



SPSP Perinatal Change Package

Welcome to the perinatal change package

The aim of the perinatal change package is to support teams to reduce neonatal mortality and neonatal morbidity by reducing complications of prematurity and reducing late preterm and unexpected term admissions to NNU. A change package consists of a number of measures supported by activities that, when tested and implemented, bring about improvement. It brings together what is known about best practices and processes based on evidence from literature, research, and the experiences of others.

Why have we developed this change package?

This change package is for perinatal teams participating in neonatal mortality and morbidity improvement work. It will support teams to use quality improvement methods to reduce neonatal mortality and neonatal morbidity by reducing complications of prematurity and reducing late preterm and unexpected term admissions to NNU.

How was it developed?

This change package was co-designed with clinical and quality improvement experts from NHS boards. The clinical experts were from a range of disciplines. Expert Reference Groups (ERG) were convened in June 2023 with representation from across NHS Scotland.

Contents and how to use the package





What is included in this change package?

- Driver diagram
- Change ideas
- Guides, tools and signposts to the supporting evidence and examples of good practice
- Guidance to support measurement

Guidance on using this change package

This change package is a resource to support NHS boards with work to reduce neonatal mortality and neonatal morbidity by reducing complications of prematurity and reducing late preterm and unexpected term admissions to NNU. It is not expected for teams to work simultaneously on all aspects of the driver diagram. It is designed to assist teams in identifying areas for improvement relevant to their local context. The change ideas and measures are not exhaustive, and it is expected that teams will develop their own to support their identified areas for improvement. We would encourage teams to seek support from their local quality improvement teams in the development of additional measures if required.

Using this package

This is an interactive document; clicking on the primary/secondary driver will take you to additional information, including tools and resources relating to that driver. At the top of each page of the secondary drivers, there is an arrow  and home button . The arrow button will take you back to the primary driver page, and the home button will take you to the main Driver Diagram page.

Setting a project aim

All quality improvement projects should have an aim that is **S**pecific, **T**ime bound, **A**ligned to the NHS board's objectives and **N**umeric (STAN).

The national aim for SPSP Perinatal is:

**Reduce
Neonatal Mortality
and
Neonatal Morbidity by:**

- *Reducing complications of prematurity*
- *Reducing late preterm and unexpected term admissions to NNU*

*By [locally agreed aim]
By 31st March 2025*

**Reduce
Neonatal Mortality
and**

Neonatal Morbidity by:

- *Reducing complications of prematurity*
- *Reducing late preterm and unexpected term admissions to NNU*

*By [locally agreed aim]
By 31st March 2025*

Rate of Neonatal Deaths

Rate of Preterm birth

Rate: Clinical Outcomes Composite measure (NNAP) – bloodstream infection, BPD, NEC, preterm brain injury

Rate of term admissions to Neonatal Unit

Percentage Compliance with PPWP

Driver diagram and change ideas

What is a driver diagram?

A driver diagram visually presents an organisation or team's theory of how an improvement goal will be achieved. It articulates which parts of the system need to change in which way and includes ideas of how to make this happen. It is used to help plan improvement projects and ensure team engagement.

The primary drivers are the key components of the system that need to change to deliver the aim. The secondary drivers are the processes that influence the primary drivers. Changing the processes outlined in the secondary drivers should change the primary drivers and deliver the aim.

Change ideas

Change ideas are specific practical changes the project team can make to alter the processes in the secondary drivers. The following pages provide change ideas to support improvement to reduce neonatal mortality and neonatal morbidity by reducing complications of prematurity and reducing late preterm and unexpected term admissions to NNU. They are grouped by the primary driver that they influence. Project teams should select change ideas to test. A range of change ideas will be needed to ensure there are changes to all primary drivers.

This change package does not contain an exhaustive list of change ideas. Project teams can also generate their own change ideas that will help drive change in the secondary drivers. One way to generate ideas is to ask, "How might we?" For example, "How might we engage with women/birthing people, babies and their families to improve the experience of care when in hospital?"

2023 Perinatal Driver Diagram

What we are trying to achieve...

We need to ensure...

Which requires...

Reduce Neonatal Mortality and Neonatal Morbidity by:

- Reducing complications of prematurity
- Reducing late preterm and unexpected term admissions to NNU

By [locally agreed aim]
By 31st March 2025

*Essentials of Safe Care

Person centred care* considers the Continuity of Carer approach

Reduction in preterm birth

Delivery of evidence based preterm care

Reduction of avoidable term and late preterm admissions

Leadership to promote a culture of safety at all levels*

Women / birthing people and families are listened to and included in care decisions

Person centred care planning

Family centred approach with a focus on reducing separation

Inclusive care pathways which provide equitable and culturally appropriate access and treatment

Screening to identify woman / birthing person at high-risk of preterm birth

Clear pathways to ensure ease of access for women / birthing people and families to maternity services

Safe clinical and care processes*

Perinatal optimisation

Reliable delivery of evidence based interventions

Collaborative perinatal team working

Avoidance of elective births before 39 weeks unless medically indicated

Risk assessment, appropriate monitoring and escalation in labour

Delivery of evidence based care to optimise postnatal transition

Recognition, response and escalation of deterioration

Psychological safety

Staff wellbeing

System for learning

Safe staffing

Primary Driver

Person centred care considers the Continuity of Carer approach



Healthcare
Improvement
Scotland



Secondary Driver

Change ideas

Women / birthing people and families are listened to and included in care decisions

Local mechanisms to support a family integrated approach in all care settings 24/7

Support parent partnership policy to encourage attendance on ward rounds and shared decision making

Process to capture and act on regular feedback to improve provision of family-integrated care

Engage families in perinatal service co-design

Use of a universal wellbeing assessment which identify vulnerability and protected characteristics

