Report of the National Significant Adverse Event Review Scoping Exercise

December 2023

Scottish Perinatal Network SAER Group

Contents

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In the production of this report, the abovementioned report to:

SPN SAER Group, SPN Core Steering Group and Oversight Board (for governance)

National Medical and Nurse Directors, national Directors and Heads of Midwifery and Clinical Directors of Obstetrics & Neonatology (for consultation and guidance).

Key messages

- The reliable, equitable and sustainable delivery of perinatal significant adverse event reviews (SAER) in line with national recommendations needs national coordination and additional local and national operational, governance and workforce training infrastructure.

- All Boards are experiencing the pressure of the high level of local, national, UK and public scrutiny and demand to achieve timely delivery, openness, and learning from perinatal reviews compared to other services. Perinatal SAERs represent the largest workload component of Board SAER.

- Many areas of good practice were identified, and all Boards are achieving part of the elements of the Learning From Adverse Event Review National Framework for Scotland and the 2021 Scottish Government Perinatal Adverse Event Review Guidance. However, all Boards are experiencing delays in the completion and approval of reviews.

- All Boards have processes for engaging families and assigning a key contact. However, all Boards experience delays in achieving timely family engagement.

- Risk service models were indicated that were optimal for Boards with deliveries 2400-4500/year and 4500-6500/year

- There is incomplete national reporting data to support learning and improvement.

Background and Context

Launch of the new Maternity and Neonatal (perinatal) Adverse Event Review Process for Scotland Guidance

On 15 September 2021 the Scottish Government published "Maternity and neonatal (perinatal) adverse event review process: guidance" as an operational guidance supplement to the Healthcare Improvement Scotland (HIS) 2019 "Learning from adverse events through reporting and review: A national framework for Scotland".

This new guidance was developed in recognition that maternity and neonatal (perinatal) reviews have additional requirements to achieve delivery of the framework. These additional demands on the service are summarised below:

Additional complexity of perinatal reviews	Risk team	Clinical manage-ment team	Family support process	Staff support process	Review focus	Service delivery
National UK recommendations for reviews	√	√	√	√	√	√
Integration with national pathways: Child Death Review, Perinatal Mortality Review Tool, National Bereavement Care Pathways	√		√		√	√
Review of the whole perinatal pathway	√				√	
Conducting reviews in context of active care (not retrospective)	√	√				
Review focus on clinical & professional practice safety systems to reliably inform immediate actions for service	√	√			√	
Supporting high incidence of psychological trauma to family and staff	√	√	√	√		
Multiple, multi-disciplinary professional follow-ups with families during the review period, especially after a bereavement	√	√	√			
Actions focus on improving guidance, training, professional practice and standard operating procedures (SOPs)	√	√				√
Higher incidence of duty of candour	√	√	√	√		√
Supporting families planning future pregnancy		√	√			

Supporting Implementation: Strategic Partners

Scottish Perinatal Network (SPN)

In December 2021, the Scottish Government commissioned the SPN to support the perinatal community to implement the new guidance in five ways (detailed in SG perinatal SAER guidance section 4.c.6 *Capturing and sharing learning from adverse events*):

1. Develop a 'safe space' learning forum on MS Teams and a corresponding 'collaboration space'
2. Facilitate regular case review events at which Boards can present, discuss and share learning (quarterly or 6-monthly)
3. Facilitate tailored learning opportunities, as requested, following particular incidents or events.
4. Develop a process to 'Buddy-up' smaller with larger Boards for peer support and to add structure to request for external reviewers.
5. Establish a perinatal SAERs working group through which to support implementation of the framework, provide peer support, and share learning and best practice.

The SPN would do this in collaboration and alignment with strategic partners leading on other Scottish Government commissioned elements of the framework, including:

- HIS Adverse Events network around broader national processes and structures
- NHS Education for Scotland (NES) and Effective Communication for Healthcare (EC4H) around training and education for staff involved in event processes
- Scottish Patient Safety Programme (SPSP) Perinatal (previously MCQIC) which leads work around reducing stillbirths, maternal deterioration, variation in caesarean section and reducing neonatal mortality and morbidity
- National Bereavement Care Pathways Scotland (NBCPS) around pregnancy loss, termination, stillbirth, neonatal death and sudden unexpected death in infancy (SUDI)
- Sands around communicating with bereaved families

As work on these 5 SPN outcomes progressed, it became increasingly clear that collaboration alone would not result in national consistency. The parallel workstreams being delivered by multiple strategic partners also required national co-ordination. This co-ordination has been provided by the SPN programme team from existing resource in response to identified need.

1. Establish a perinatal SAERs working group through which to support implementation of the framework, provide support, and share learning and best practice.

The first meeting of the SPN SAER Group took place on 17 December 2021 and has met quarterly since. Appetite to better understand the current landscape around perinatal SAER processes nationally and identify themes for improvement and shared learning has been consistent. The group has over 65 members from across the perinatal community and is facilitated by the SPN Programme Team. Most members have senior and strategic influence and decision-making authority for their Board's perinatal adverse event processes or are actively involved in them. Membership also includes colleagues from partner organisations

such as NES, HIS, Sands, National Bereavement Care Pathway, to promote joined-up collaborative approaches and avoid duplication of work.

2. Develop a 'safe space' learning forum on MS Teams and a corresponding 'collaboration space'

An SPN SAER Group channel on MS Teams was established in December 2021, and includes a private discussion channel and collaboration space. It has over 60 members with strategic roles in supporting perinatal SAER processes. While meeting attendance and engagement has remained good, uptake of the underpinning Teams channel has so far been poor. In parallel, the HIS Adverse Events Network has developed a Community of Practice on SharePoint which has similar objectives, and scope to dedicate a bespoke section of the portal to perinatal colleagues. The SPN Programme Support Officer (Anne-Sophie Hoffmoen) has been invited to attend HIS training in administration of the new Community of Practice, and it is anticipated this will prove to be a better solution. It is expected to go live this financial year (likely to be December 2023).

3. Facilitate regular case review events at which Boards can present, discuss and share learning (quarterly or 6-monthly)

To date SPN have coordinated three Board-specific case review Shared Learning Events:

- NHS Lothian in May 2022
- NHS Ayrshire & Arran in December 2022
- NHS Lanarkshire in June 2023.

A fourth event in August 2023 was *A conversation with Charlotte Bevan*. Charlotte showcased Sands and PMRT resources tailored to support communication with bereaved families, underpinned by Sands' service user research. A learning summary was shared with attendees after the event and will shortly be published on the SPN website.

NHS Grampian will present in December 2023 and NHS Highland early in 2024.

Feedback on these events has been positive. Presenters and attendees have valued the opportunity to honestly reflect on processes and practice and discuss learning, challenges and best practice as a national group. The events have been recorded and are available to NHS colleagues on request. The new HIS Community of Practice will have controlled membership permissions, and hosting recordings there is being considered.

Facilitation of the learning events has so far been provided collaboratively by Edile Murdoch, as chair of the perinatal SAER group, and the SPN programme team from existing resource. Maintaining the programme is time consuming and involves ongoing:

- Promoting learning sharing opportunities and encouraging volunteers
- Complex scheduling of multiple cross-specialty clinical diaries of presenters
- Meeting with presenters to discuss and reassure about content, format, practicalities, focus on system and processes and avoidance of judgement or blame.
- Promoting events, answering questions, managing attendance
- Event facilitation, technical support for presenters
- Evaluation, writing and sharing learning summaries and incorporating feedback to support continuous improvement in the next event
- Podcast and animation learning sharing options are being explored with NES.

The SPN remit in support of the SAER programme of work is on a project basis, focussed on identifying and designing support systems to help Boards deliver perinatal SAERs. Continued reliance on SPN programme team resource will not be sustainable long term in the context of the wider SPN work programme and remit. SPN is also currently not baseline funded, which is a risk to the sustainability of the programme.

4. Facilitate tailored learning opportunities, as requested, following particular incidents or events.

Effective Communication for Health (EC4H) is a communications training programme hosted by NHS Lothian, which facilitates training on some elements of the SAER process, such as principles of Being Open and the Key Contact role (aimed primarily at Community Midwives). Training is usually available only to partner Boards who provide funding for courses to run for their own staff, however in her capacity as Chair of the SPN SAER Group, Edile Murdoch negotiated for EC4H to host a series of 7 sessions so far, free to attend and open to colleagues across NHS Scotland. These have so far been delivered from existing EC4H resource and through goodwill, promoted via the SPN's monthly newsletter and emails to Heads/Directors of Midwifery requesting cascading to frontline colleagues.

5. Develop a process to 'Buddy-up' smaller with larger Boards for peer support and to add structure to request for external reviewers.

