NMPA

National Maternity & Perinatal Audit

Annual Clinical Report

Based on births in NHS maternity services in England, Scotland and Wales during 2023

Alarm-level Outliers and Trust/Board Responses

Published September 2025

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE
RCPCH Royal College of Paediatrics and Child Health Leading the way in Children's Health
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Royal College of Obstetricians & Gynaecologists
HQIP Healthcare Quality Improvement Partnership

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Introduction

This document provides a summary of the outlier policy for the National Maternity and Perinatal Audit (NMPA), as well as a list of the alarm-level outlier trusts/boards, those for whom the outlier status has been removed following a review of their data quality, and the trusts/boards that were non-participatory in the outlier process because of data quality. These lists can be found in appendix 1; appendix 2 includes documents provided by a number of trusts/boards in reponse to their outlier status, including what they found when interrogating their own data and some oportunities for clinical and/or data quality improvement.

The outlier process aims to facilitate clinical improvement and reduce variation in practice by using audit data to identify areas where improvement is required.

The policy sets out:

- How data provided to the NMPA will be analysed to detect potential outliers (NHS maternity service providers that have a result for a specific indicator that falls outside a predefined range).
- How the NMPA team will engage with NHS maternity service providers that are identified as potential outliers.

This policy relates specifically to the analysis of births in NHS Maternity Services in England, Scotland and Wales during 2023. It has been reviewed and updated in line with the NCAPOP Outlier Guidance which was updated in January 2024, and is published on the HQIP website.

Choice of indicators for outlier reporting

The NMPA indicators measure a range of processes and outcomes of maternity care. These indicators were selected on the basis of a number of criteria,[1] including that they need to:

- be valid and accepted measures of a provider's quality of care
- meet feasibility and data quality standards – that available information can correctly identify the required women/birthing people and babies, and their associated features and outcomes
- be fair – it should be possible to accurately adjust for the differing case-mix of women and babies between participating data providers
- occur frequently enough to provide sufficient statistical power for analysis to identify outlying performance

[1] Geary RS, Knight HE, Carroll FE, Gurol-Urganci I, Morris E, Cromwell DA, van der Meulen JH. A step-wise approach to developing indicators to compare the performance of maternity units using hospital administrative data. *BJOG*. 2018;125(7):857-865 [https//:doi.org/10.1111/1471-0528.15013]

The indicators selected for outlier reporting were chosen because they represent adverse outcomes for women/birthing people or babies with potential serious or long-term effects. The indicators included in the outlier reporting for the NMPA Annual Clinical Report for births in 2023 are:

1) Proportion of women and birthing people giving birth vaginally to a singleton baby between 37^{+0} and 42^{+6} weeks of gestation, who experience a third or fourth degree perineal tear
2) Proportion of women and birthing people giving birth to a singleton baby between 34^{+0} and 42^{+6} weeks of gestation, who have a postpartum haemorrhage of 1500 ml or more
3) Proportion of liveborn, singleton babies born between 34^{+0} and 42^{+6} weeks of gestation, with a 5-minute Apgar score less than 7

The level of reporting for the outlier indicators is NHS Trust in England, Board/Health Board in Scotland and Wales. This document uses the term 'Trusts and Boards' to include all Trusts, Boards and Health Boards across the three countries.

The results for each of the indicators are adjusted for case-mix. For more detail about how the indicators are defined and calculated, the data quality checks applied, and the case-mix factors used in the adjustment models, please see the NMPA measures technical specification.

How to use this document

This Outlier Policy document forms part of a suite of resources produced for the NMPA annual clinical report on births occurring in 2023. The following additional supporting documents can be found on our website:

- Data flow diagrams
- A measures technical specification document describing how the audit measures were constructed
- A methods document outlining how the analysis for this report was carried out.
- A data completeness overview, at trust/board and national levels
- A glossary explaining the terminology and abbreviations used in our reports
- State of the Nation report on births occurring in 2023
- Trust/board-level interactive data tables and funnel plots
- A line-of-sight table describing the evidence base for the recommendations in this report
- Quality Improvement (QI) resources

Data sources

The NMPA annual clinical report uses English, Scottish and Welsh data from the following sources:

England: Maternity data from Maternity Services Data Set (MSDS) version 2, are linked to Hospital Episode Statistics (HES) Admitted Patient Care (APC) administrative data, as well as the Personal Demographics Service (PDS) Birth Notification data. All pseudonymised English datasets are controlled and supplied directly to the NMPA by NHS England (formerly NHS Digital).