Person centred care planning

Implement CoC model of care

Care and support is planned and structured proportionate to need

Use of anticipatory care planning and bereavement support where appropriate (neonate)

Locally agreed processes to enable parental and sibling access to support services

Use of 'what matters to me?' to inform care planning and provision of targeted support

Principles of Trauma Informed Practice included in local education programmes

Family integrated approach with a focus on reducing unnecessary separation

Delivery room resuscitation and stabilisation

Delivery room contact / cuddles when clinically appropriate

Repatriation pathways to home unit as soon as clinically indicated

Use of digital systems to maintain effective communication when parents are unable to visit

Use of nationally agreed hospital passports

Inclusive care pathways which provide equitable and culturally appropriate access and treatment

Co-produced person centred care plans include ethnicity, deprivation and individual communication needs

Social determinants addressed through onward referral to appropriate services

Staff afforded flexibility to provide care proportionate to need for those experiencing severe and multiple disadvantage

Local education for staff to enable support for those experiencing severe and multiple disadvantage

Provision of timely interpretation services support

Documented discussion about signs, symptoms and response to possible pre-term labour

Person centred care considers the Continuity of Carer approach

Secondary drivers

Change ideas

Women / birthing people and families are listened to and included in care decisions

Local mechanisms to support a family integrated approach in all care settings
24/7

Support parent partnership policy to encourage attendance on ward rounds and shared decision making

Process to capture and act on regular feedback to improve provision of family-integrated care

Engage families in perinatal service co-design

Use of a universal wellbeing assessment which identify vulnerability and protected characteristics

Evidence and Guidelines:

- British Association of Perinatal Medicine. Enhancing Shared Decision Making in Neonatal Care. A BAPM Framework for Practice [online]. 2019; Available from: <https://www.bapm.org/resources/158-enhancing-shared-decision-making-in-neonatal-care> Accessed 13th October 2023.
- McCann E, Brown M, Hollins-Martin C, Murray K, McCormick F. [The views and experiences of LGBTQ+ people regarding midwifery care: A systematic review of the international evidence](#). Midwifery. 2021;103:103102.
- Wreesmann WW, Lorié ES, van Veenendaal NR, van Kempen AAMW, Ket JCF, Labrie NHM. The Functions of Adequate Communication in the Neonatal Care unit: a Systematic Review and meta-synthesis of Qualitative Research. Patient Educ Counse. 2022;104(7):1505-17.

Tools and Resources:

- Healthcare Improvement Scotland. What matters to you? [online] 2023; Available at: <https://www.whatmatterstoyou.scot/> Accessed 13th October 2023.
- National Institute for Health and Care Excellence. Chapter 28 Structured ward rounds [online]. 2018; Available from: <https://www.nice.org.uk/guidance/ng94/evidence/28.structured-ward-rounds-pdf-172397464641#:~:text=Ward%20rounds%20are%20critical%20to,steps%20in%20their%20care%20planned> Accessed 13th October 2023.
- United Kingdom Committee for UNICEF (UNICEF UK). Guide to the UNICEF UK Baby friendly initiative neonatal standards [online]. 2022; Available from: <https://www.unicef.org.uk/babyfriendly/baby-friendly-resources/implementing-standards-resources/> Accessed 13th October 2023.



Person centred care considers the Continuity of Carer approach

Secondary drivers

Change ideas

Person centred care planning

Implement CoC model of care

Care and support is planned and structured proportionate to need

Use of anticipatory care planning and bereavement support where appropriate (neonate)

Locally agreed processes to enable parental and sibling access to support services

Use of 'what matters to me?' to inform care planning and provision of targeted support

Principles of Trauma Informed Practice included in local education programmes



Evidence and Guidelines:

- National Institute for Health and Care Excellence. Babies, children and young people's experience of healthcare. NICE guideline [NG204] [online] 2021; Available from: <https://www.nice.org.uk/guidance/NG204> Accessed 13th October 2023.
- Pace CA, Crowther S, Lau A. [Midwife experiences of providing continuity of carer: A qualitative systematic review](#). Women Birth. 2021;35(3).
- Mamun A, Biswas T, Scott J, Sly PD, McIntyre HD, Thorpe K, et al. [Adverse childhood experiences, the risk of pregnancy complications and adverse pregnancy outcomes: a systematic review and meta-analysis](#). BMJ Open. 2023;13(8).

Tools and Resources:

- Healthcare Improvement Scotland. What matters to you? [online] 2023; Available at: <https://www.whatmatterstoyou.scot/> Accessed 13th October 2023.
- Healthcare Improvement Scotland. Anticipatory Care Planning toolkit [online]. 2021; Available from: <https://ihub.scot/project-toolkits/anticipatory-care-planning-toolkit/anticipatory-care-planning-toolkit/> Accessed 13th October 2023.
- NHS National Education for Scotland. National trauma training programme [online]. 2023; Available from: <https://learn.nes.nhs.scot/37898> Accessed 13th October 2023.
- NHS National Education for Scotland. Pregnancy loss, stillbirth and neonatal death [online]. 2023; Available from: <https://www.sad.scot.nhs.uk/bereavement/pregnancy-loss-stillbirth-and-neonatal-death/> Accessed 13th October 2023.