This scoping exercise identified current arrangements for shared support between smaller and larger boards. These are currently informal and would benefit from Service Level Agreement (or similar) structure and consistent definition.

Current arrangements for shared support	
NHS Borders	NHS Lothian
NHS Highland (Argyll & Bute)	NHS Greater Glasgow & Clyde
NHS Highland (North)	NHS Grampian
NHS Orkney	NHS Grampian
NHS Shetland	NHS Grampian
NHS Western Isles	NHS Greater Glasgow & Clyde
Proposed new arrangements for shared support	
NHS Dumfries & Galloway	NHS Lanarkshire

A new partnership is proposed between NHS Dumfries & Galloway and NHS Lanarkshire, and possibly in some way between NHS Ayrshire & Arran, Tayside, Forth Valley and Fife if they would welcome a more formal peer support arrangement (these Boards are similar in size and in performance against the framework and guidance).

Healthcare Improvement Scotland (HIS)

The following overview of opportunities to collaborate has been provided by Moira Manson, Senior Reviewer within the Quality Assurance and Regulation Directorate of HIS. It responds to SG perinatal guidance section: 4.c.6 *Capturing and sharing learning from adverse events.*

Standardisation of the reporting of adverse events (AE)

As part of the national programme of standardisation of adverse events (all levels,) one of the priorities was agreeing a national data set for maternity/perinatal AE. In addition to the data standardisation subgroup, the draft of the national data set was shared with members of the SPN SAER group. Their feedback helped inform the work.

Adverse Events Framework Revision

Work began in October 2022 to revise the current national AE framework. 14 Focus groups took place during Summer 2023 and the outputs can help inform the review of the Maternity and neonatal (perinatal) adverse event review guidance alongside the SPN scoping work. The overarching framework revision focuses on these key areas.

- Patients, families and carers at the centre of the review process
- Psychological safety of staff – Support systems
- Timeline of commissioning, the review and sign of SAERs
- What does a quality national SAER report look like
- Systems for learning

This work continues to develop via the adverse events network which meets every 2 months. It is anticipated that the Maternity and Neonatal (perinatal) adverse event review guidance will be an additional supplement to the revised AE framework. Timescales for delivery are uncertain due to organisational re-structure within the Quality Assurance and Regulation Directorate at HIS. However, the work has a commitment from all NHS boards to collaborate towards a national approach and will be prioritised. Laura Brown has been invited to sit on the adverse events network to support communication flow and collaboration.

Learning systems – Adverse Events Community of Practice (CoP)

The pilot of the new AE CoP started in May 2022. This SharePoint site, hosted on MS teams includes an AE toolkit and some work with partner organisations. There is also an NHS board discussion space where risk and governance leads can ask questions and share ideas regarding their own local processes and share knowledge. Meeting minutes, agendas and events are also hosted here.

On 30 November 2023 the national AE learning platform will be launched which will be a key area of this site. Each NHS board (all territorial and national boards) will have their own specific ownership area of the site where learning summaries will be uploaded to encourage national learning alongside other valuable information which may be of interest to other boards.

Work of the Scottish Fatalities Investigation Unit (SFIU) (where HIS complete a learning summary at their request for specific cases where a discretionary FAI is being considered) will also be shared on this site. Learning sessions and case discussions groups/webinars are also planned with the AE network and wider groups with an interest in AE.

Work is underway with other organisation such as COSLA (National Suicide review process) to have their specific area on the site. The SPN are very welcome to also work with us to have their own space to share their work and add their own membership to this area along with accessing the whole site. This site is available to staff with an NHS e-mail address with membership access agreed by the AE team at HIS

NHS Education for Scotland (NES)

Education and Training

The following overview of opportunities to collaborate has been provided by Tom McEwan, Head of Programme & Principal Educator: Women, Children, Young People and Families within NES. An extensive list of current NES learning resources is at Appendix 2. This responds to perinatal guidance section: 4.b.5 *Supporting staff training and wellbeing.*

In addition to bespoke staff training provided by NHS Boards, NHS Education for Scotland provides a range of resources for NHS staff involved in investigation work and those in leadership/management positions. These include training on learning from safety incidents in complex care environments, building a safety culture and other associated areas. Further details are available within the **Patient Safety Zone** on TURAS Learn. NES also provides:

- The **Human Factors Hub** which will contain a range of new learning resources and courses (face-to-face, online and hybrid). **Some of this is in the development and testing phase.**
- **Safety Investigations and Learning Reviews**- this contains a range of learning resources including capturing organisational learning and systems thinking for safety investigation. **The latter will contain a range of material to support those conducting investigations and learning reviews and is currently in development.**
- Brief introduction to **Human Factors**
- Learning at work week- **What is Human Factors?**
- What is **Systems Thinking**
- **'Why things go wrong and right in complex systems'** e-module
- an **Enhanced Significant (learning) Event Analysis (SEA)** e-module
- entry-level **Human Factors** e-modules
- a **Duty of candour** e-module (which includes a 'train the trainers' component)

In addition to training, it is important that appropriate measures are in place to support the wellbeing of staff during and following involvement in an adverse event review process. It is possible this support could be provided through future collaboration with NES and/or EC4H.

An extensive list of additional learning to support for SAER processes, including perinatal events, (internal and external to NES) is at Appendix 1.

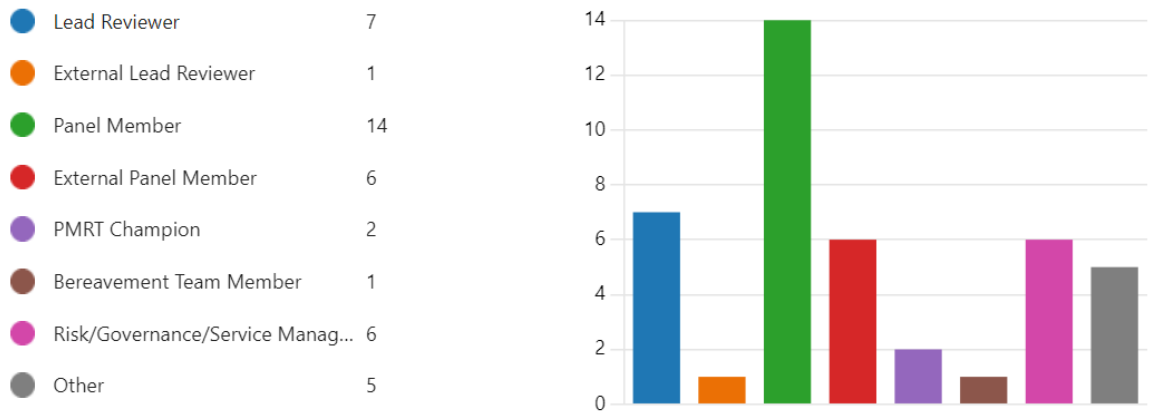
National SAER Scoping Exercise

Process

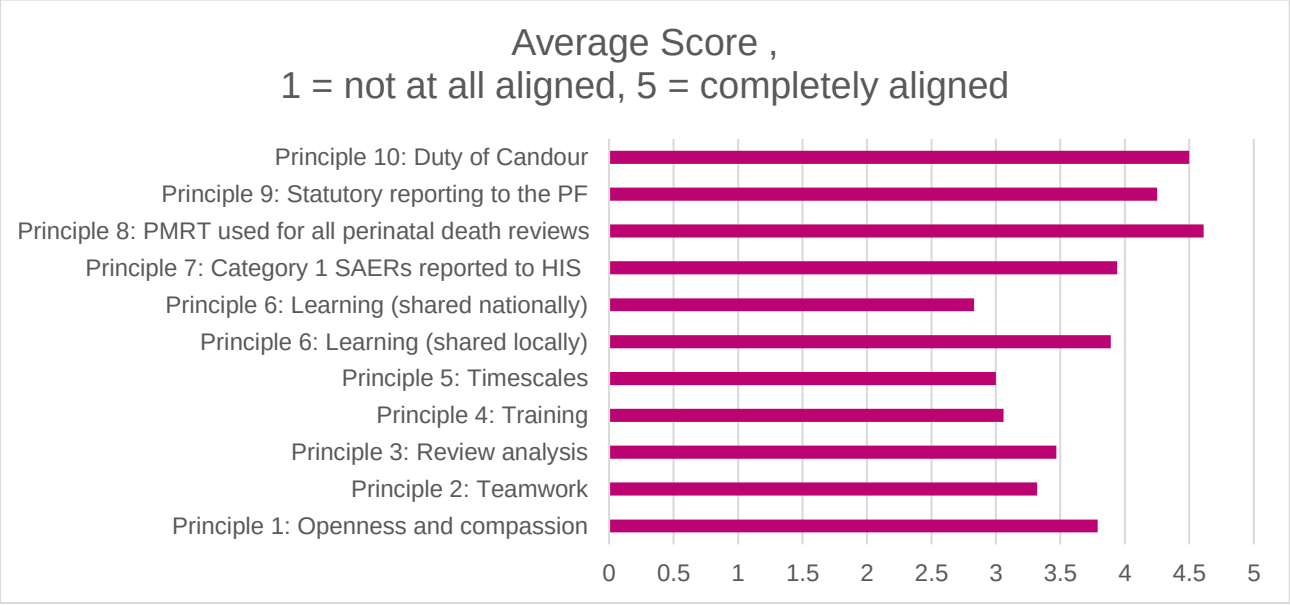
In August 2022 the SPN team wrote to Chief Executives, Medical Directors and Nurse Directors to advise they would soon be approaching senior midwifery, neonatal, and obstetric colleagues to discuss current perinatal SAER processes. On 7 October 2022 the team emailed over 100 senior colleagues in the perinatal community requesting participation in a scoping questionnaire (survey) and subsequent MS Teams meeting. Scoping meetings started with NHS Fife in November 2022 and concluded with NHS Lothian in August 2023.