Wales: Maternity data from the Maternity Indicators data set (MIds), including Initial Assessment (IA) data, and the National Community Child Health Database (NCCHD), are linked to administrative data from the Patient Episode Database for Wales (PEDW) Admitted Patient Care (APC). All pseudonymised Welsh datasets are controlled and supplied directly to the NMPA by The Digital Health & Care Wales (DHCW) (formerly NHS Wales Informatics Service (NWIS)).

Scotland: Maternity data from the Scottish Morbidity Record-02 (SMR-02) and the Scottish Birth Record (SBR) are linked to inpatient and daycase data from Scottish Morbidity Records-01 and data from the National Records of Scotland (NRS) registers for births, stillbirths, and death. All pseudonymised Scottish datasets are controlled and supplied directly to the NMPA by Public Health Scotland (PHS).

Potential outliers

Detection of a potential outlier

The target for the expected rate is based on the average rate of all maternity service providers, adjusted for case-mix. Statistically-derived limits around this target are used to define whether a participating Trust or Board is a potential outlier.

Results that fall in the range between the upper 95% and 99.8% control limits (between 2 and 3 standard deviations above the mean) are considered to be ‘alerts’. A relatively large number of Trusts and Boards will have results for performance indicators within this range. These Trusts or Boards will be notified, as specified in Table 1 below, but they will not be required to follow the full outlier management process.

A result for an indicator that is **higher** than the upper 99.8% control limit (greater than 3 standard deviations above the mean) is considered to be an ‘alarm’. The Trust or Board is then deemed a potential outlier and will be required to follow all steps in the outlier management process shown in Table 2 below.

A result for an indicator that is **below** the lower 99.8% control limit (more than 3 standard deviations below the mean) is considered to be a 'lower than expected alarm'. These Trusts or Boards will be notified, as specified in Table 3 below.

Non-participation outliers

The NMPA makes use of centrally-collected datasets, which should include all eligible trusts/boards. However, data quality is assessed for each indicator and only organisations that pass completeness and distribution checks are included in the analysis.

Given that NMPA make use of multiple datasets, the data quality issues may be due to a range of issues, some of which are out of the control of the trust/board. Data quality outcomes will be published at organisation level for each indicator.

The following scenario will be followed-up from step 5 of the outlier process, as outlined in Table 2, and in line with the NCAPOP outlier guidance.

- The trust/board failed data quality checks for one or more of the indicators selected for outlier reporting (as outlined in section 2) **and** the data quality issue is judged to be within the control of the trust/board.

Starting at Step 5 allows the organisation to review and improve their data quality going forwards, but acknowledges that given the NMPA makes use of routinely collected data via centralised sources, it is now too late in the process for them to be able to resubmit better quality data for inclusion in the current publication.

Management of a potential outlier

The following tables summarise the key steps that the NMPA will follow in managing potential outlier maternity service providers, including the action required, the people involved, and the maximum time scales. It is based on the NCAPOP Outlier Guidance which is published on the HQIP website.

Trusts and Boards need to invest the time and resources required to review the data when they are identified as a potential outlier. Those that are still considered to be potential outliers after completing all steps of the outlier management process will be reported to the CQC and NHS England (English Trusts), the Scottish Government (Scottish Boards) or the Welsh Government (Welsh Health Boards).