Person centred care considers the Continuity of Carer approach

Secondary drivers

Change ideas

Family integrated approach with a focus on reducing unnecessary separation

Delivery room resuscitation and stabilisation

Delivery room contact / cuddles when clinically appropriate

Repatriation pathways to home unit as soon as clinically indicated

Use of digital systems to maintain effective communication when parents are unable to visit

Use of nationally agreed hospital passports



Evidence and Guidelines:

- British Association of Perinatal Medicine. Neonatal Transitional Care - A Framework for Practice (2017). A BAPM Framework for Practice [online]. 2017; Available from: <https://www.bapm.org/resources/24-neonatal-transitional-care-a-framework-for-practice-2017>. Accessed 13th October 2023.
- British Association of Perinatal Medicine. Safe and Effective Repatriation of Infants. A Framework for Practice [online]. 2023; Available from: <https://www.bapm.org/resources/safe-and-effective-repatriation-of-infants>. Accessed 13th October 2023.
- Kristoffersen L, Bergseng H, Engesland H, Bagstevold A, Aker K, Støen R. Skin-to-skin contact in the delivery room for very preterm infants: a randomised clinical trial. *BMJ Paediatr Open*. 2023; 7(1):e001831.
- United Kingdom Committee for UNICEF (UNICEF UK). Research on skin-to-skin contact. [online] 2022; Available from: <https://www.unicef.org.uk/babyfriendly/news-and-research/baby-friendly-research/research-supporting-breastfeeding/skin-to-skin-contact/>. Accessed 13th October 2023.
- Førelund AM, Engesland H, Kristoffersen L, Fegran L. Postpartum Experiences of Early Skin-to-Skin Contact and the Traditional Separation Approach After a Very Preterm Birth: A Qualitative Study Among Mothers. *Glob Qual Nurs Res*. 2022;9:10.1177/23333936221097116

Tools and Resources:

- United Kingdom Committee for UNICEF (UNICEF UK). You and Your Baby. Supporting love and nurture on the Neonatal Unit Leaflet. [online] 2021; Available from: <https://www.unicef.org.uk/babyfriendly/baby-friendly-resources/neonatal-care-resources/you-and-your-baby-supporting-love-and-nurture-on-the-neonatal-unit/>. Accessed 13th October 2023.

Person centred care considers the Continuity of Carer approach

Secondary drivers

Inclusive care pathways and processes which provide equitable and culturally appropriate access and treatment

Change ideas

Co-produced person centred care plans include ethnicity, deprivation and individual communication needs

Social determinants addressed through onward referral to appropriate services

Staff afforded flexibility to provide care proportionate to need for those experiencing severe and multiple disadvantage

Staff able to identify, challenge and change the values, structures and behaviours that perpetuate systemic racism

Local education for staff to enable support for those experiencing severe and multiple disadvantage

Provision of timely interpretation services support

Documented discussion about signs, symptoms and response to possible pre-term labour

Evidence and Guidelines:

- Khan Z, Vowles Z, Fernandez Turienzo C, et al. Targeted health and social care interventions for women and infants who are disproportionately impacted by health inequalities in high-income countries: a systematic review. *Int J Equity Health*. 2023;22(1):131.
- Catalao R, Zephyrin L, Richardson L, Coghill Y, Smylie J, Hatch S, et al. [Tackling racism in maternal health](#). *BMJ*. 2023;383:e076092.
- Royal College of Midwives. Position Statement: midwives to address the needs of women experiencing severe and multiple disadvantage [online]. 2021; Available from: https://www.rcm.org.uk/media/5449/rcm-position-statement-women-experiencing-severe-and-multiple-disadvantage-2021_2.pdf. Accessed 13th October 2023.
- Royal College of Paediatrics and Child Health. Child health inequalities driven by child poverty in the UK – position statement [online]. 2022; Available from: <https://www.rcpch.ac.uk/resources/child-health-inequalities-position-statement#how-poverty-affects-child-health-outcomes>. Accessed 13th October 2023.
- Puthussery S, Li L, Pei-Ching Eseng, Kilby L, et al. Ethnic variations in risk of preterm birth in an ethnically dense socially disadvantaged area in the UK: a retrospective cross-sectional study. *BMJ Open* 2021; 9(3).
- Thomson K, Moffat M, Arisa O, et al. Socioeconomic inequalities and adverse pregnancy outcomes in the UK and Republic of Ireland: a systematic review and meta-analysis. *BMJ Open* 2021; 1;11(3).

Tools and Resources:

- NHS National Education for Scotland. Equality and diversity zone [online]. 2023; Available from: <https://learn.nes.nhs.scot/3480>. Accessed 13th October 2023.
- NHS. Premature labour and birth [online] 2020; Available from: <https://www.nhs.uk/pregnancy/labour-and-birth/signs-of-labour/premature-labour-and-birth/>. Accessed 13th October 2023.

Primary Driver

Reduction in preterm birth



Healthcare
Improvement
Scotland



Secondary Drivers

Change ideas

Identify woman / birthing person at high-risk of preterm birth

Screening process and risk assessment includes social determinants/ethnicity to identify and monitor women/birthing person at risk

Early multidisciplinary discussions and planning identifies social determinants/ethnicity for women/birthing people at high risk of preterm birth

Routine screening for infection and high risk conditions such as diabetes and pre-eclampsia

Locally agreed pathway to identify and monitor multiple pregnancies

Clear pathways to ensure ease of access for women / birthing person and families to maternity services

Signpost woman/birthing person to information to support healthy behaviours in pregnancy and beyond e.g. Ready Steady Baby

Collaboration with substance teams to support recovery in pregnancy

CO monitoring at booking and 36 weeks

Consider psychological therapies / nicotine replacement therapy to support smoking cessation in pregnancy

Pathways include evidence based interventions to address substances harmful to health e.g. alcohol / drugs

Safe clinical and care processes

Low dose aspirin following appropriate screening (PIGF UtAD) and risk assessment

Implementation of local pathway for women/birthing people reporting altered fetal movements

Women have access to specialist service e.g. pre-term birth clinic

Implementation of triage systems and guidelines that support staff in recognition and escalation of preterm labour

Use of agreed information for all pregnant women/birthing people about the signs and symptoms of preterm birth and the benefits of preterm optimisation

Local processes for discussing and documenting risks / benefits of delivery options induction of labour before 39 weeks gestation

Reduction in preterm birth

Secondary drivers

Change ideas

Identify woman / birthing person at high-risk of preterm birth

Screening process and risk assessment includes social determinants/ethnicity to identify and monitor women/birthing person at risk

