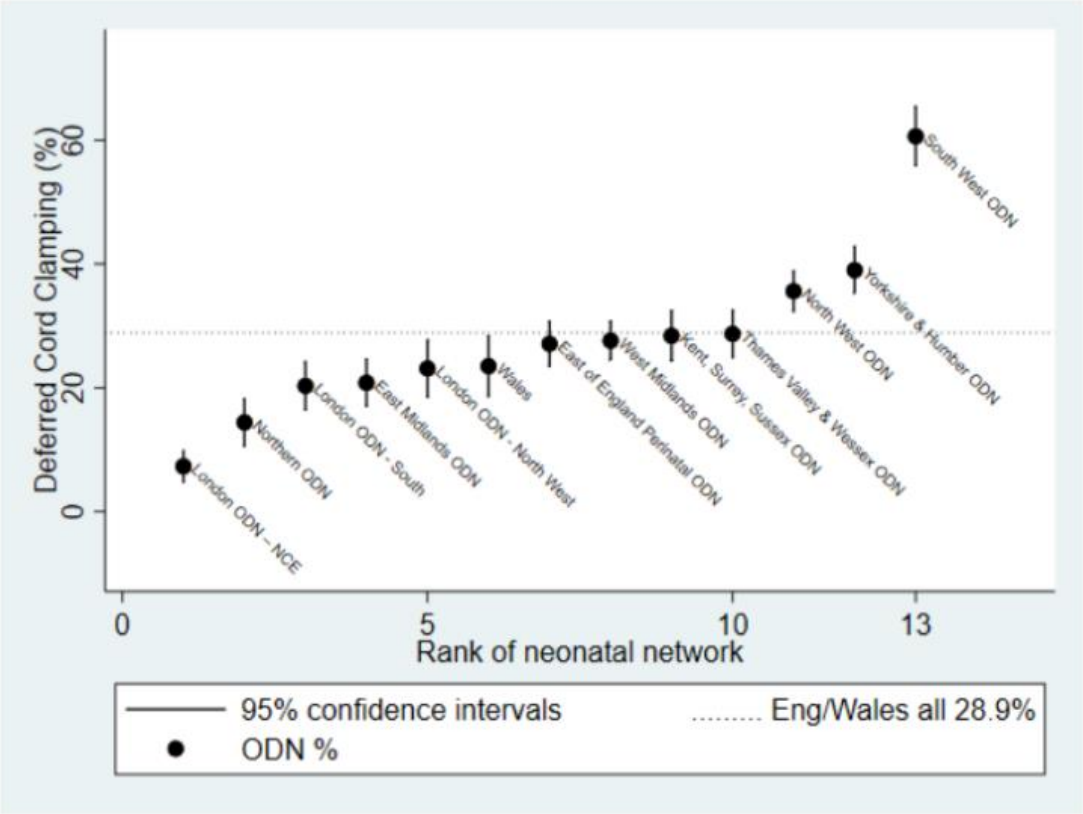
	2019 n (%)	2021 n (%)	Probability [95% CI]	p
Mothers and babies receiving all eligible elements	3 (3%)	35 (29%)	0.96 [0.87 to 0.99]	<0.001*
Place of Birth	7 (44%)	12 (75%)	0.92 [0.60 to 0.99]	0.022*
Antenatal Steroids	68 (57%)	107 (89%)	0.87 [0.73 to 0.94]	<0.001*
Magnesium Sulphate	33 (75%)	32 (86%)	0.62 [0.43 to 0.78]	0.197
Intrapartum Antibiotics	31 (66%)	29 (62%)	0.65 [0.33 to 0.88]	0.351
Optimal Cord Management	63 (60%)	95 (79%)	0.73 [0.60 to 0.83]	0.002*
Thermoregulation	89 (74%)	98 (82%)	0.63 [0.53 to 0.72]	0.010*
Ventilation	41 (87%)	39 (95%)	0.34 [0.01 to 0.97]	0.750
Caffeine	35 (80%)	35 (95%)	0.97 [0.83 to 0.99]	<0.001*
Early Breast Milk	14 (12%)	76 (63%)	0.94 [0.90 to 0.96]	<0.001*
Probiotics	10 (14%)	39 (54%)	0.98 [0.83 to 1.00]	0.002*
Prophylactic Hydrocortisone	4 (24%)	20 (87%)	1.00 [0.99 to 1.00]	<0.001*
	2019 (%)	**2021 (%)**	**Mean Difference (%)**	**p**
% of interventions received by mothers and babies	55%	78%	23.4%	<0.001*