Table 1 Actions required for outliers at the alert level

Greater than 2 standard deviations above the mean			
Step	**England**	**Wales and Scotland**	**Owner**
1	The healthcare provider Clinical Director and Head of Midwifery will be informed by the NMPA team of any alert-level outliers. However, the CQC, NHSE, and HQIP are not mandating a formal notification and escalation process for alert-level beyond notification of the relevant clinical team.	The NMPA team will inform, the Welsh Government (wgclinicalaudit@gov.wales) or Scottish Government Health Department (MaternalandInfantHealth@gov.scot) and HQIP of all outliers at the alert level.	NMPA Team
2	The expectation is that NHS Trusts should use 'alert' information as part of their internal quality monitoring process. They should review alerts in a proactive and timely manner, acting accordingly to mitigate the risk of care quality deteriorating to the point of becoming an alarm-level outlier.	The expectation is that Health Boards should use 'alert' information (available within local Health Board reports) as part of their internal quality monitoring process. They should investigate alerts in a proactive and timely manner, acting accordingly to mitigate the risk of care quality deteriorating to the point of becoming an alarm-level outlier.	England = Healthcare provider Clinical Director Wales & Scotland = Health Boards

Table 2 Actions required for outliers at alarm level and for non-participation

Greater than 3 standard deviations above the mean start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
1	Following a full quality assurance of the analysis, a list of trusts/health boards identified as potential alarm level outliers will be produced.		NMPA team	10
2	The Clinical Director and Head of Midwifery in the identified Trust or Health Board will be informed about the potential 'alarm' status and asked to identify any data errors or organisational or clinical factors which may have played a part. Relevant data and analyses will be made available.		NMPA Team	5
3	Healthcare provider Clinical Director to provide written response to NMPA team.		Clinical Director of Trust/ Health Board	25
4	Review of Clinical Directors' response to determine: *'Alarm' status not confirmed:* • Review of information received from Clinical Director and/or further investigation of data held by NMPA demonstrates that the results are invalid[2]. • Invalid results will not be displayed in the published results. • The Clinical Director will be notified in writing with a copy sent to the Head of Midwifery and Chief Executive Officer. *'Alarm' status confirmed:* • Although it is confirmed that the originally supplied data were inaccurate, review of the data still indicates 'alarm' status, or • It is confirmed that the originally supplied data were		NMPA Team	20

[2] Participating Trusts and Health Boards should be aware that while the NMPA has a duty to report on the data it holds, the NMPA is not responsible for the accuracy and completeness of the data it has received. This responsibility dually rests with the Trusts and Health Boards providing maternity services as well as with the providers of secondary datasets. Issues with audit data, whether case ascertainment, data completeness or data quality, must be addressed by the participating Trust or Health Board concerned. The NMPA will support the Trusts and Health Boards by identifying areas where data submission requires improvement, whilst providing consistent analysis and case-mix adjustment of all data received from units, and in making the reports on structure, process and outcomes of care publicly available.

Greater than 3 standard deviations above the mean start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
	accurate, thus confirming the initial designation of 'alarm' status ○ *If organisational or clinical factors have been identified that may have played a part, this information will be included within communications in the next steps of the process.* *> proceed to step 5*			
5	Contact healthcare provider Clinical Director by email, prior to sending written notification of confirmed 'alarm' (3 SD) outliers and/or non-participation outliers to healthcare provider CEO and copied to healthcare provider Clinical Director and Head of Midwifery. For 3 SD outliers, all relevant data and statistical analyses, including previous response from the healthcare provider lead clinician should be made available to healthcare provider CEO.		NMPA clinical lead/ team	5
	For England, the outlier confirmation letter should also include a copy of the NMPA specific outlier policy, and the details in Step 7 below, as well as a request that the Trust engage with their CQC local team. CQC will be notified (clinicalaudits@cqc.org.uk), using the outlier template. A copy of the project specific outlier policy will be included. Notifications of confirmed 'alarm' status will also be sent to NHSE (england.clinical-audit@nhs.net), HQIP associate director and project manager	For Welsh providers, notify wgclinicalaudit@gov.wales, HQIP associate director and project manager (www.hqip.org.uk/about-us/our-team/) and HQIP NCAPOP Director of Operations, Jill Stoddart (jill.stoddart@hqip.org.uk) of confirmed 'alarm' status. For Scottish providers, notify Scottish Government Health Department (MaternalandInfantHealth@gov.scot), HQIP associate director and project manager (www.hqip.org.uk/about-us/our-team/) and HQIP NCAPOP Director of Operations, Jill Stoddart		