Early multidisciplinary discussions and planning identifies social determinants/ethnicity for women/birthing people at high risk of preterm birth

Routine screening for infection and high risk conditions such as diabetes and pre-eclampsia

Locally agreed pathway to identify and monitor multiple pregnancies



Evidence and Guidelines:

- Greco E, Calanducci M, Nicolaidis K, Barry E, Huda B, Stamatina Iliodromiti. [Gestational diabetes mellitus and adverse maternal and perinatal outcomes in twin and singleton pregnancies: a systematic review and meta-analysis](#). Am J Obstet Gynecol. 2023;S0002-9378(23)00545-8.
- Khan Z, Vowles Z, Cristina Fernandez Turienzo, Barry P, Brigante L, Downe S, et al. [Targeted health and social care interventions for women and infants who are disproportionately impacted by health inequalities in high-income countries: a systematic review](#). Int J Equity Health. 2023;22(1).
- Royal College of Paediatrics and Child Health. Child health inequalities driven by child poverty in the UK – position statement [online]. 2022; Available from: <https://www.rcpch.ac.uk/resources/child-health-inequalities-position-statement#how-poverty-affects-child-health-outcomes>. Accessed 13th October 2023.

Tools and Resources:

- NHS National Education for Scotland. Equality and diversity zone. Protected characteristics [online]. 2023; Available from: <https://learn.nes.nhs.scot/27954>. Accessed 13th October 2023.
- NHS. Premature labour and birth [online] 2020; Available from: <https://www.nhs.uk/pregnancy/labour-and-birth/signs-of-labour/premature-labour-and-birth/>. Accessed 13th October 2023.

Reduction in preterm birth

Secondary drivers

Clear pathways to ensure ease of access for women / birthing person and families to maternity services

Change ideas

Signpost woman/birthing person to information to support healthy behaviours in pregnancy and beyond e.g. Ready Steady Baby

Collaboration with substance teams to support recovery in pregnancy

CO monitoring at booking and 36 weeks

Consider psychological therapies / nicotine replacement therapy to support smoking cessation in pregnancy

Pathways include evidence based interventions to address substances harmful to health e.g. alcohol / drugs



Evidence and Guidelines:

- Rockliffe L, Peters S, Heazell A.E.P, Smith D.M. [Factors influencing health behaviour change during pregnancy: a systematic review and meta-synthesis](#). Health Psychol Rev. 2021; 15(4):613-32.

Tools and Resources:

- NHS. Keeping well in pregnancy [online] 2023; Available from: <https://www.nhs.uk/pregnancy/keeping-well/> Accessed 13th October 2023.
- The Solihull Approach. Online Antenatal Course [online] Available from: <https://solihullapproachparenting.com/online-antenatal-course/> (enter the access code 'TARTAN' and complete a short registration form to access the courses). Accessed 13th October 2023.
- Public Health Scotland. Ready Steady Baby! Easy Read: Guidance for health professionals [online] 2022; Available from: <https://www.publichealthscotland.scot/publications/ready-steady-baby-easy-read-guidance-for-health-professionals/> Accessed 13th October 2023.

Reduction in preterm birth

Secondary drivers

Change ideas

Safe clinical and care processes

Low dose aspirin following appropriate screening (PIGF UtAD) and risk assessment

Implementation of local pathway for women/birthing people reporting altered fetal movements

Women have access to specialist service e.g. pre-term birth clinic

Implementation of triage systems and guidelines that support staff in recognition and escalation of preterm labour

Use of agreed information for all pregnant women/birthing people about the signs and symptoms of preterm birth and the benefits of preterm optimisation

Local processes for discussing and documenting risks / benefits of delivery options induction of labour before 39 weeks gestation



Evidence and Guidelines:

- Bavita Jeer, Haberdorf E, Khalil A, Shakila Thangaratnam, Allotey J. [Perinatal and maternal outcomes according to timing of induction of labour: A systematic review and meta-analysis](#). Eur J Obstet Gynecol Reprod Biol. 2023;288:175-82.
- National Institute for Health and Care Excellence. PLGF-based testing to help diagnose suspected preterm pre-eclampsia. Diagnostics guidance [DG49] [online] 2022. Available from: <https://www.nice.org.uk/guidance/dg49/informationforpublic>. Accessed 13th October 2023.
- Smith V, Muldoon K, Brady V, Delaney H. [Assessing fetal movements in pregnancy: A qualitative evidence synthesis of women's views, perspectives and experiences](#). BMC Pregnancy Childbirth. 2021;21(1).

Tools and Resources:

- British Association of Perinatal Medicine. QI Publications Review – Antenatal Optimisation Edition. A BAPM QI Resource [online]. 2020. Available from: <https://www.bapm.org/resources/295-qi-publications-review-antenatal-optimisation-edition>. Accessed 13th October 2023.
- NHS Inform. Ready Steady Baby! Getting to know your baby's movements [online] 2023. Available from: <https://www.nhsinform.scot/ready-steady-baby/pregnancy/your-baby-s-development/getting-to-know-your-babys-movements/>. Accessed 13th October 2023.
- NHS. Premature labour and birth [online] 2020; Available from: <https://www.nhs.uk/pregnancy/labour-and-birth/signs-of-labour/premature-labour-and-birth/> Accessed 13th October 2023.