*statistically significant changes p<0.05

- Perinatal excellence to reduce injury in preterm birth (PERIPrem) through quality improvement | BMJ Open Quality
- Barriers and Enablers to the Implementation of a Perinatal Care Bundle: The Perinatal Excellence to Reduce Injury in Premature Birth (PERIPrem) Project (preprint)
- PERIPrem case studies were published in April 2022 by NHS Confederation and in July 2022 in the National Child Mortality Database thematic report (pages 21-22). https://www.ncmd.info/publications/newborn-health-mortality/

Figure 19: Caterpillar plot of the proportions of deferred cord clamping, by neonatal network or operational delivery network (ODN).

Network proportions are represented by dots. The 95% confidence intervals for a network are shown by a vertical line with each dot.



NNAP
National Neonatal Audit Programme

PERIPrem

GIRFT
GETTING IT RIGHT FIRST TIME

- “The NHS LTP is to achieve a 50% reduction in stillbirth, maternal mortality, neonatal mortality and serious brain injury by 2025. This is a challenging target and we are currently not on target to achieve this in neonatology.
- The PERIPrem Project, however, has shown what can be done to optimise perinatal care with a structured collaborative QI approach not only across neonatology, maternity and obstetrics but also putting parent empowerment at the heart of this project.
- The team have made all their QI support, guidelines and parent stories widely available for use across the UK.
- In my work as a neonatologist and clinical lead for the Getting It Right First Time programme, I strongly support major improvements in early perinatal care as one of the key ways to reduce neonatal death and significantly reduce brain injury in this population and PERIPrem is an outstanding example of this ambition.”

Evaluation

Barriers

COVID 19

Time

Complexity

Psychological capacity

Hierarchical structures

Resistance to experimentation

Choice of PERIPrem leads: interested and engaged, and not coerced

Each intervention had bespoke barriers & enablers

Evaluation

Enablers

Awareness of & belief in evidence based knowledge

Funding → Time

Toolkit & Checklists

Co-design

Flexible implementation techniques tailored to local systems

Choice of PERIPrem leads

PERIPrem leads created teachable moments in busy clinical environments

Tea Trolley teaching

Development of a joint team identity

Communication

Evaluation

Impact on psychological safety and teamworking

Statistically significant improvement in team function (p=0.021)
Situation monitoring (p=0.029)
Communication within teams (p=0.002) over the implementation phase