Greater than 3 standard deviations above the mean start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
	(www.hqip.org.uk/about-us/our-team/), and HQIP NCAPOP Director of Operations, Jill Stoddart (jill.stoddart@hqip.org.uk) **All three organisations should confirm receipt of the notification.** The CQC will provide NHS England with a quarterly report of all alarm- and alert-level outliers that have been notified to CQC.	(jill.stoddart@hqip.org.uk) of confirmed 'alarm' status.		
6	The NMPA will proceed to public disclosure of comparative information that identifies healthcare providers, on the NMPA website. Healthcare providers who have an 'alarm'-level outlier investigation, that they or others have performed, will be published alongside the 'State Of The Nation' NMPA report, on the NMPA website, as an addendum or footnote. Publication will not be delayed whilst waiting for such investigation to be completed. This can be added, online, when and if it subsequently becomes available. Conversely, if there has been no response from the healthcare provider concerning their alarm outlier	Acknowledge receipt of the written notification confirming that a local investigation will be undertaken with independent assurance of the investigation's validity for 'alarm'-level outliers, copying in the Welsh or Scottish Government. Healthcare provider CEO informed that the NMPA team will publish information of comparative performance which will identify healthcare providers.	England = NMPA team Wales / Scotland = Healthcare provider CEO	England = NMPA State of the Nation report publication date Wales/ Scotland = 10

Greater than 3 standard deviations above the mean start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
	status, that will also be documented on the NMPA website as an addendum or footnote.			
7	The CQC advise that during their routine local engagement with the providers, their inspectors will: • Encourage Trusts to identify any learning from their performance and provide the CQC with assurance that the Trust has used the learning to drive quality improvement • Ask the Trust how they are monitoring or plan to monitor their performance • Monitor progress against any action plan if one is provided by the trust.	The Welsh Government monitors the actions of organisations responding to outliers and takes further action as and when required. The Healthcare Inspectorate Wales (HIW) does not act as regulator and cannot take regulatory action in relation to NHS providers. However, HIW can request information on the actions undertaken by organisations to ensure safe services are being delivered. The Welsh Government can share information with HIW where appropriate and advise on the robustness of plans in place to improve audit results and outcomes.	England = CQC Wales = Healthcare Inspectorate Wales	Determined by the CQC and HIW
	If an investigation has been conducted in the Trust into an 'alarm' outlier status, it is required that the CQC and audit provider would be provided with the outcome and actions proposed.	N/A	Trust Clinical Director	
	This would be published by the audit provider alongside the annual results. Further, if there were no response, the audit	N/A	NMPA Team	

Greater than 3 standard deviations above the mean start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
	provider would publish this absence of a response. The CQC are not prescriptive concerning any such investigations but there needs to be a degree of independence so that the validity of the findings is acceptable.			
8	N/A	If no acknowledgement is received, a reminder letter should be sent to the healthcare provider CEO, copied to Welsh/Scottish Government and HQIP. If not received within 15 working days, Welsh/Scottish Government notified of non-compliance in consultation with HQIP.	NMPA team	Wales = 15 Scotland = 15
9	N/A	Publication on NMPA website of comparative information that identifies healthcare providers	NMPA team	NMPA State of the Nation report publica-tion date

Table 3 Actions required for 'lower than expected' outliers at the alarm-level

Greater than 3 standard deviations **below** the mean			
Step	**England**	**Wales and Scotland**	**Owner**
1	The healthcare provider Clinical Director and Head of Midwifery will be informed by the NMPA team of any lower than expected alarm-level outliers. They will be encouraged to investigate whether under reporting could have been a contributing factor. However, the CQC, NHSE, and HQIP are not mandating a formal notification and escalation process for lower than expected alarm-level outliers beyond notification of the relevant clinical team.	The NMPA team will inform the Welsh Government (wgclinicalaudit@gov.wales) or Scottish Government (MaternalandInfantHealth@gov.scot) and HQIP of all lower than expected alarm level outliers.	NMPA Team

Appendix 1

List of outlier measures

Third- and fourth-degree perineal tears

What is measured: Proportion of women and birthing people giving birth vaginally to a singleton baby between 37+0 and 42+6 weeks of gestation, who experience a third- or fourth-degree perineal tear.