Primary Driver

Delivery of evidence based preterm care



Healthcare
Improvement
Scotland



Secondary Drivers

Change ideas

Perinatal optimisation

Use of evidence based tools to establish risk of preterm labour e.g. FFN, Cx length, QUIPP

Use of SPN In-Utero transfer pathway

Implementation of all elements of the preterm perinatal wellbeing package

Optimise environment and thermal care practices

Reliable delivery of evidence based interventions

Implementation of BAPM guidelines to inform non-invasive respiratory support

Implementation of BAPM guidelines to support volume targeted strategies

Consistent implementation of infection prevention and control guidelines to minimise the risk of sepsis

Breast milk given to all babies especially highest risk babies

Collaborative perinatal team working

Network of local/regional MDT perinatal teams with special interest in preterm birth and optimisation

Perinatal team huddles to discuss high risk in-patients

Use of SBAR at transitions in care

Local process in place for escalation of clinical concerns

Use of preterm resources e.g. grab bags

Pre-birth preterm pause to agree shared goals and stabilisation plan

Provision of multidisciplinary simulation training & teaching

Delivery of evidence based preterm care

Secondary drivers

Change ideas

Perinatal optimisation

Use of evidence based tools to establish risk of preterm labour e.g. FFN, Cx length, QUIPP

Use of SPN In-Utero transfer pathway

Implementation of all elements of the preterm perinatal wellbeing package

Optimise environment and thermal care practices



Evidence and Guidelines:

- NHS Race & Health Observatory. Review of neonatal assessment and practice in Black, Asian and minority ethnic newborns: Exploring the Apgar score, the detection of cyanosis, and jaundice. Available from: <https://www.nhs.uk/publications/review-of-neonatal-assessment-and-practice-in-black-asian-and-minority-ethnic-newborns-exploring-the-apgar-score-the-detection-of-cyanosis-and-jaundice/> Accessed 13th October 2023.
- Ramaswamy VV, Dawson JA, de Almeida MF, Trevisanuto D, Nakwa FL, Kamlin COF, et al. [Maintaining normothermia immediately after birth in preterm infants <34 weeks' gestation: A systematic review and meta-analysis](#). Resuscitation. 2023;191:109934.

Tools and Resources:

- British Association of Perinatal Medicine. Building Successful Perinatal Optimisation Teams. A Toolkit to support delivery of the Perinatal Optimisation Pathway [online]. 2023; Available from: <https://www.bapm.org/resources/building-successful-perinatal-teams-doc> Accessed 13th October 2023.
- British Association of Perinatal Medicine. Perinatal Optimisation Pathway. Resources to help improve preterm outcomes [online]. 2023; Available from: <https://www.bapm.org/pages/perinatal-optimisation-pathway> Accessed 13th October 2023.
- British Association of Perinatal Medicine. QUIPP App Toolkit [online]. 2020; Available from: <https://www.bapm.org/pages/187-quipp-app-toolkit> Accessed 13th October 2023.
- Health Innovation West of England. PERIPrem [online]. Available from: <https://www.healthinnovest.net/our-work/transforming-services-and-systems/periprem/> Accessed 13th October 2023.
- Scottish Perinatal Network Transport Group. In-Utero Transfers in Scotland. Consultant Led Unit to Consultant Led Unit [online] 2023. Available from: <https://www.perinatalnetwork.scot/wp-content/uploads/2023/03/In-Utero-Transfers-in-Scotland-CLU-to-CLU.pdf> Accessed 13th October 2023.

Delivery of evidence based preterm care

Secondary drivers

Reliable delivery of evidence based interventions

Change ideas

Implementation of BAPM guidelines to inform non-invasive respiratory support

Implementation of BAPM guidelines to support volume targeted strategies

Consistent implementation of infection prevention and control guidelines to minimise the risk of sepsis

Breast milk given to all babies especially highest risk babies



Evidence and Guidelines:

- National Institute for Health and Care Excellence. 2019. Specialist neonatal respiratory care for babies born preterm. Available from: <https://www.nice.org.uk/guidance/ng124> Accessed 13th October 2023.
- British Association of Perinatal Medicine. Managing the Difficult Airway in the Neonate. A BAPM Framework for Practice [online]. 2020; Available from: <https://www.bapm.org/resources/199-managing-the-difficult-airway-in-the-neo> Accessed 13th October 2023.
- British Association of Perinatal Medicine. Perinatal Management of Extreme Preterm Birth Before 27 weeks of Gestation (2019). A BAPM Framework for Practice [online]. 2019; Available from: <https://www.bapm.org/resources/80-perinatal-management-of-extreme-preterm-birth-before-27-weeks-of-gestation-2019> Accessed 13th October 2023.
- NHS National Services Scotland. National Infection Prevention and Control Manual [online]. 2023; Available from: <https://www.nipcm.hps.scot.nhs.uk/> Accessed 13th October 2023.

Tools and Resources:

- British Association of Perinatal Medicine. Maternal Breast Milk Toolkit. Optimising Maternal Breast Milk for Preterm Infants: A two-part Quality Improvement Toolkit [online]. 2022; Available from: <https://www.bapm.org/pages/196-maternal-breast-milk-toolkit> Accessed 13th October 2023.
- British Association of Perinatal Medicine. The Use of Donor Human Milk in Neonates [online]. 2023; Available from: <https://www.bapm.org/resources/the-use-of-donor-human-milk-in-neonates> Accessed 13th October 2023.

Delivery of evidence based preterm care

Secondary drivers

Collaborative perinatal team working

Change ideas

Network of local/regional MDT perinatal teams with special interest in preterm birth and optimisation

Perinatal team huddles to discuss high risk in-patients

Use of SBAR at transitions in care

Local process in place for escalation of clinical concerns

Use of preterm resources e.g. grab bags

Pre-birth preterm pause to agree shared goals and stabilisation plan

Provision of multidisciplinary simulation training & teaching



Evidence and Guidelines:

- Glover Williams A, Tuvey S, McBain H On behalf of the PERIPrem Steering Group, et al. Perinatal excellence to reduce injury in preterm birth (PERIPrem) through quality improvement. *BMJ Open*. 2022; 11(3):e001904.
- Wu M, Tang J, Etherington C, Walker M, Boet S. Interventions for improving teamwork in intrapartem care: a systematic review of randomised controlled trials. *BMJ Qual Saf*. 2020;29(1):77-85.