PERIPrem
thank you

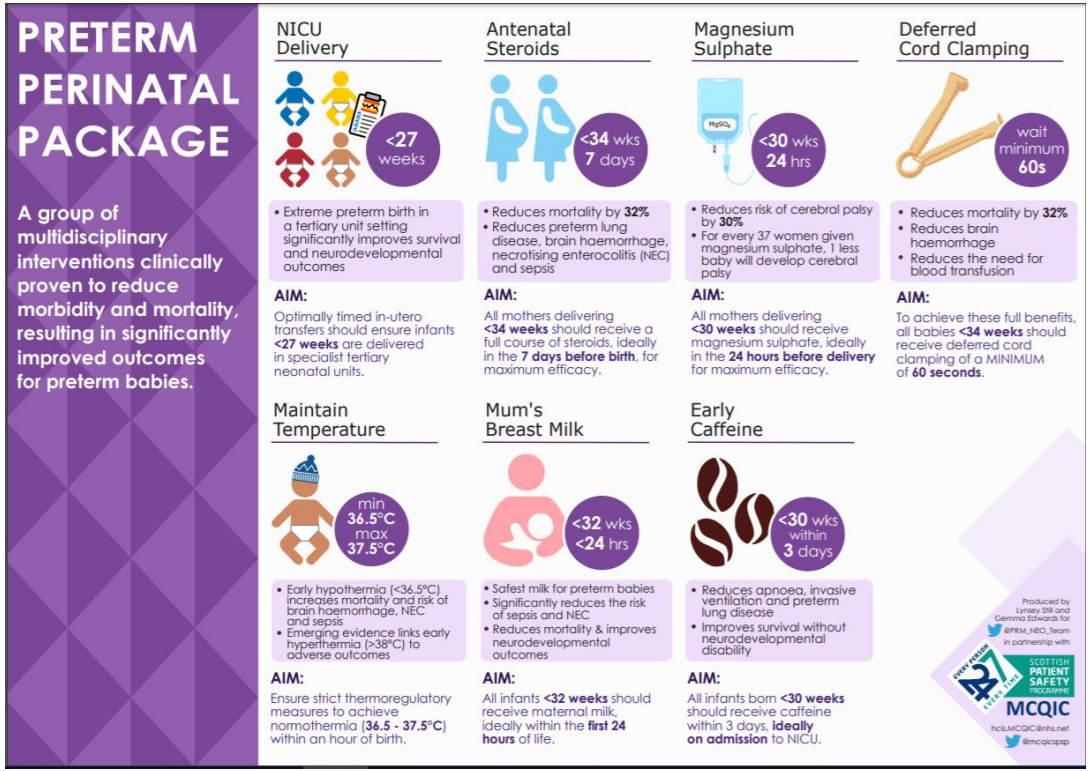
Perinatal optimisation resources

Dr Lynsey Still

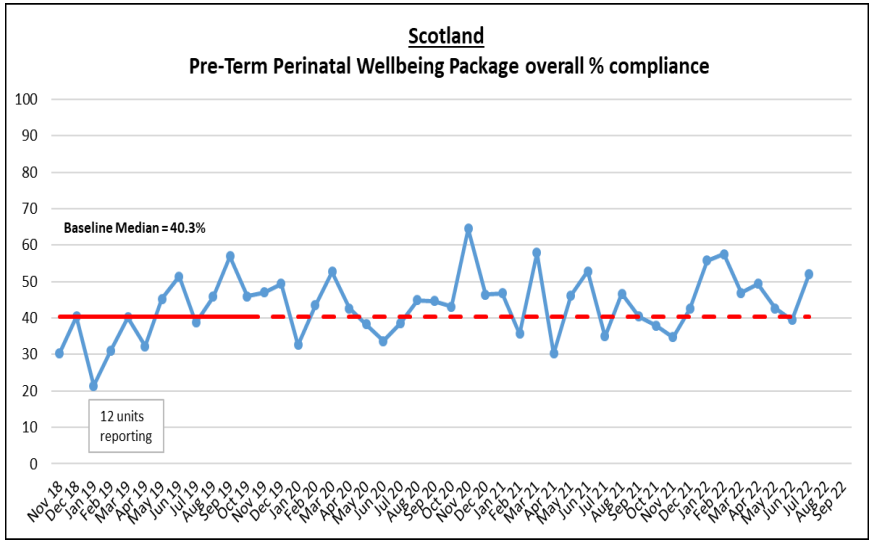
MCQIC Neonatal Clinical Lead

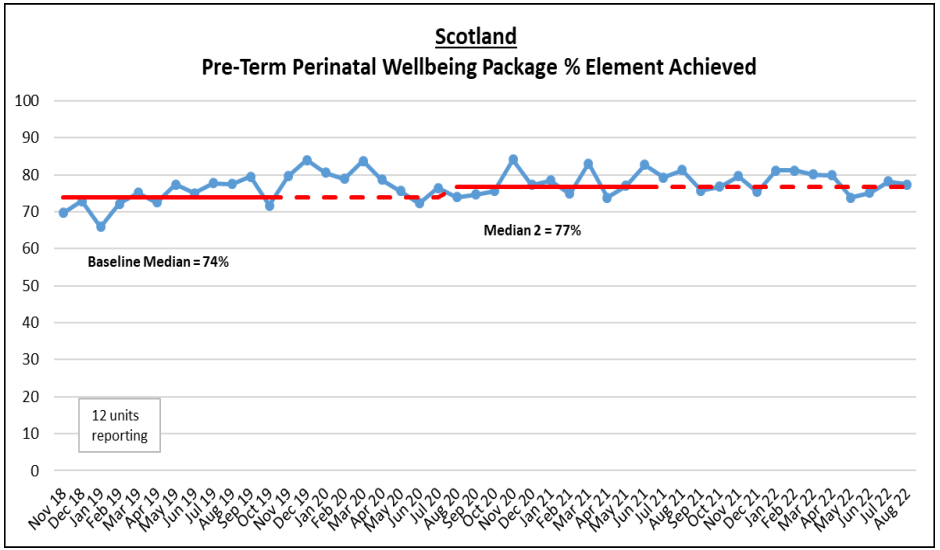
Healthcare Improvement Scotland

Perinatal Optimisation



PPWP – How well are we doing?