Postpartum haemorrhage of ≥1500 ml

What is measured: Proportion of women and birthing people giving birth to a singleton baby between 34^{+0} and 42^{+6} weeks of gestation, who have a postpartum haemorrhage of 1500 ml or more.

Apgar score <7 at 5 minutes

What is measured: Proportion of liveborn, singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute Apgar score less than 7.

List of confirmed outlier trusts/boards

The following trusts/boards were identified as alarm-level outliers, they were notified and relevant responses can be found in appendix 2.

Third- and fourth-degree perineal tears

English Trusts

Chesterfield Royal Hospital NHS Foundation Trust

Great Western Hospitals NHS Foundation Trust

London North West University Healthcare NHS Trust

North Bristol NHS Trust

Nottingham University Hospitals NHS Trust

The Hillingdon Hospitals NHS Foundation Trust

University Hospitals Sussex NHS Foundation Trust

Scottish Boards

NHS Grampian

NHS Lothian

Postpartum haemorrhage of ≥1500 ml

English Trusts

Ashford And St Peter's Hospitals NHS Foundation Trust

Birmingham Women's And Children's NHS Foundation Trust

Cambridge University Hospitals NHS Foundation Trust

Countess Of Chester Hospital NHS Foundation Trust

Gateshead Health NHS Foundation Trust

Medway NHS Foundation Trust

Mid Yorkshire Teaching NHS Trust

St George's University Hospitals NHS Foundation Trust

Apgar score <7 at 5 minutes

English Trusts

Barnsley Hospital NHS Foundation Trust

County Durham And Darlington NHS Foundation Trust

Northumbria Healthcare NHS Foundation Trust

Portsmouth Hospitals University National Health Service Trust

Sheffield Teaching Hospitals NHS Foundation Trust

South Tyneside And Sunderland NHS Foundation Trust

The Queen Elizabeth Hospital, King's Lynn, NHS Foundation Trust

University Hospital Southampton NHS Foundation Trust

Scottish Boards

NHS Fife

NHS Forth Valley

NHS Greater Glasgow And Clyde

NHS Lanarkshire

NHS Tayside

Trusts removed from outlier list

The following trusts have been removed from the outlier list following confirmation from each that their alarm-level outlier status was triggered by an issue with data quality and was not a true reflection of their clinical results.

Third- and fourth-degree perineal tears

English Trusts

Bolton NHS Foundation Trust

Royal United Hospitals Bath NHS Foundation Trust

Sherwood Forest Hospitals NHS Foundation Trust

University Hospitals of North Midlands NHS Trust

Wirral University Teaching Hospital NHS Foundation Trust

Postpartum haemorrhage of ≥1500 ml

English Trusts

The Newcastle Upon Tyne Hospitals Foundation Trust

West Suffolk NHS Foundation Trust

Apgar score <7 at 5 minutes

English Trusts

Gateshead Health NHS Foundation Trust

Hull University Teaching Hospitals NHS Trust

Somerset NHS Foundation Trust

The Newcastle Upon Tyne Hospitals Foundation Trust

Non-participation trusts/boards

The following trusts did not pass the NMPA data quality checks necessary to be included in the trust-level analysis for outlier measures.