Tools and Resources:

- British Association of Perinatal Medicine. Building Successful Perinatal Optimisation Teams. A Toolkit to support the Perinatal Optimisation Pathway [online]. 2023. Available from: <https://www.bapm.org/resources/building-successful-perinatal-teams-doc> Accessed 13th October 2023.
- NHS Education Scotland. SBAR [online]. Available from: <https://learn.nes.nhs.scot/3408/quality-improvement-zone/qi-tools/sbar> Accessed 13th October 2023.
- NHS Education for Scotland. TURAS Learn. Team Huddles [online]. Available from: <https://learn.nes.nhs.scot/39913/quality-improvement-zone/qi-tools/team-huddles> Accessed 13th October 2023.

Primary Driver

Reduction of avoidable term and late preterm admissions



Healthcare
Improvement
Scotland



Secondary Drivers

Change ideas

Avoidance of elective births before 39 weeks unless medically indicated

Staff education around morbidity of births before 39 weeks

Use of agreed information to support informed consent around births before 39 weeks

Informed consent highlights the risk / benefits using evidence based practice and data

Regular review of any unexpected admissions before 39 weeks

Risk assessment, appropriate monitoring and escalation in labour

Use of standardised intrapartum risk assessment tool

Use of buddy system in providing holistic care

Locally agreed pathway for fetal monitoring, interpretation and escalation

Implementation of Sepsis 6

Delivery of evidence based care to optimise postnatal transition

Warm environment and a focus on early thermal care (Warm Bundle)

Skin to skin contact in all areas

Early feeding and support to establish breast feeding

Locally agreed pathways for management of common neonatal issues

Provision of transitional care setting

Recognition, timely response, review and reassessment of deterioration

Risk assessment at birth to ensure baby on correct pathway of care e.g. Newborn Early Warning Trigger & Track(NEWTT2)

Locally agreed process to escalate clinical concern

Locally agreed system for families to escalate concerns

Locally agreed processes to ensure regular review of late preterm baby

Reliable process for oxygen saturation screening when required

Reduction of avoidable term and late preterm admissions

Secondary drivers

Avoidance of elective births before 39 weeks unless medically indicated

Change ideas

Staff education around morbidity of births before 39 weeks

Use of agreed information to support informed consent around births before 39 weeks

Informed consent highlights the risk / benefits using evidence based practice and data

Regular review of any unexpected admissions before 39 weeks



Evidence and Guidelines:

- Hong J, Atkinson J, Alexandra Roddy Mitchell, Tong S, Walker SP, Middleton A, et al. Comparison of Maternal Labor-Related Complications and Neonatal Outcomes Following Elective Induction of Labor at 39 Weeks of Gestation vs Expectant Management: A Systematic Review and Meta-analysis. JAMA Netw Open. 2023;6(5):e2313162.
- Bavita Jeer, Haberfeld E, Khalil A, Shakila Thangaratinam, Allotey J. Perinatal and maternal outcomes according to timing of induction of labour: A systematic review and meta-analysis. Eur J Obstet Gynecol Reprod Biol. 2023;288:175-182.
- Kloester J, Willey S, Hall H, Brand G. Midwives' experiences of facilitating informed decision-making – a narrative literature review. Midwifery. 2022;109(109):103322.
- National Institute for Health and Care Excellence. Inducing labour. NICE guideline [NG207] [online] 2021; Available from: <https://www.nice.org.uk/guidance/ng207> Accessed 13th October 2023.
- National Institute for Health and Care Excellence. Shared decision making. NICE guideline [NG197] [online] 2021; Available from: <https://www.nice.org.uk/guidance/ng197> Accessed 13th October 2023.

Tools and Resources:

- Patient Information Forum. Communicating benefits, risks and uncertainties [online]. 2021; Available from: <https://pifonline.org.uk/resources/how-to-guides/communicating-benefits-risks-and-uncertainties/> Accessed 13th October 2023.

Reduction of avoidable term and late preterm admissions

Secondary drivers

Risk assessment, appropriate monitoring and escalation in labour

Change ideas

Use of standardised intrapartum risk assessment tool

Use of buddy system in providing holistic care

Locally agreed pathway for fetal monitoring, interpretation and escalation

Implementation of Sepsis 6



Evidence and Guidelines:

- National Institute for Health and Care Excellence. Fetal monitoring in labour. NICE guideline [NG229] [online] 2022; Available from: <https://www.nice.org.uk/guidance/ng229> Accessed 13th October 2023.
- National Institute for Health and Care Excellence. Intrapartum care. NICE guideline [NG235] [online] 2023; Available from: <https://www.nice.org.uk/guidance/ng235> Accessed 13th October 2023.
- The UK Sepsis Trust. The Sepsis Manual. Responsible management of sepsis, severe infection and antimicrobial stewardship. 6th Edition [online]. 2022; Available from: <https://sepsistrust.org/wp-content/uploads/2022/06/Sepsis-Manual-Sixth-Edition.pdf> Accessed 13th October 2023.

Tools and Resources:

- NHS Education Scotland. SBAR [online]. Available from: <https://learn.nes.nhs.scot/3408/quality-improvement-zone/qi-tools/sbar> Accessed 13th October 2023.
- Nutbeam T, Daniels R on behalf of the UK Sepsis Trust. Screening and Action Tool for Community Midwives [online]. 2020; Available from: <https://sepsistrust.org/professional-resources/community-services-nice/> Accessed 13th October 2023.