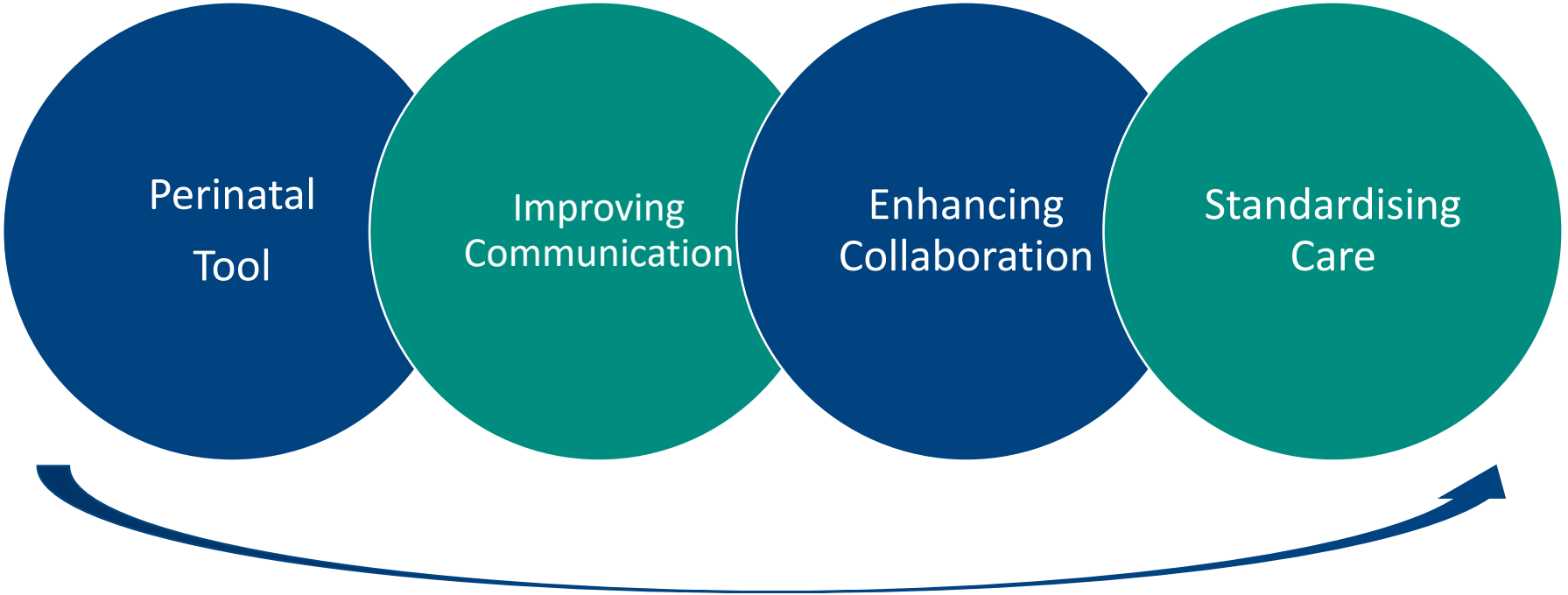




Supporting QI Efforts

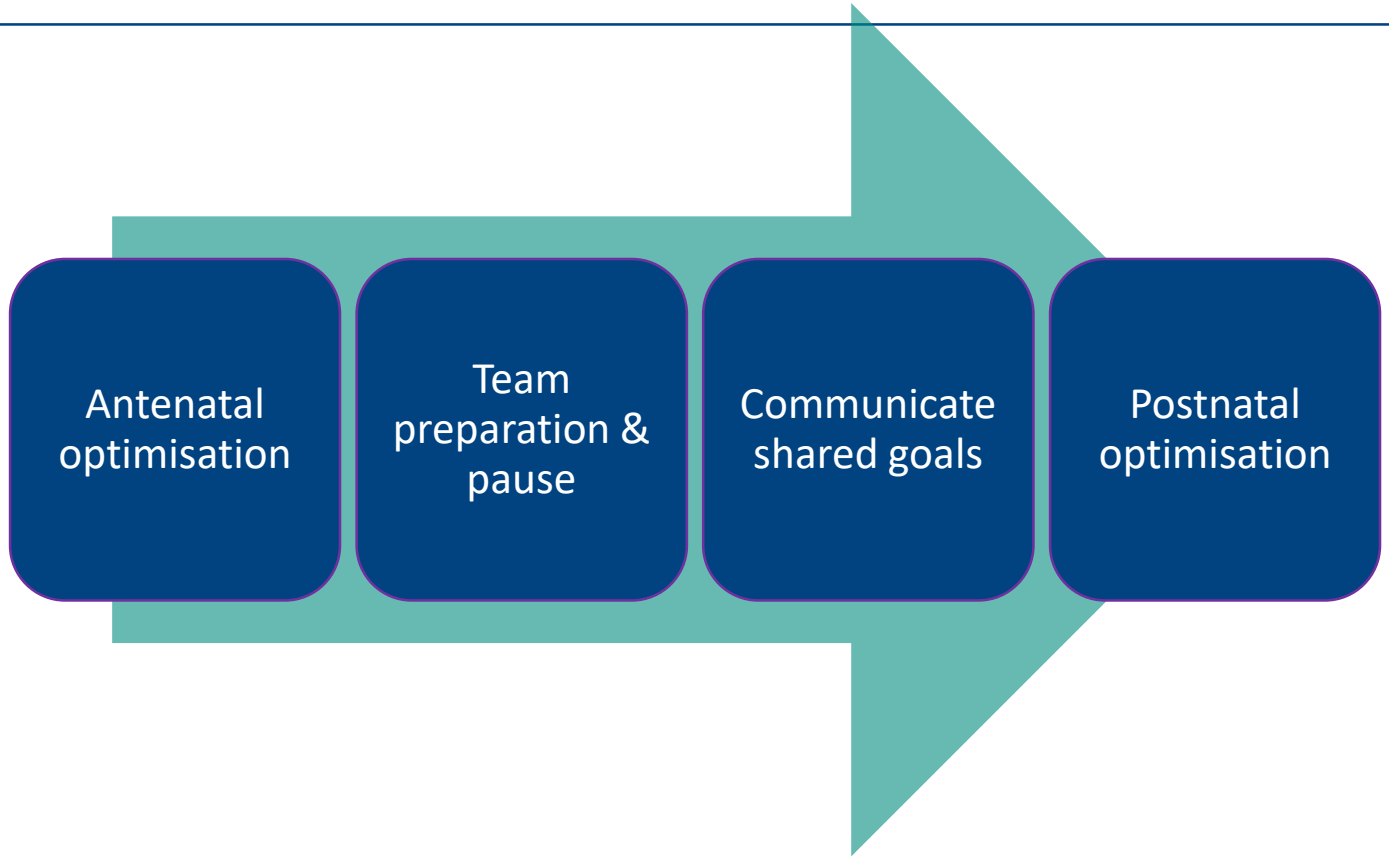
- Evolution of programme - perinatal optimisation will remain key focus
- Need for national tool to support perinatal teams deliver improved perinatal optimisation
- Creation of high quality, consistent and safe clinical care processes, underpinned by the Essentials of Safe Care

Preterm Passport



Every preterm baby receives the best possible care & best chance of survival

Preterm Passport



Healthcare Improvement Scotland

Scottish Patient Safety Programme

Preterm Passport

Perinatal optimisation for babies <34 weeks

MCQIC

The preterm passport supports delivery of all aspects of the perinatal wellbeing package (PPWP) and evidence based interventions proven to significantly improve outcomes in preterm babies.