Third- and fourth-degree perineal tears

Welsh Health Boards

Betsi Cadwaladr

Postpartum haemorrhage of ≥1500 ml

English Trusts

Barts Health NHS Trust

Bedfordshire Hospitals NHS Foundation Trust

Calderdale and Huddersfield NHS Foundatoin Trust

Chelsea and Westminster Hospital NHS Foundation Trust

Chesterfield Royal Hospital NHS Foundation Trust

Doncaster and Bassetlaw Teaching Hospitals NHS Foundation Trust

East and North Hertfordshire NHS Trust

Frimley Health NHS Foundation Trust

Gloucestershire Hospitals NHS Foundation Trust

Hull University Teaching Hospitals NHS Trust

Leeds Teaching Hospitals NHS Trust

London North West University Healthcare NHS Trust

Manchester University NHS Foundation Trust

Mid and South Essex NHS Foundation Trust

North Tees and Hartlepool NHS Foundation Trust

North West Anglia NHS Foundation Trust

Northern Lincolnshire and Goole NHS Foundation Trust

Northumbria HealthCare NHS Foundation Trust

Oxford University Hospitals NHS Foundation Trust

Royal Berkshire NHS Foundation Trust

The Princess Alexandra Hospital NHS Trust

The Rotherham NHS Foundation Trust

University Hospitals Coventry and Warwickshire NHS Trust

University Hospitals Plymouth NHS Trust

York and Scarborough Teaching Hospitals Foundation Trust

Scottish Boards

NHS Ayreshire and Arran

NHS Borders

NHS Dumfries and Galloway

NHS Fife

NHS Forth Valley

NHS Grampian

NHS Greater Glasgow and Clyde

NHS Highland

NHS Lanarkshire

NHS Lothian

NHS Tayside

Apgar score <7 at 5 minutes

English Trusts

Barking, Havering and Redbridge University Hospitals NHS Trust

Dartford and Gravesham NHS Trust

George Eliot Hospital NHS Trust

Harrogate and District NHS Foundatin Trust

Tameside and Glossop Integrated Care NHS Foundation Trust

Torbay and South Devon NHS Foundation Trust

Appendix 2

Trust/board outlier responses

This section contains trusts/board responses to their alarm-level outlier status, the responses include details such as a review of local data, data quality, recommendations for practice and/or quality improvements planned or implemented. Where the details provided may breach data sharing rules or individual confidentiality, such as where the results are less than five, information has been redacted. Click on the trust/board name in the list below to read to their response.

Third- and fourth-degree perineal tears

Chesterfield Royal Hospital NHS Foundation Trust

Great Western Hospitals NHS Foundation Trust

London North West University Healthcare NHS Trust

North Bristol NHS Trust

University Hospitals Sussex NHS Foundation Trust

NHS Grampian

Postpartum haemorrhage of ≥1500 ml

Birmingham Women's And Children's NHS Foundation Trust

Countess Of Chester Hospital NHS Foundation Trust

Gateshead Health NHS Foundation Trust

Medway NHS Foundation Trust

Mid Yorkshire Teaching NHS Trust

St George's University Hospitals NHS Foundation Trust

Apgar score <7 at 5 minutes

County Durham And Darlington NHS Foundation Trust

Northumbria Healthcare NHS Foundation Trust

Portsmouth Hospitals University National Health Service Trust

South Tyneside And Sunderland NHS Foundation Trust

NHS Fife

NHS Lanarkshire

NHS Tayside

NHS
Chesterfield
Royal Hospital
NHS Foundation Trust

A Response to the findings of the NMPA of third- and fourth-degree perineal tears at Chesterfield Royal Hospital in 2023 (data reported in March 2025).

Introduction

In February 2025 results of the National Maternity and Perineal Audit (NMPA) for the calendar year of births during 2023 were published. The results showed that during that time period Chesterfield Royal Hospital NHS Foundation Trust (CRHFT) had an increased incidence of women sustaining a third- or fourth-degree perineal tear during childbirth.

The Trust has been identified as a potential alarm-level outlier with an adjusted result of **5.19 %** in comparison of the national mean of **3.40 %.** It is acknowledged that this is not necessarily an indication of poor performance, however the Trust has conducted a number of deep dives during this period of time.

There appears to be a slight discrepancy with the NMPA data and CRHFT local data, work has been undertaken by the Digital Midwife and the informatics team to understand the discrepancy.

NMPA Data

Indicator	National Mean (%)	Trust/Board Numerator	Trust/Board Denominator	Trust/Board Unadjusted Result (%)	Trust/Board Adjusted Result (%)	Trust/Board 3SD upper limit
Third- or fourth-degree tears	3.40	79	1525	5.18	5.19	4.80

For the Trust/Board Numerator; K2 and Tableau (local digital platforms) are reporting 78 third- or fourth-degree tears, not 79.