Survey

Engagement with the survey yielded 20 responses, representing 9 of the 14 regional Boards. Of the 20 respondents, 18 had been a panel member for either an adverse event or perinatal mortality review. Most had been a panel member for both, and in the following capacities:



Participants were asked how well they thought their own Health Board processes aligned with the ten principles from the **Maternity and neonatal (perinatal) adverse event review process for Scotland.** They were asked to rank against the principles from 1 (not at all aligned) – 5 (fully aligned). Respondents all felt their own board was performing at or above average, with particular success in principles 8, 9 and 10. The averages are below.



The remaining questions focused on the six stages of adverse event management as per the HIS National Framework, and how these were delivered. Respondents were also asked to share successes, challenges, and reflect on work already being done in their Boards to align with the guidance. The results from the Scoping Survey and meetings are at Appendix 1.

Local Work Already Being Carried Out

Respondents were given an opportunity to showcase what their departments and Boards had already undertaken or considered in order to increase alignment with the guidance. Examples included:

- Establishing perinatal review groups and oversight teams
- Conducting gap analysis exercises and process reviews
- Utilising existing Board level patient experience teams to help liaise with families
- Regular meetings between risk teams and clinical teams
- Establishing MDT meetings
- Aligning terminology
- Attending Being Open training sessions (via EC4H)
- Making changes to how SAERs are commissioned for different categories

In Their Own Words – Successes

When asked whether they had any learning about implementing the guidance other Boards might benefit from, responses included:

- Establishing a strong model to support parents which includes a bereavement support service offering counselling from British Association for Counselling and Psychotherapy (BACP) registered staff
- Developing a business case for lead reviewers and Clinical Governance Managers to have allocated time to support SAER's (dedicated staff time was mentioned often)
- Standardising perinatal process with other Directorates within the Board
- Cooperative perinatal working from the start of the process
- Developing guidance about panel composition and standardising triggers for SAERs

In Their Own Words – Challenges

Respondents were asked about their key challenges in implementing the framework and perinatal guidance. Some themes emerged from the 18 responses:

- Pressures on time and resources (12 mentions)
- Sourcing external panel members (8 mentions)
- Training (4 mentions)
- Engaging with families (4 mentions)
- Lack of dedicated time protected in job plans (3 mentions)

"Main challenge is time. SAER takes a significant portion of time from both the service lead and the external reviewer. Not having dedicated time means difficulty fitting this in with other duties. Having to coordinate that with an external reviewer with the same challenges means meetings can be delayed and timescales are hard to achieve"

Strengths in delivering perinatal SAER processes

Each of the scoping meetings highlighted how staff are working creatively to deliver SAERs in accordance with the HIS Framework and perinatal guidance. All 14 Boards**:**

- Have implemented elements of the HIS pathway and perinatal guidance
- Use the national categories for level 1 SAER
- Achieve early notification of level 1 SAER
- Achieve elements of an early safety check, early safety review, and debrief
- Have generic risk review training available
- Use PMRT for stillbirth review
- Allocate a key contact
- Have a mechanism for shared learning locally, such as newsletter, bulletin, or M&M.
- Identify a clinical manager to meet with the family when Duty of Candour applies
- Recognised local challenges and opportunities and had actively worked to mitigate and capitalise on them

Of the 14 Boards:

- 13 use PMRT for neonatal review
- 13 use the DATIX system
- 13 are achieving the HIS 10-day timeline for commissioning reviews

Examples of Effective Service Delivery

The following examples seemed particularly effective, likely to be transferrable or suitable for national scaling-up at pace:

- Limiting the review process to perinatal adverse event reviews until the full framework is reliably established and only then expand to include other services (such as Paediatrics or Gynaecology) if appropriate.

- Integrate risk review process with the Board's quality improvement programme. Services with a joint risk and QI team were more effective in implementing improvements and learning from the risk process.

- "SAER Hot week" rota's clinical managers and leads to be available to support the risk team if a SAER/PMRT happens during that week, in addition to their usual activities. This includes triage of any new SAE and oversight of early safety check and ESR planning e.g., timelines, staff statements, interviews, recollection of events, and supporting commissioning meeting.

- Implement fixed weekly Morbidity and Mortality Multi-displinary Team (MDT) meetings. Services doing this managed the early review process and sharing learning most efficiently and also enabled multi-disciplinary peer support and review. Here is an example structure:

	Morbidity & mortality MDT	**Commissioning**	**Oversight**
Attended by	All staff	• Commissioning group • Director of Midwifery	• Director of Midwifery • Associate Medical Director

		• Associate Medical Director • Obs or Neo Clinical Director • Risk Team	• Obs or Neo Clinical Director • Risk Team • Service Manager
Purpose	• Comprehensive Care Review (CCR) (level 2) • PMRT • SAER • Shared learning	Commissions reviews and appoints panel members	Review progress of review panel, can extend to manage complaints
Flexibility	Can be repurposed for PMRT/SAER panel if needed		

Areas most in need of improvement in delivering perinatal SAER processes

Lead Reviewers

Most Boards struggled to identify adequate lead reviewer time and/or capacity to meet review timelines, and routinely asked only local clinicians and managers to lead reviews. These were mostly Consultant Obstetricians, Neonatologists or Paediatricians. Of the 14 Boards, only:

- 2 have access to lead reviewers with reliable capacity for reviews
- 2 currently use lead reviewers from non-perinatal services, with an experienced maternity reviewer required to co-chair or sit on the panel
- 2 offer midwives lead reviewer training (4 midwives are currently trained nationally)

Of the 14 NHS Boards, only:

- 7 have a review service is limited to maternity and neonatal
- 7 share learning from each level 1 SAER using the HIS template
- 3 provide support from Board level Quality team to organise level 1 SAER
- 2 achieve timely reliable engagement with families throughout the review processes
- 2 are achieving the HIS 90 Day timeline for directorate approval of reviews.
- 2 are achieving the PMRT 120-day timeline for completing reviews
- None report annual review data, outcome and learning locally or nationally
- National variation in risk team and board level adverse event team commissioning

Conclusions of the Scoping Exercise

The scoping exercise demonstrated that Boards are striving to deliver consistent, effective and compliant perinatal SAER processes and there are examples of excellent practice with potential to be shared or scaled-up to national. However, they are unlikely to be able to fully deliver a fully compliant HIS pathway and perinatal guidance through existing approaches and resources, and without national coordination and support. These are the key contributing factors:

1. Capacity and leadership model of the risk review team does not match the demands of perinatal reviews-
2. Significant reliance on informal team processes and relationships
3. Delay in accessing and securing lead reviewers that are trained and have capacity
4. Delay in accessing and securing panel members, particularly external panel members
5. Delays from the administration burden of coordinating timely reviews - complex processes, information and communication to coordinate
6. The Clinical Risk Midwife role has significant administrative burden distracting from formal role
7. Expanded services that maternity and neonatal risk team support, e.g. childrens' and gynaecology
8. Psychological burden on teams and anxiety about blame and external review
9. Minimal specialist training for lead reviewers and communication training
10. Varied support from Board adverse event teams to perinatal risk teams

Risks of continuing to deliver perinatal SAER processes through current approaches:

Families could continue to experience:

- Delays in receiving review reports due to lead reviewer availability or Board approval processes, especially where perinatal risk processes include other services
- Inadequate and inconsistent communications due to stretched team capacity
- Impaired review processes which lack openness, honesty and robustness
- Reviews which fail to answer family questions and inform learning

Staff could continue to experience:

- Risk of burn out from working over capacity and under scrutiny.
    - In smaller Boards risk roles are often combined with others, stretching internal capacity. Accessing expertise can be more difficult
    - In larger Boards case SAER processes are often more complex, with larger and more complex case loads

Boards could continue to struggle to:

- Deliver compliant, efficient and effective local perinatal review processes
- Demonstrate performance, impact and improvements due to unreliable data available on national review processes, outcomes and learning

Key Recommendations

The following suggestions are likely to best support Boards to achieve consistent implementation of the perinatal adverse event review guidance:

1. Additional information on the perinatal process to supplement the HIS pathway.
2. Perinatal adverse event review processes would benefit from a service specification.
3. National SOPs to define minimum standards for reliable delivery of the process.
4. Encouragement to improve national use of DATIX to document all pathway elements.
5. National Lead reviewer and external panel programme to provide capacity.
6. National adverse event data reporting of outcomes, actions and thematic learning.
7. National approach to family engagement that is integrated into the review process.
8. National approach to staff support and feedback.
9. National approach to specialist communication training.
10. Recommended risk team service model and perinatal SAER workforce roles
11. Recommended national perinatal SAER workforce roles
12. Sustainable national coordination of the perinatal SAER programme, delivered collaboratively by multiple strategic partners (SPN, SG, HIS, NES, EC4H, NBCPS).