Reduction of avoidable term and late preterm admissions

Secondary drivers

Delivery of evidence based care to optimise postnatal transition

Change ideas

Warm environment and a focus on early thermal care (Warm Bundle)

Skin to skin contact in all areas

Early feeding and support to establish breast feeding

Locally agreed pathways for management of common neonatal issues

Provision of transitional care setting



Evidence and Guidelines:

- Sivanandan S, Sankar MJ. Kangaroo mother care for preterm or low birth weight infants: a systematic review and meta-analysis. *BMJ Glob Health*. 2023;8(6):e010728.
- British Association of Perinatal Medicine. Framework: Early Postnatal Care of the Moderate-Late Preterm Infant [online]. 2023. Available from: <https://www.bapm.org/resources/framework-early-postnatal-care-of-the-moderate-late-preterm-infant> Accessed 13th October 2023.
- British Association of Perinatal Medicine. Identification and Management of Neonatal Hypoglycaemia in the Full Term Infant (Birth – 72 hours). DRAFT Framework for Practice [online]. 2023. Available from: <https://www.bapm.org/resources/identification-and-management-of-neonatal-hypoglycaemia-in-the-full-term-infant-birth-72-hours> Accessed 13th October 2023.

Tools and Resources:

- British Association of Perinatal Medicine. Norothermia Toolkit. Improving Norothermia in Very Preterm Infants: A Quality Improvement Toolkit [online]. 2019. Available from: <https://www.bapm.org/pages/105-norothermia-toolkit> Accessed 13th October 2023.
- Health Innovation West of England. PERIPrem [online]. Available from: <https://www.healthinnowest.net/our-work/transforming-services-and-systems/periprem/> Accessed 13th October 2023.
- Health Innovation West of England. PERIPrem bundle: Maternal Early Breast Milk [online]. Available from: <https://www.healthinnowest.net/our-work/transforming-services-and-systems/periprem/periprem-bundle-early-breast-milk/> Accessed 13th October 2023.

Reduction of avoidable term and late preterm admissions

Secondary drivers

Recognition, timely response, review and reassessment of deterioration

Change ideas

Risk assessment at birth to ensure baby on correct pathway of care e.g. Newborn Early Warning Trigger & Track(NEWTT2)

Locally agreed process to escalate clinical concern

Locally agreed system for families to escalate concerns

Locally agreed processes to ensure regular review of late preterm baby

Reliable process for oxygen saturation screening when required



Evidence and Guidelines:

- British Association of Perinatal Medicine. Framework: NEWTT 2 – Deterioration of the Newborn. A Framework for Practice [online]. 2023; Available from: <https://www.bapm.org/resources/deterioration-of-the-newborn-newtt-2-a-framework-for-practice> Accessed 13th October 2023.

Tools and Resources:

- NHS Education Scotland. SBAR [online]. Available from: <https://learn.nes.nhs.scot/3408/quality-improvement-zone/qi-tools/sbar> Accessed 13th October 2023.

Primary Driver

Leadership to promote a culture of safety at all levels



Healthcare
Improvement
Scotland



Secondary Drivers	Change ideas						
Psychological safety	Access to regular clinical supervision and/or senior support and discussion	Create forums to allow staff to identify areas for improvement	Visible supportive leadership	Structured 1:1 time	Staff aware of mechanisms available to support speaking out (including key contacts and feedback loop)		
Staff wellbeing	Staff supported to celebrate success	Access to peer support and clinical educators	Hot and cold debriefs	Local mechanism to check the wellbeing of staff after traumatic events		Promotion of National Wellbeing hub	
System for learning	Local process to keep policies and guidelines up to date and communicated timeously to staff	Information from DATIX/SAER/PMRT/Care Opinion/complaints used to inform learning and improvement	Implementation of national guidelines	Establish links with local QI support	MDT local perinatal learning sessions and data review	Share data and learning locally and nationally e.g. Scottish Perinatal learning events	Demographic and ethnicity data analysed and compared at national and local level
Safe staffing	Local education to include safe staffing legislation and wider workforce planning principles	Efficient and safe rostering / CoC model implemented	Real time staffing risk assessment, escalation and mitigation		Use of the BAPM staffing tool	Local perinatal workforce data, including staffing levels, skill mix, experience etc. used to identify focus for improvement work Perinatal service staffing levels regularly reported and discussed at site level during safety huddles	

Leadership to promote a culture of safety at all levels



Healthcare
Improvement
Scotland



Secondary drivers

Change ideas

Psychological safety

Access to regular clinical supervision and/or senior support and discussion

Create forums to allow staff to identify areas for improvement

Visible supportive leadership

Structured 1:1 time

Staff aware of mechanisms available to support speaking out (including key contacts and feedback loop)



Evidence and Guidelines:

- Edmondson A. [Psychological Safety and Learning Behavior in Work Teams](#). Adm Sci Q. 1999;44(2):350-383.
- NHS Providers. Psychological Safety and Why It Matters [online]. 2020; Available from: <https://nhsproviders.org/news-blogs/blogs/psychological-safety-and-why-it-matters>. Accessed 13th October 2023.
- Tulleners T, Campbell C, Taylor M. [The experience of nurses participating in peer group supervision: A qualitative systematic review](#). Nurse Educ Pract. 2023;69:103606.

Tools and Resources:

- The King's Fund. The practice of collaborative leadership: Across health and care services [online]. 2023; Available from: <https://www.kingsfund.org.uk/publications/practice-collaborative-leadership> Accessed 13th October 2023.

Leadership to promote a culture of safety at all levels



Healthcare
Improvement
Scotland



Secondary drivers

Change ideas

Staff wellbeing

Staff supported to
celebrate success

Access to peer
support and
clinical
educators

Hot and cold
debriefs

Local mechanism to check
the wellbeing of staff after
traumatic events

Promotion of
National Wellbeing
hub



Evidence and Guidelines:

- Cohen C, Pignata S, Bezak E, Tie M, Childs J. [Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: a systematic review.](#) BMJ Open. 2023;13(6):e071203.
- Garcia-Catena C, Ruiz-Palomino P, Saavedra S, Gonzalez-Sanz JD. [Nurses' and midwives' perceptions and strategies to cope with perinatal death situations: A systematic literature review.](#) J Adv Nurs. 2023;79(3):910-921.
- The Kings Fund. The courage of compassion Supporting nurses and midwives to deliver high-quality care. 2020; Available from: <https://www.kingsfund.org.uk/publications/courage-compassion-supporting-nurses-midwives>. Accessed 13th October 2023.