For the Trust/Board Denominator; K2 and Tableau are reporting 1604 women, not 1525. This is using the parameters of "singleton, vaginal birth, between 37- and 42+6-weeks' gestation, occurring in the calendar year of 2023"

The NMPA report does not mention the inclusion or exclusion of breech vaginal births, who are excluded from CQIM figures relating to perineal trauma, but even if these were excluded there are only [redacted] for 2023. Other potential exclusions could be babies Born Before Arrival (BBA), since there was no clinical opportunity to minimise the risk of perineal trauma – there were 14 BBAs in 2023 registered on K2.

However, the Trust does acknowledge that even if we referenced local data (see SPC chart below), which would result in a Trust/Board rate of **4.86/4.87** (depending on the inclusion or exclusion of breech vaginal deliveries) this is still above the Trust/Board 3SD upper limit.

Current Position

Women giving birth at Chesterfield Royal Hospital Foundation Trust (CRFHT) had a higher incidence of third- and fourth-degree perineal tears 2021- 2024 than many other Trusts in England (NHS England, 2024). The implementation of the Obstetric Anal Sphincter Injury (OASI) care bundle (Jurczuk M, 2021) and further training that took place in 2023 led to some improvement however during March 2024 there was an unexpectedly high number of cases.

A thematic review of all cases of third- and fourth-degree tears between April 2023 and March 2024 was undertaken to identify any themes or learning outcomes The higher incidence did not identify any themes, and it was thought this may be due to the detection of OASI, variation in modes of birth, perineal support techniques, use of episiotomy and differences in maternal characteristics. Improved training for all Obstetric trainees took place following this review to ensure good control of the fetal head during all instrumental births. It was recognised an improvement project was required to further interrogate the data and local practises. Certain individual practitioners were outliers in the figures, and individual training and supervision was given. Ongoing monitoring of the rate of 3rd/4th tears by individuals is occurring and feedback will continue to be individualised for outliers through their designated Educational Supervisors.

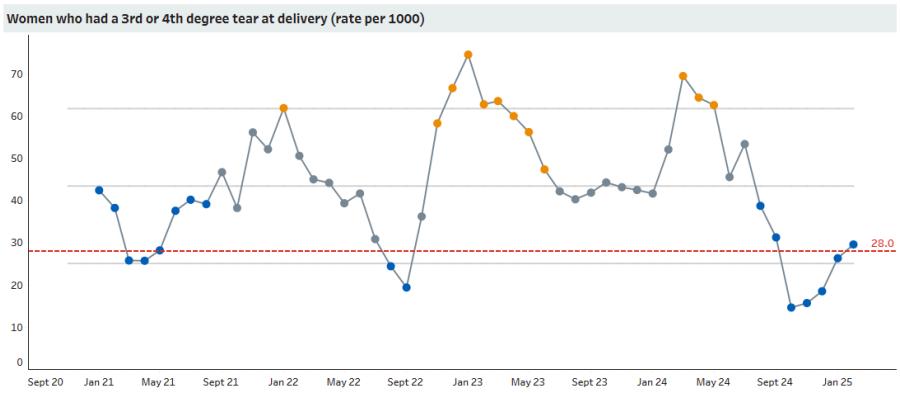
CRHFT appointed a Consultant Midwife in November 2024, this post is key to progressing the work of the Perinatal Pelvic Health Service (PPHS) which is part of the Three- year plan for the Maternity and Neonatal Service.

We use a systems wide approach to learning about the long-term impact of perineal trauma. This will provide richer learning to help us understand how well the fourth element of the OASI care bundle is being practiced and support the planning of future perinatal pelvic health services.

It is reassuring to note CRHFT have seen a steady reduction in tears since 2023.