This passport should be used for all women giving birth <34 weeks.

Maternal details		Baby details	
Name	_____	Gestation	_____+____
CHI	_____	DOB	_____ /____ /_____
Birth type	_____	Time of birth	_____ :_____
GBS status	_____	CHI	_____

Antenatal

Place of birth

All births <27 weeks should occur in a maternity hospital with co-located neonatal intensive care unit.

Achieved: Yes ☐ No ☐ N/A ☐

Reasons if no:

Steroids

All women giving birth <34 weeks should receive 2 doses of steroids within 7 days of delivery.

1st dose ___/____/____ @ ___:___

2nd dose ___/____/____ @ ___:___

Achieved: Yes ☐ No ☐ N/A ☐

Magnesium sulphate

All women giving birth <30 weeks should receive a magnesium sulphate loading dose and 4 hour infusion in the 24 hours before birth.

Loading dose started ___ /___ /____ @ ___:___

Maintenance started ___ /___ /____ @ ___:___

Achieved: Yes ☐ No ☐ N/A ☐

Reasons if no:

Antibiotics

All women in established preterm labour should receive intrapartum antibiotic prophylaxis to prevent GBS infection in newborns.

Achieved: Yes ☐ No ☐ N/A ☐

Reasons if no:

Counselling

All women giving birth <34 weeks should be counselled antenatally, with MDT discussions focused on the importance of breast milk and early expressing.

Achieved: Yes ☐ No ☐ N/A ☐

Reasons if no:

Preparation

NNU
Incubator
Ventilator/CPAP
IV trolley
Drugs
Fluids
Monitoring

Labour ward
Resuscitaire
CPAP
Intubation
Surfactant
Thermal care
Monitoring

Perinatal pause
Allocate roles
Stabilisation plan
Shared Goals:
- DCC
- Gentle transition
- Normothermia

Stabilisation

Deferred cord clamping

All babies should receive a minimum of 60 seconds deferred cord clamping.

Achieved: Yes ☐ No ☐ N/A ☐

Reasons if no:

Contraindications:

No signs of life ☐
Cord integrity ☐
Major placental separation ☐
Twin-to-twin transfusion syndrome ☐

Respiratory

Transition: Gentle lung inflation with PIP 20–25cm
FiO2 <28 weeks 30% FiO2 >28weeks 21–30%

CPAP: >25 weeks gestation aim for CPAP as firstline

Intubation: <25 weeks gestation, or if clinically indicated

Surfactant: Give surfactant if intubated for stabilisation

Temperature

Strict thermal care measures should ensure all babies achieve normothermia (temperature 36.5–37.5°C), within an hour of birth

Temp on admission to NICU _____ °C

Achieved: Yes ☐ No ☐

Reasons if no:

Postnatal

NNU pause

Team pause on admission to NNU to clarify plan and allocation of tasks. Ensure experienced staff perform procedures on the most preterm babies. Aim to minimise handling, maintain normothermia and ensure rapid administration of drugs and fluids.

Access ➡ Bloods and gas ➡ Drugs and fluids ➡ Imaging

Respiratory

CPAP: Maintain non-invasive ventilation where possible.
Non-invasive surfactant administration if required.

Ventilation: Use volume limited lung protective strategy.
Actively wean towards early extubation if >25 weeks.
Avoid hypocarbia, target pCO2 4.5–8.5 kPa.

Caffeine

All babies <30 weeks should be receive caffeine on admission to the NNU

Achieved Yes ☐ No ☐ N/A ☐

Reasons if no:

Maternal breast milk

All mothers should be supported to express within 2 hours of birth.