Proposals underpinning some of these recommendations are expanded below.

1: Examples of additional information on the maternity and neonatal process to supplement the HIS pathway

Process	Pathway Point	Goal	Process	Documentation	Timescale
SAER	Notification	Early agreement on level 1 SAER or perinatal mortality	Notification of level 1 SAER, PMRT	DATIX	End of clinical shift event occurred
	Notification escalation	Early Escalation through Health Board Safety teams	Incident notification system automatically escalate to service directorate and Health Board	DATIX	
OP	Clinical management escalation	Early escalation to clinical and service managers	On call obstetric, neonatal consultant and managers informed and attend to	DATIX Medical record	End of clinical shift

			support operational processes		
SAER/OP	Early Safety Check	Early safety check		DATIX	End of clinical shift event occurred
SAER/BO		Early communication with family	Known facts shared with the family about the event	DATIX Medical record	End of clinical shift event occurred
BO		Early staff support	Known facts shared with staff. Early staff support check and signposting	DATIX	End of clinical shift
SAER/OP		Early record of contemporaneous clinical activity, workforce and environmental factors. Key professionals involved	Record key information on check list	DATIX	End of clinical shift
SAER/		Early Safety Review			
BO	Explain review process to the family	Before a family leaves hospital clinical team should explain the review, process and what happens next. Explain the role of the key contact. Explain which clinician continuity of care. Feed any early information back to the RT			
SAER/BO	DOC	Early DOC concerns to be shared with family			
	Commissioning of the review	The clinical senior management team HOM, CD, DOM, RT should attend Health Board commissioning to provide management and subject matter expertise. There should be a facility to fast track a review			

SAER/BO	Offer meeting with family to discuss first draft of the review a factual accuracy. Share with key staff as well				
SAER/BO	Feeding review back to the family				

3: Suggested National Standard Operating Procedures to support SAER process

i. Early safety and operational responses:

- Agreement of level 1 SAE
- Notification
- Informing clinical and service management team
- Communicating known facts to the family and staff
- Early staff check in
- Early safety check
- Documentation of any work and environmental issues
- Documentation of key staff involved
- Documentation on Datix
- Define roles and responsibilities of LW coordinator, consultant neonatologist, obstetrician, on call manager during the shift when the event occurred.

ii. Procurator Fiscal.

SOP with guidance on which level 1 and PMRT cases are referred to the PF and when.

iii. Early coordination of notification information by Risk Team

- Check notification details, early documentation of early safety check, staff check, work and environmental check and key staff names are recorded on DATIX
- Standardised approach to preparation of a Briefing note
- Documentation of early coordination information on DATIX

iv. Early Safety Review.

This review should form part of the information available for the review and should be shared with the clinical management team and recorded on DATIX. It is an MDT opportunity for peer support. Consider the following to inform early actions:

- Clinical causation
- Clinical practice
- Professional practice
- Actions and documentation on DATIX
- Any professional action for staff recorded on staff files

v. Commissioning

Since several level 1 SAER are automatic, commissioning process should have fast track facility especially when there are concerns for Duty of Candour.

vi. **Key contact and clinical continuity team for the family.**
A family can have several different teams or people in contact with them. For example:

- Named consultant
- Community midwife
- Bereavement team
- Risk team
- GP and/or Health Visitor.

A pathway describing how to coordinate communication with a family's primary and secondary healthcare team throughout the review process supports consistency and clarity. Details should be recorded on DATIX and the patient's clinical record.

vii. **Terminology.**
Define standardised terminology to be used in the review process, e.g., SAE/SI.

viii. **Feeding back to families.**
SOP to define approach to this to improve consistency and quality of family experiences.

ix. **Shared learning.**
SOP for minimal shared learning approaches from level 1 SAER and PMRT.

x. **Governance.**
SOP on the reporting and governance structures for information from the review process.

5: Lead Reviewer and external panel member training and capacity

This review estimates 100 trained Lead Reviewers are needed to deliver adverse event review processes for all level 1 SAER and level 2 PMRT reviews in Scotland. The SPN SAER Group highlighted that there are currently no mechanisms for Boards to know whether an external panel member has an equivalent level of training to local panel members. Training of Lead Reviewers and panel members was raised consistently throughout the scoping exercise there is national appetite for a centrally managed Lead Reviewer training programme, based on the 3-week HSIB model and led by NES, which includes a national:

- Role description
- Maintained register
- Process for Boards to access or be allocated a Lead Reviewer.

9: Specialist training in communication with families and staff through the review process (Being Open)

EC4H directors were part of the HIS Being Open pilot team working with NHS Lothian in 2015 and NHS Ayrshire and Arran 2016. EC4H co-developed communication training courses for staff and teams involved in adverse event reviews. EC4H:

- Is a communications training programme hosted by NHS Lothian,
- Uses a psychology informed training approach which is aligned to bereavement and trauma informed care, adverse event scenarios and simulated patients
- Has licenses with other Boards to deliver a range of communication training workshops and webinars for healthcare staff

- Courses are delivered by local tutors and are already routinely delivered in NHS Lothian, Ayrshire & Arran and Tayside
- Collaborated with the Scottish Perinatal Network to deliver a 'Key Contact' webinar in September 2022, which evaluated well, and an annual programme has since developed.
- Training is available on the following topics:
    - Key contact support
    - Early Staff support
    - Explaining review processes to the family
    - Feeding back review findings to the family
    - Being Open during adverse events for inpatient midwives
    - Being Open through whole review process

10: Risk Team service model

This review considered deliveries per annum by board data but appreciated these may not account for cross boundary flow birth numbers, such as where mothers were transported and gave birth in units outwith their local Board areas.

NHS Board	Total Deliveries
NHS Greater Glasgow & Clyde	10531
NHS Lothian	8124
NHS Lanarkshire	6118
NHS Grampian	4958
NHS Tayside	3329
NHS Ayrshire & Arran	2850
NHS Fife	2837
NHS Forth Valley	2488
NHS Highland	2343
NHS Dumfries & Galloway	1068
NHS Borders	789
NHS Western Isles	188
NHS Shetland	165
NHS Orkney	129

Parallel Risk Service models were indicated as optimal for Boards with different populations, since it may be unlikely that any single model could serve all of them well. If this is agreed in principle, more work will be done to agree what the models and boundaries should be. Early thoughts suggest a 4-tier structure. For example:

>8000 deliveries model	Glasgow and Lothian
>4,000 – 8000 model	Grampian and Lanarkshire
2,400 – 4000 model	Ayrshire & Arran, Fife, Forth Valley, Tayside
<2400 'buddy' model	Borders, D&G, Highland, Orkney, Shetland, Western Isles

This is an example of a service model currently working well in Lanarkshire, with potential to be scaled up or down to work for other boards too.

- Clinical Manager Band 8A for governance including risk, QI, complaints, patient experience
- 1x WTE Clinical Risk Midwife
- 1x Band 4 admin
- 1x Obstetric Clinical Lead 1 PA, 1x Neonatal Clinical Risk Lead 1 PA
- 3 obstetric consultants with risk roles e.g., PMRT/ CCR/Training, 3x Neonatologists with risk roles
- 0.2 WTE Clinical Midwife to support PMRT
- 0.2 WTE Neonatal nurse to support PMRT
- All clinical managers and clinical leads have a role in the risk team
- Band 7 across maternity and neonatal teams have at least 1 non-clinical day/week to support clinical governance
- All staff available for panel roles
- Some Health Board support for level 1 SAER

11: National professional perinatal SAER workforce roles

- Develop role descriptions for key roles within a perinatal SAER process with nationally agreed definitions and responsibilities. Examples are CRM, Risk Coordinator, Lead Reviewer, Key Contact.
- Collaborate with professional bodies and organisations to support these roles.
- Defining roles and time required will help service managers to allocate staff time appropriately.
- Support standardised national delivery of reviews and cross-board communication.