Tools and Resources:

- Healthcare Improvement Scotland. The Essentials of Safe Care: Staff Wellbeing. 2021; Available from: <https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-essentials-of-safe-care/leadership-and-culture/staff-wellbeing/>. Accessed 13th October 2023.
- Healthcare Improvement Scotland. What matters to you? 2023; Available from: <https://www.whatmatterstoyou.scot/>. Accessed 13th October 2023.
- National Wellbeing Hub [online] Available from: <https://wellbeinghub.scot/> Accessed 13th October 2023.
- NHS Education for Scotland. Psychological First Aid and Debriefing - COVID 19. 2020; Available from: <https://learn.nes.nhs.scot/29206>. Accessed 13th October 2023.

Leadership to promote a culture of safety at all levels



Healthcare
Improvement
Scotland



Secondary drivers

Change ideas

System for learning

Local process to keep policies and guidelines up to date and communicated timeously to staff

Information from DATIX/SAER/PMRT/Care Opinion/complaints used to inform learning and improvement

Implementation of national guidelines

Establish links with local QI support

MDT local perinatal learning sessions and data review

Share data and learning locally and nationally e.g. Scottish Perinatal learning events

Demographic and ethnicity data analysed and compared at national and local level



Evidence and Guidelines:

- Kurinczuk J J, Smith P, Bevan C, Burden C, Draper E S, Fenton A, Gallimore I, Hezell A, Johnston T, Kenyon S, Knight M, Manktelow B, Neves M, Prince S, Siassakos D, Smith L, Storey C. Learning from Standardised Reviews When Babies Die. National Perinatal Review Tool: Fourth Annual Report. Oxford: National Perinatal Epidemiology Unit [online]. 2022; Available from: <https://www.npeu.ox.ac.uk/pmrt/reports> Accessed 13th October 2023.
- MBRRACE-UK collaboration. MBRRACE-UK Perinatal Mortality Surveillance. UK perinatal deaths for births from 1 January 2021 to 31 December 2021. State of the Nation Report [online]. 2023; Available from: <https://timms.le.ac.uk/mbrpace-uk-perinatal-mortality/surveillance/> Accessed 13th October 2023.
- MBRRACE-UK/PMRT collaboration. Perinatal Mortality Review Tool [online]. 2023; Available from: <https://www.npeu.ox.ac.uk/pmrt> Accessed 13th October 2023.

Tools and Resources:

- NHS Education for Scotland. Safety Culture Discussion Cards. 2023; Available from: <https://learn.nes.nhs.scot/61108/human-factors-hub/human-factors-tools/safety-culture-discussion-cards/safety-culture-discussion-cards>. Accessed 13th October 2023.
- Care Opinion C. Care Opinion. 2023; Available from: <https://www.careopinion.org.uk/>. Accessed 13th October 2023.
- Healthcare Improvement Scotland. The Essentials of Safe Care: System for Learning. 2021; Available from: <https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-essentials-of-safe-care/leadership-and-culture/system-for-learning/>. Accessed 13th October 2023.

Leadership to promote a culture of safety at all levels



Healthcare Improvement Scotland



Secondary drivers

Change ideas

Safe staffing

Local education to include safe staffing legislation and wider workforce planning principles

Efficient and safe rostering / CoC model implemented

Real time staffing risk assessment, escalation and mitigation

Use of the BAPM staffing tool

Local perinatal workforce data, including staffing levels, skill mix, experience etc. used to identify focus for improvement work

Perinatal service staffing levels regularly reported and discussed at site level during safety huddles



Evidence and Guidelines:

- British Association of Perinatal Medicine. Calculating Unit Cot numbers and Nurse Staffing Establishment and Determining Cot Capacity. A BAPM Framework for Practice – Supplementary Guidance [online]. 2019; Available from: <https://www.bapm.org/resources/157-calculating-unit-cot-numbers-and-nurse-staffing-establishment-and-determining-cot-capacity> Accessed 13th October 2023.

Tools and Resources:

- NHS Education for Scotland. Clinical Supervision Resource. 2023; Available from: <https://learn.nes.nhs.scot/3580/clinical-supervision>. Accessed 13th October 2023.
- Healthcare Improvement Scotland. Workforce capacity and capability. [online]. 2021; Available from: <https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-essentials-of-safe-care/person-centred-care/workforce-capacity-and-capability/>. Accessed 13th October 2023.
- Healthcare Improvement Scotland. Inclusion and involvement. [online]. 2021; Available from: <https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/spsp-essentials-of-safe-care/person-centred-care/inclusion-and-involvement/>. Accessed 13th October 2023.
- Healthcare Improvement Scotland. Staffing level (workload) tools and methodology. [online]. Available from: https://www.healthcareimprovementscotland.org/our_work/patient_safety/healthcare_staffing_programme/staffing_workload_tools.aspx. Accessed 13th October 2023.
- NHS Education for Scotland. Health and Care Staffing in Scotland. [online]. 2019; Available from: <https://learn.nes.nhs.scot/61827>. Accessed 13th October 2023.

Contact details



his.spsppp@nhs.scot



@mcqicspsp @online_his
#spsp247 #PerinatalCare

Edinburgh Office

Glasgow Office

Gyle Square

Delta House

1 South Gyle Crescent

50 West Nile Street

Edinburgh

Glasgow

EH12 9EB

G1 2NP

0131 623 4300

0141 225 6999