Achieved: Yes ☐ No ☐ ☐

Reasons if no:

All babies <32 weeks should receive maternal milk within the first 24 hours.

Achieved: Yes ☐ No ☐ N/A ☐

Reasons if no:

Compliant with all elements of PPWP passport Yes ☐ No ☐

Next Steps

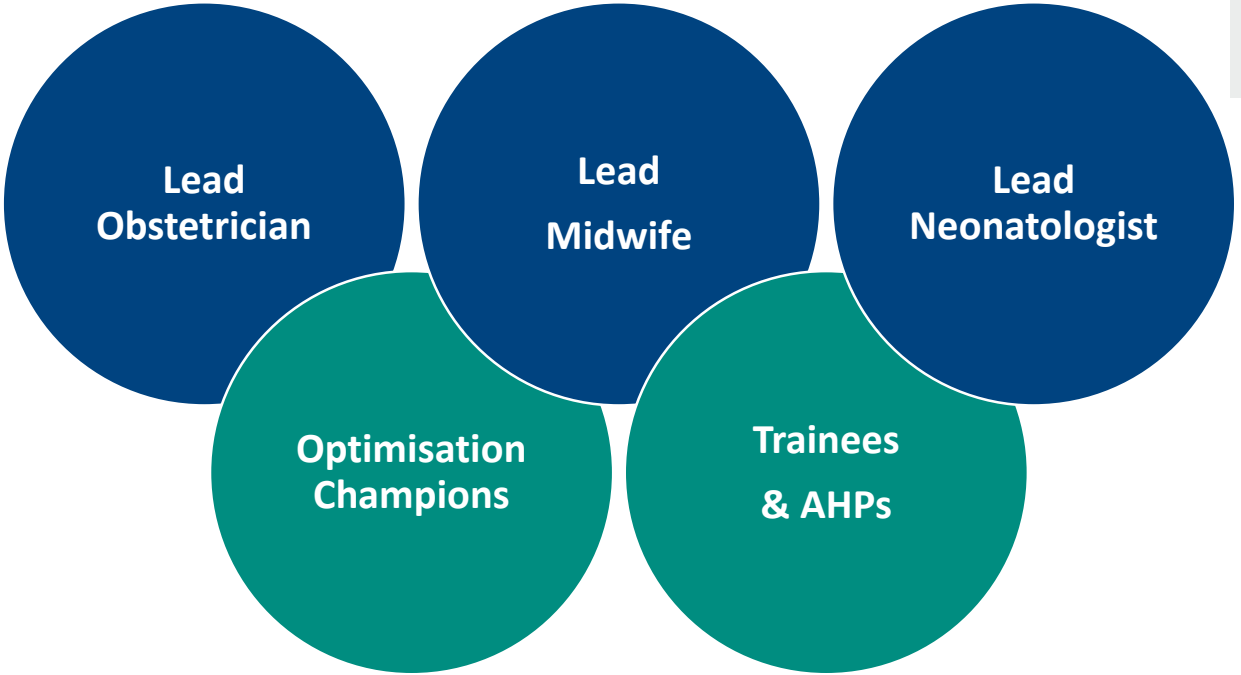
- Final draft to be agreed.
- Early 2023 testing of passport in small number of units.
- Working with data team to develop our toolkits.
- Creation of visual reporting tools to provide instant feedback for teams.

What we will do next

- Continue to promote perinatal collaboration across maternity and neonatal communities.
- Work with you to test the perinatal passport resource.
- Engage with the community to continue developing our improvement offers for the perinatal and paediatric programmes of work.
- Embed the Essentials of Safe Care across all programmes.

Your Next Steps

It's now over to YOU



Key Resources

ihub.scot/spsp

ihub.scot/TheEoSC

@ihubscot #spsp247 #TheEoSC

@mcqicspsp

his.pspcontact@nhs.scot

his.mcqic@nhs.scot

Thank you


EVERY PERSON
EVERY TIME
SCOTTISH
PATIENT
SAFETY
PROGRAMME