12: Sustainable national coordination of the perinatal SAER programme, delivered collaboratively by multiple strategic partners

The Scottish Perinatal Network is a commissioned strategic network which is not baseline funded, nor does it have the authority to mandate change. SPN is unable to guarantee provision of long-term sustainable national coordination of the perinatal SAER programme.

The national Adverse Events Network is hosted by HIS, and is baseline funded. The national adverse events core infrastructure is undergoing redesign and could not currently progress workstreams specific to perinatal SAERs, but it is essential they remain aligned. The following proposal describes short (by the end of 2023/4), interim (until the new HIS core infrastructure is established) and long-term measures through which to achieve integration of the perinatal SAER programme with the HIS Adverse Events programme.

Short term goals – delivered via SPN SAER Group

Current position (Project Scoping Stage)

Starting in September 2021, the SPN programme team has provided Programme Management resource and Edile Murdoch has chaired the SPN SAER Group and multiple workstreams from existing capacity. e following resource to the scoping stage of the project from existing network capacity. EC4H has delivered 7 complimentary Key Contact webinars for community midwives to support the project from existing capacity and resource. The programmed could be developed sustainably if resource is available to support it.

Evelyn Frame has supported the final stages of the perinatal SAER scoping exercise and findings report for Scottish Government. Between November 2023 and March 2024, she will work with Chief Midwifery Officers, Directors of Midwifery and Royal College of Midwives (SMiLe) to support a consistent approach to operationalising improvements to the perinatal adverse event process, as identified by the scoping exercise. This will include:

Midwifery Role Profiles
Midwives are the staff group most likely to support perinatal SAER processes and Boards had asked that clearly defined midwifery role profiles to support national consistency be developed. This will be prioritised.

Shared Learning around templates and documentation
Standardised and structured approaches to perinatal SAER processes from the event through to sharing national learning, are recommended by the national guidance. The scoping exercise identified a variety of templates which supported good practice and Boards were keen to learn and improve national consistency where possible. These resources will be collated, reviewed and synthesised into a toolkit resource for Boards.

Development of supportive proformas – with the aid of an SPN SAER Group short life working group
Boards felt having a proforma at specific parts of the process could be helpful and requested development at national level. The SPN SAER Group will facilitate short life working groups (SLWGs) to progress the work this financial year. For example, to develop:

- A proforma for staff to complete during the shift when the event occurs, to promote consistency around identifying initial actions, documentation and support for staff.
- A Best Practice document to support staff engaging with families and encourage use of existing templates and language guides developed with service user input.
- National standard operating procedures to support SAER delivery. While it would not be possible to develop all 10 suggested SOPs this financial year, the SAER Group will be asked to prioritise 2 and establish high-intensity SLWGs to draft them.

If agreed in principle, complementary workplans will be developed for the Obstetric Special Advisor, SPN SAER Group chair and EC4H.

Long term solution – utilising strategic partnerships with HIS, NES, and Scottish Government to build supportive infrastructure

- Sustainable national coordination of perinatal SAER processes and reporting, aligned with generic SAER processes and reporting (hosted by HIS).
- Learning from other processes in 4 nations, in particular HSIB.
- A national implementation group with terms of reference.
- Strategic partnership and collaboration between: HIS / NES / Scottish Government / SPN / Boards / HSIB / EC4H

Interim proposal

Alignment of the perinatal specific coordination and support with the wider generic SAER processes hosted by HIS is the best option for a sustainable way forward. However, it is understood that in the context of other changes being progressed over the next 2 years, HIS is unlikely to be able to host the national coordination of perinatal SAER processes and reporting in the short to medium term. As such, an interim solution is needed to maintain momentum of this work, building on learning from the scoping exercise and developing a

national support infrastructure for perinatal SAER that can then be adopted and sustained longer term by HIS.

With adequate funding and resource, an interim medium-term plan to support implementation and governance of the new framework could be initiated with effect from April 2024. This would include:

- Interim national coordination
- A national implementation group with terms of reference
- Facilitated strategic partnership and collaboration between HIS / NES / Scottish Government / SPN / Boards / HSIB / EC4H
- Governance through SPN Core Steering Group and Oversight Board
- Scottish Government support and mandate for Boards to engage.

Work Programme	**Lead**	**Support**	**Co Production**
Developing a maternity and neonatal HIS pathway supplement	Edile Murdoch	SPN	HIS Evelyn Frame Alan Cameron
Developing national midwifery and risk team professional roles, responsibilities	Evelyn Frame	SPN	Chief Midwives, RCM
Developing medical risk team roles and responsibilities	SPN	RCM Risk Midwives	SMO
Implementation of integrated SAER - BO model NHSL and A&A completed. 23/24 Fife and Tayside, 24/25 Lanarkshire and D&G	Edile Murdoch EC4H	EC4H admin SPN	Evelyn Frame Alan Cameron
Developing national SOPs from modelling	SPN	Evelyn Frame Chief Midwives, CD Obs	Boards, HIS, NES
Developing a proposal for lead reviewer programme	Alan Cameron	SPN	HIS, NES, SG
Developing national parent resources with SANDS	SPN	SANDS	NBCP
Developing national data reporting from HIS and national templates for risk process	PHS?	SPN	HIS
Establishing national specialist communication training	Edile Murdoch	SPN	EC4H , NES
Continue with national shared learning events	SPN	Edile Murdoch	Boards

Appendix 1

Scottish Perinatal Network Significant Adverse Event Review Group
Scoping Exercise – November 2022 – August 2023

In August 2022 the SPN wrote to Chief Executives, Medical Directors and Nurse Directors to advise they would soon be approaching senior midwifery, neonatal, and obstetric colleagues to initiate discussions about current perinatal SAER processes. On 7 October 2022 the SPN team emailed over 100 senior colleagues in the perinatal community requesting participation in a questionnaire (survey) and subsequent MS Teams scoping meeting. These started with NHS Fife on 15 November 2022 and concluded with NHS Lothian on 25 August 2023.

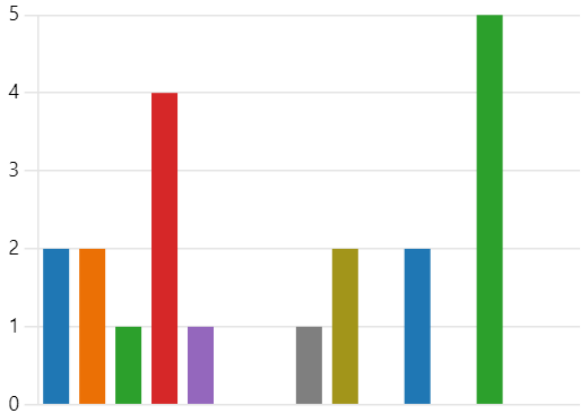
Engagement with the survey was not as successful as hoped and yielded only 20 responses, however these represented 9 of the 14 regional Boards.

A note on consistency: In the course of our scoping exercise nine teams advised they use the term “SAE” for Category 1 reviews, with the remaining five used “SAER”. There is more national variation with regards to Level 2 reviews. Six teams used “Level 2” or “Level 2 Review”, 3 teams would use CCR and another term (either LMR or Briefing note) interchangeably. Other terminology used was Management review; Timeline SBAR; Local Adverse Event Review.

Throughout our scoping exercise we used the terminology SAER for Category 1 Significant Adverse Event Reviews, and Comprehensive Care Reviews (CCR) for Level 2 reviews and continue to use these in this report.

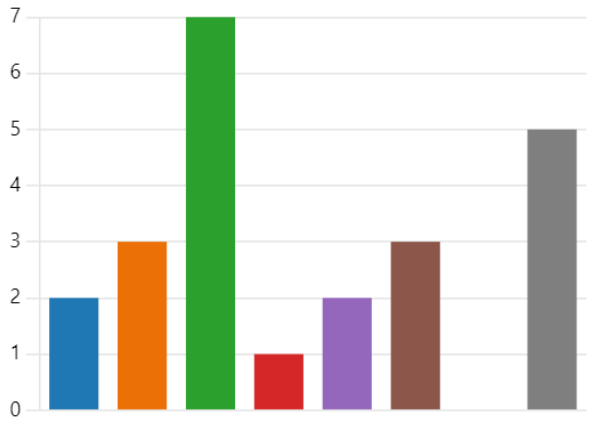
Boards represented in the Survey results:

NHS Ayrshire & Arran	2
NHS Borders	2
NHS Dumfries & Galloway	1
NHS Fife	4
NHS Forth Valley	1
NHS Grampian	0
NHS Greater Glasgow & Clyde	0
NHS Highland	1
NHS Lanarkshire	2
NHS Lothian	0
NHS Orkney	2
NHS Shetland	0
NHS Tayside	5
NHS Western Isles	0
Other	0



Professions of respondents:

Obstetrician	2
Neonatologist	3
Midwife	7
Neonatal Nurse	1
Non-clinical Risk/Governance M...	2
Service Manager	3
Obstetric Anaesthetist	0
Other	5

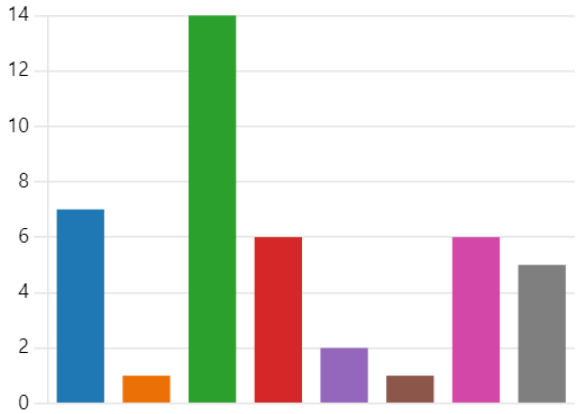


Respondents who have experience in an SAER/PMRT panel role:

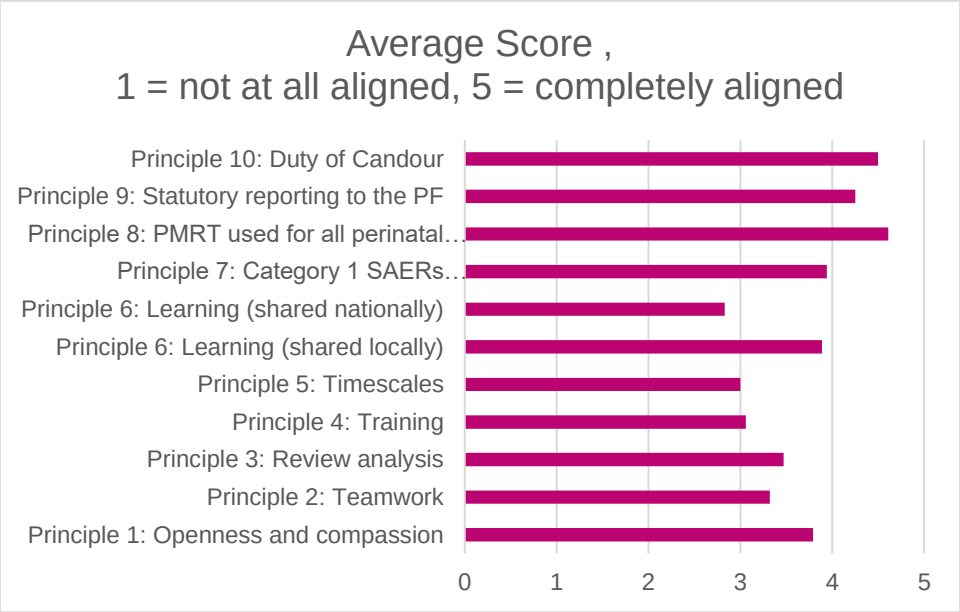
Yes - Level 1 SAER	3
Yes - Perinatal Mortality Review	1
Yes - Both	14
No	2

Panel roles held by respondents:

Lead Reviewer	7
External Lead Reviewer	1
Panel Member	14
External Panel Member	6
PMRT Champion	2
Bereavement Team Member	1
Risk/Governance/Service Manag...	6
Other	5



Participants were asked how well they thought their own Health Board processes aligned with the ten principles from the **Maternity and neonatal (perinatal) adverse event review process for Scotland.** They were asked to rank against the principles from 1 (not at all aligned) – 5 (fully aligned). Respondents all felt their own board was performing at or above average, with particular success in principles 8, 9 and 10. Below are the averages:



Scoping Meetings

Engagement with the meetings was good and with time and persistence meetings with representatives from all 14 regional Boards took place. Through meetings and follow-up conversations we discussed the six stages of adverse event management as per the HIS National Framework and how the teams felt they were succeeding on those principles. We were also led by the voices of the teams we spoke with; we heard about challenges which had inspired innovative and creative solutions, and those proving more persistent.

Risk Assessment & Prevention

All Boards reported preparing a briefing note or SBAR-style document about an event, as well as an early safety review before the commissioning of a SAER. Most were already using DATIX to notify HIS (HIS) of Category 1 reviews, and during the course of the scoping process this shifted to full alignment to DATIX usage across all 14 Boards.

Quote from a survey respondent. “Continual risk assessment and prevention is captured within the daily business of the unit. Unit co-ordinator has situational awareness with escalation to senior team as required. Our quality improvement Midwife is dedicated to the review and progress of all improvement work with innovation as risk arises”

Identification and immediate actions following and adverse event, including consideration of Duty of Candour

12 teams advised that they do complete a safety check at the end of a shift during which an adverse event has occurred, with the remaining two teams saying this would happen sometimes. All teams would perform some form of staff debrief or check in at the end of such shifts but most did not have a formal process or Standard Operating Procedure for this.

> *"Staff involved are expected to address immediate risks and mitigate. Hot debriefs do generally take place with the lead clinicians around at the time taking ownership."*

Initial reporting and notification
All but one team advised that Level 1 SAERs were notified by the end of the shift during which an adverse event occurred. 12 teams advised the staff on shift would enter the details to DATIX, with another two teams specifying a Band 7 midwife would usually do this. All teams reported that there was a notification system which would alert the directorate of an adverse event, though not always carrying on up to the Health Board wide level.

Level 1 SAER and PMRT reporting process:
All Boards advised they use the national categories for significant adverse events, and that they have some form of weekly meeting where SAER/PMRT reports can feature, be commissioned, and followed up. However, for some Boards this meeting may also serve other services (e.g., gynaecology), or have other agenda items/topics. Many noted that briefing notes are usually prepared within 24 – 72 hours, and the majority of these are prepared by a midwifery colleague, whether that be HoM, DoM, CRM, etc. Others mentioned Neonatal Clinical Nurse Managers, professional leads of obstetrics, and risk teams. One Board appointed the Key Contact as part of the reporting and commissioning meeting.

Reporting neonatal deaths and stillbirths to the Procurator Fiscal:
Aside from one Board which had not had a relevant incident since the introduction of the pathway, all reported a low to medium proportion of Procurator Fiscal reports, acknowledging this could be variable. One Board specified they would only report stillbirths and neonatal deaths to the Procurator Fiscal following involvement from law enforcement.

> *"All staff are able to access the Datix reporting system to report events with automated notification to key staff in the organisation."*

Assessment and categorisation, including consideration of Duty of Candour:
All Boards had either had a weekly meeting or could organise a commissioning meeting as soon as one was required. These were typically attended by senior staff from the service, e.g., Head/Director of Midwifery, Lead Clinicians or Clinical Directors, and Clinical Risk Midwife. Additionally, many included service/directorate/Board level risk teams, Clinical Governance staff, Medical and/or Nurse Directors and Associate Medical/Nurse/Midwifery Directors. In a majority of Boards a senior midwifery colleague is responsible for preparing for this meeting using a commissioning template or briefing note, though some Boards also indicated a non-midwife risk team member or other professional lead might produce this.

When asked how they assigned cases for Comprehensive Care Reviews (CCR), of those who specified frequency, 8 respondents advised this would be done at weekly meetings. One said bi-weekly and 2 said as and when required (though one of these also had a regularly monthly meeting which could also be utilised). Meetings typically include members of risk and clinical management teams, with some including clinicians. Briefing notes are used to present cases.

> *"We have criteria that informs staff when an adverse event should be recorded, and the grading of review and professional judgement defines if adverse event requires an MDT."*

Review and analysis:

Organising the review:

We asked teams to detail their review process and analysis methods. 64% advised that typically their Risk Team would organise the review, and all Boards regularly achieved the initial commissioning milestone of reporting within 10 days of the adverse event occurring.

In one Board organising the review is a shared task between the Risk Team and Clinical Managers. Of the Boards in which it is not a Risk Team who organises the reviews, two were organised by the Head of Midwifery, one by the Board Quality Team, and one had their reviews organised by a Clinical Governance Team. Some Boards, particularly the Island Boards, have smaller population and workforce and sometimes a single senior member of staff or broader Board wide construct will lead on these processes.

Most teams advised they would meet the recommended composition of a review panel as per the perinatal adverse event guidance either most or all of the time. Two said they found it challenging. Half were usually able to have an external member on panels, half were not.

All teams advised they use systems and human factor analysis, and they all reported using the Perinatal Mortality Review Tool for reviews of stillbirths and neonatal deaths.

Lead Reviewers:

Most Boards advised that for perinatal SAERs and PMRTs a Lead Reviewer would be found within midwifery, obstetric or neonatal staff. Three Boards sometimes identified a Lead Reviewer from anaesthetics, their risk team or senior patient experience/safety team. One Board used a pool of trained bank staff from a variety of services (including perinatal).

Of the nine Boards who reported having midwife Lead Reviewers, seven had included protected time to carry this out into the role description. Two had provided their midwife lead reviewers with specialist lead reviewer training, with one respondent advising they had this training from a previous role outside of NHS Scotland. Through this exercise we have tallied that there are 26 midwifery colleagues able to lead a review.

Nine Boards have obstetricians who are trained to carry out the Lead Reviewer role. Eight Boards dedicated time to this, six said it was included within the job role. One Board advised specialist lead reviewer training had been given. Although one Board did not specify the number of obstetricians who are lead reviewer trained, we counted 37 across Scotland.

Six Boards had neonatology colleagues who would lead a review, of which three Boards provided protected time, two as part of their job role. One Board had provided specialist lead reviewer training. As with obstetricians, one Board could not specify the number of neonatologists who were trained to lead reviews; we counted at least 14 across Scotland. s.

At least 77 members of staff across the perinatal community in NHS Scotland who are trained to their Board's standards in leading SAER or PMRT reviews.

Timescales:

While all Boards reported initial commissioning would take place within 10 days of the adverse event occurring, 10 Boards found completing a SAER within 90 days challenging and often did not reach this target. This was often attributed to delays in the sign-off stage. Three teams advised they would complete most reviews within 90 days, another said it varied depending on whether the lead reviewer had protected time or not.

Similarly, eight Boards reported challenges in completing a PMRT review within 120 days, with four advising they achieved this the majority of the time. In this instance delays in receiving a post-mortem report, delays in sign-off, and lack of protected time for reviewers, were the common reasons cited for inability to observe the timeline.

> *Link in with Clinical Governance team and a template is followed to role and responsibilities of Lead reviewer. Terms of reference for scope of review are set. We would endeavour to undertake all reviews externally to ensure objectivity."*

Improvement planning and monitoring

Most Boards reviewed recommended actions at a formal monthly clinical governance meeting. Two held weekly assurance meetings where recommendation implementation was monitored. One Board also reported this to a quarterly Board-wide clinical governance meeting in addition to more frequent directorate level meetings. One Board advised recommendations would be reported and monitored via an MDT meeting chaired by their Medical Director. Midwifery and clinical management colleagues were most often responsible for implementing the recommendations.

> *"Learning shared via 'risk alerts', quarterly newsletter, team meetings, weekly safety huddle and monthly group clinical supervision. Monthly senior midwives' meetings and quarterly maternity governance and improvement group review improvement planning and monitoring."*

Other topics discussed:

Engaging with families

All teams had a process for organising engagement with families. Most were flexible in who was assigned to the Key Contact role for the family, but it was usually a community, senior or specialist midwife. In two Boards this might be a Head of Midwifery, in others it could be clinical managers, clinicians with whom the family already have a connection, or the Lead Reviewer themselves. Some Boards noted that in the event of a case coming under high scrutiny, the Key Contact role might be assigned to professional leads, senior managers, or with the assistance of Board representatives. One respondent advised that where Duty of Candour was triggered, the Medical Director would be the main contact for this.

Midwifery colleagues were the primary staff category across all Boards who were responsible for collating questions for the families and keeping in touch (as Key Contact) throughout the review process, though this would also include clinical managers and risk teams. The method of contact is mostly driven by the family's wishes, usually through telephone calls, letters, or email communication.

When it came to feeding back the final review report, all teams advised they would centre this around family wishes, though many referenced meetings with the families as an initial suggestion. Eight respondents advised the Lead Reviewer would be the main contact to feed back the review, often in combination with a senior midwifery colleague and the key contact. Some Boards also mentioned clinical managers, Board level clinical governance teams, medical directors, and local patient experience/engagement teams.

> *"To date this has been done by consultants +/- bereavement support/counsellors. We have recognised the potential conflict of interest and are putting in a model with a role descriptor using members of the senior nursing team. Maternity locally have a good model for this which we have taken lessons from."*

Training
Everyone reported generic risk review training was available at Board level. Eight Boards said most of their staff who might sit on a panel had taken advantage of this, and three said a moderate number had. One team said there was low uptake, with a further two Boards didn't know. Only two Boards had local lead reviewer training available.

We asked teams to estimate what proportion of staff who are responsible feeding back reviews to families had training to do this. Eight of them advised that none of their staff had, five said "a few", "not many", or "medium", and one Board said 100%. Nearly half of teams did not use any other recognised training resources. Those who did had used Effective Communication for Healthcare (EC4H), Healthcare Safety Investigation Branch (HSIB), Sands / National Bereavement Care Pathway (NBCP), and an independent training provider. One team was utilising the training programme of another NHS Scotland Board.

> *"No specific panel member or lead reviewer training. I have led on perinatal mortality review for a number of years and have tried to develop my skills in this area by attending relevant training e.g., on human factors."*

Learning:
All teams have different mechanisms of sharing learning locally, many using more than one. Eight boards used a shared learning summary based on the HIS template. Other methods included newsletters, bulletins, and other targeted local messaging. Some shared learning via morbidity & mortality meetings or other forums, and some arranged to share cases at quarterly or bi-annual learning events. Personal feedback is also given.

All wished to foster a culture of learning and openness and felt they were taking steps to achieve this. Colleagues in NHS Orkney, NHS Shetland, and NHS Western Isles, while not having a high volume of cases meriting Category 1 reviews, use reviews of routine transfers to mainland Scotland to seek learning and improvement opportunities, and noted a good relationship with ScotSTAR was a key element to this.

All Boards have at least one representative on the SPN SAER Group and have access to meeting notes and recordings of the groups Shared Learning Events.

Appendix 2

Additional learning to support SAER processes (internal and external to NES)

Resilience Engineering

- Blog - Increasing the adoption of resilience engineering in healthcare – overcoming practical and systems challenges (YouTube)
- Resilient Healthcare (YouTube)
- Safety-I, Safety-II and the resilience of health care: 3rd Patient Safety Global Ministerial Summit (Prof Jeffrey Braithwaite) (Youube)
- The problem with making Safety-II work in healthcare (BMJ)
- Sustainable Ergonomics (Prof Jeffrey Braithwaite) (YouTube)
- Podcast: Safety is never about behaviour alone (Prof Ken Catchpole Trevor Dale)

Human Factors Tools

- BowTie Analysis: https://learn.nes.nhs.scot/60928
- SEIPS: https://learn.nes.nhs.scot/61144
- Capturing Organisational Learning: https://learn.nes.nhs.scot/60945
- Systems Thinking in Incident Investigation: https://learn.nes.nhs.scot/60944
- FRAM (4 short modules): https://learn.nes.nhs.scot/65347
- Hierarchical Task Analysis: https://learn.nes.nhs.scot/62272
- Hierarchical Task Analysis to Optimising Human Performance (Dominic Furniss)
- Link Analysis: https://learn.nes.nhs.scot/62289
- Quality Improvement: The Human Factors Perspective:
- NASA TLX (5-minute Video): Cognitive Work Analysis: Part 1, Part 2, Part 3
- Card Sorting
- www.england.nhs.uk/Walkthrough-analysis-v1.1.pdf
- Undertaking Remote Walk-Through-Talk-Through Analysis
- Swim Lane Diagrams: https://www.youtube.com/watch?v=6L1z2YTC7ZY
- Safety culture discussion cards
- User Interviews: https://www.nngroup.com/articles/user-interviews/
- Workshop Facilitation: https://www.nngroup.com/articles/workshop-facilitation-101/
- Open-Ended vs. Closed-Ended Questions in User Research
- Tips for Creating Qualitative Surveys

Human Factors in Safety Investigations

- Why it's important that we learn from incidents (Dr Dawn Benson, HSIB) (youtube)
- Captain Hindsight: https://www.youtube.com/watch?v=gdbjw27QPJQ
- Investigation Science (Dr Dawn Benson, HSIB): https://learn.nes.nhs.scot/65334
- Competencies capabilities of prof Healthcare Safety Investigator Dawn Benson HSIB
- The Future of Healthcare Investigation:
- Traps to Avoid in Safety Investigations (Paul Bowie, Newsletter Article):
- Accident Models: Past, Present and Future in Healthcare:
- Investigation Report Writing: https://learn.nes.nhs.scot/64069
- Investigative Interviewing: https://learn.nes.nhs.scot/62291
- Learning From Incidents: https://learn.nes.nhs.scot/65309
- Systems Thinking in Incident Investigation: https://learn.nes.nhs.scot/65311
- Psychological Safety: https://learn.nes.nhs.scot/65229
- Is your workplace a ‘psychologically safe’ environment?

- Patient Safety Incident Response Framework (PSIRF) oversight: a shift towards engagement and empowerment:
- Systems Thinking - A New Direction in Healthcare Incident Investigation (youtube)
- Safety Differently: The Movie https://www.youtube.com/watch?v=moh4QN4IAPg
- Safety differently: ep83-does-language-in-investigations-influence-recommendations
- The Safety at Work Podcast-what-is-safety-clutter
- Learning From Adverse Events - My breakdown of the white paper by CIEHF
- Safety Clutter with Andrew Barrett:
- A Safety-II approach to investigations with Mark Alston
- The 5 Principles of Human Performance (Todd Conklin):
- Safety Moments (Todd Conklin Podcast): Investigations Learn Corrective Actions Fix
- Safety Differently is a Philosophical Change:
- Zero has a cost: https://www.youtube.com/watch?v=-J_QPghXB8M
- Drift: https://www.youtube.com/watch?v=yx6KqQjlPqs
- It's easy to follow rules when it is easy to follow rules
- Risk requires nerve: https://www.youtube.com/watch?v=mnuR1kD8WEQ
- Things are not always what they seem:
- Hazard Identification is only half the job:
- We Fail Safely: https://www.youtube.com/watch?v=3qyBAHqzSeg
- Rewarding Near Misses: https://www.youtube.com/watch?v=IITNcPb-ovA
- Cardinal Rules: https://www.youtube.com/watch?v=Mm-mt3nE_GU
- Do we need a Safety Department? https://www.youtube.com/watch?v=Gr-Q1voq1Zw
- The dance between compliance and initiative
- Leadership Requirements: https://www.youtube.com/watch?v=5HY54VYaCRk
- Accountability: https://www.youtube.com/watch?v=-dlhmrvGLcE
- The Changing Way We View Workers youtube
- Blame Vs Understanding: https://www.youtube.com/watch?v=F32lPpkSc0E
- Failure or Success: https://www.youtube.com/watch?v=3DAIGX7WKXQ
- Don't Wait for Failure: https://www.youtube.com/watch?v=b3egGumbOBc
- How Leaders React: https://www.youtube.com/watch?v=1PovN-DQnxE
- Mistakes are Normal: https://www.youtube.com/watch?v=iWgJb4A0E64
- Success is a Bad Teacher: https://www.youtube.com/watch?v=FwpodUZhsj8
- Time to think Time to work: https://www.youtube.com/watch?v=-wunTwWI4_I
- Try Harder, Care More: https://www.youtube.com/watch?v=wd5xvco2Wms
- Three Competencies for Senior Leaders
- In complex systems it is the interaction
- Who Failed to What Failed: https://www.youtube.com/watch?v=12DmNy0DmRc
- Weak Signals: https://www.youtube.com/watch?v=cf-VDzQgFDE
- The Solution for Complexity: https://www.youtube.com/watch?v=auN5yu49YNU
- You don't know what you don't know, and you don't know you don't know it
- Death Hides in Normal Work: https://www.youtube.com/watch?v=ERO5FCYjqrg
- Why you can't have it both ways: https://www.youtube.com/watch?v=i0HiYA80RYw
- Why Workers Don't Fix Problems: https://www.youtube.com/watch?v=8ioRKfDGdzI
- Safety as a Common Good: https://www.youtube.com/watch?v=f_nIyWB1Y3M
- Two views on Human Error (Johan Bergström):
- Three analytical traps in accident investigation- (Johan Bergström):
- The Problem with Human Error (Steve Shorrock)
- Learning from Adverse Events

- The problem with root cause analysis: https://qualitysafety.bmj.com/content/26/5/417
- The problem with '5 whys': https://qualitysafety.bmj.com/content/26/8/671
- Restorative Just Culture (Dekker, 4 Modules): https://learn.nes.nhs.scot/61008
- Just Culture: The Movie https://www.youtube.com/watch?v=bu9yhdOegm8
- Restorative Just Culture (Sidney Dekker):
- Healing After Harm: A Restorative Approach to Incidents - Jo Wailling

Human Factors for Clinical Professions

- Human Factors Applied to Paramedic Practice: https://learn.nes.nhs.scot/62255
- The value of Human Factors for Paramedics:
- Embedding Human Factors in a critical care environment:
- Human Factors in nursing leadership:
- Human Factors in anaesthesia: https://www.youtube.com/watch?v=VSFFQU9RZvg
- User-centred design as part of Human Factors
- Team Steps 11 short videos
- Human Factors Ergonomics for Primary Care (Paul Bowie Shelly Jeffcott)
- The contribution of Human Factors & Ergonomics to the design and delivery of safe future healthcare (Mark Sujan, Laura Pickup, Paul Bowie, Sue Hignett, Fran Ives, Helen Vosper, Noorzaman Rashid)

Human Factors Education for the Healthcare Workforce

- Improving Health and Social Care (Dr Alexandra Lang)
- Who should be trained in Human Factors? (Paul Bowie)
- Why We Shouldn't Teach Patient Safety (Al Ross)
- human-factors-designing-for-people
- Healthcare Learning Pathway (Prof Sue Hignett): https://learn.nes.nhs.scot/65339
- Integrate Human Factors principles within clinical education (Vosper, Hignett, Bowie)
- Integrating Human Factors Health and Social Care: CIEHF White Paper (Hignett)
- Ergonomics makes things (Prof Sarah Sharples): effective usable Defined
- The Value of Ergonomics: https://www.youtube.com/watch?v=utYtFIQmg04
- Ergonomists Describe their Work: https://www.youtube.com/watch?v=lZ-QODsBb3c
- Pushing the boundaries of Human Factors - An interview with Professor Paul Salmon
- Work-related violence in hospital settings Systems Thinking approach (Paul Salmon)
- CIEHF Professional Competencies Checklist
- Careers in ergonomics & human factors (Dr Jeanette Edmonds):
- Building Capacity & Capability in Human Factors (Paul Bowie and Helen Vosper)
- Coping with Complexity
- Equality, Diversity & Inclusion – How Human Factors Can Make a Difference
- Human Connection I (Case Studies): one and two
- e-Book - Making human factors and ergonomics work in health and social care: Chapter 1, Chapter 2, .Chapter 3

Risk Management

- Risk assessment in Health and Social Care
- Proactive Risk Management: Straddling Safety-I/II
- Safety-netting advice in primary care:
- Risk Assessment in Primary Care: https://learn.nes.nhs.scot/51942
- Johan Bergström "What, Where And When Is Risk In System Design?

- Managing the risk of organisational change:
- Human Factors in Barrier Management
- What is reasonably practicable
- Risk Acceptance 1 – 7 - Introduction Absolute risk Relative risk Trade-offs ALARP Implied acceptability Fiat
- Does risk assessment reveal risk?
- https://safetyrisk.net/
- What is safety

Situation Awareness

- Life After 'Human Error' (Steven Shorrock)
- Integrating Human Factors within org change, imp, transformation (Bryn Baxendale)
- Culture change in health settings (Prof Jeffrey Braithwaite)
- Implementation Science in Healthcare (Prof Jeffrey Braithwaite)
- A story of safety 2
- The Power of Civility in Healthcare (Dr Chris Turner)
- When Rudeness in Healthcare Teams Turns Deadly (Dr Chris Turner)
- "Independent" Double Checking in Healthcare (Leah Konwinski)
- Complexity science in healthcare: aspirations, approaches, applications and accomplishments: a white paper

Blogs

- The importance of equipment design in patient safety (Laura Pickup, HSIB)
- New opportunities for risk management (Dr Jonathan Back, HSIB)
- Integrating restorative justice into patient safety investigation (Paul Bowie)
- Maintaining family involvement in the face of winter pressures (Louise Pye)
- How Complex Systems Fail (Richard Cook)
- Human Factors: A Better Depth of Explanation

Websites:

- Patient Safety Learning: https://www.patientsafetylearning.org/
- Clinical Human Factors Group: https://chfg.org/
- NES Human Factors Hub: https://learn.nes.nhs.scot/21394/human-factors
- Civility Saves Lives: https://www.civilitysaveslives.com/podcast

Publication: Twelve tips for students who wish to write and publish