NHS
Chesterfield
Royal Hospital
NHS Foundation Trust

Current Data Clinical Quality Improvement Metrics (CQUIM) 2021- 2025



	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sept-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25
Women who had a 3rd or 4th degree tear at delivery (Rate per 1,000)	69.4	64.3	62.5	45.5	53.3	38.6	31.2	14.6	15.6	18.4	26.2	29.5
Rolling Tears (Numerator)	29	25	24	17	22	16	13	6	6	7	9	10
Rolling Singleton Vaginal Births (Denominator)	418	389	384	374	413	414	417	412	384	380	343	339
Total Tears (Monthly count)	12	[redacted]	8	[redacted]	9	[redacted]						
Singleton Vaginal Birth (Monthly Count)	138	110	136	128	149	137	131	144	109	127	107	105

Midlands Perinatal Team Project Charter

CRHFT have engaged in an Improvement project with the Midlands perinatal team and have Quality Improvement support from NHSE.

Project aim :- *To improve pelvic health morbidity of those having an unassisted vaginal birth by reducing the incidence of Obstetric Anal Sphincter Injury (OASI) by 1.5% (from 4.5% to 3%) to be in line with national average within the next 6 months (by June 2025).*

Project Objectives :-

Implement Manual Perineal Protection through education (MPP)

Ensure the correct information/education for service users, staff and student midwives.

Implement PPH Champions.

Update the clinical guidelines.

Consideration has been given as to the sustainability of the project objectives: -

Additional training has been sourced for the PPHS Champions, this increased knowledge will ensure continued cascade of training and knowledge to junior staff and students. Observations in practice have occurred and inconsistent practices have been noted. To adopt consistent, evidence-based practice teaching sessions are regularly held for all staff including students on manual perineal protection. Datix (local reporting system for incidents) in relation to OASI are reviewed by the Consultant Midwife and Consultant Clinical Lead for the Birthing centre, individual feedback is given with clinical support as required.

Staff's understanding of the OASI care bundle will be monitored by completing a survey at 3 and 6 months and there is a plan to carry out PDSA cycles for continued improvements. This project has the Chief Nurse as Executive Sponsor with local and regional stakeholders including the voice of the service user through collaboration with Derbyshire Maternity and Neonatal Voices Partnership (DMNVP).

The Anterior Ninety-Degree Elevation Forceps approach has been shared with obstetrics staff, which is now being taught on the national RObuST (RCOG Operative Birth Simulation Training) course, to consider adding to their practice to further reduce the risk of forceps deliveries.

The rate of third- and fourth-degree perineal tears is reported monthly through the Trust governance and quality committee's and bimonthly to Trust Board. Updates are provided with regards to ongoing practice development and quality improvement initiatives. There is a strong and responsive commitment to reducing these figures.

Graham Geary, Clinical Director

Rebecca Bustani, Director of Midwifery

19th March 2025

Great Western Hospitals NHS Foundation Trust

NHS
Great Western Hospitals
NHS Foundation Trust

The Great Western Hospital
Marlborough Road
Swindon
SN3 6BB

gwh.nhs.uk

3rd March 2025

Dear NMPA team,

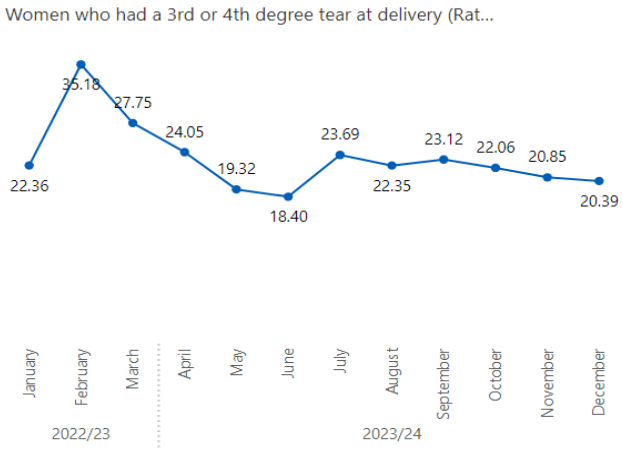
Thank you for contacting the Great Western Hospital to highlight our potential alarm-level outlier status regarding the

- **proportion of women and birthing people giving birth vaginally to a singleton baby between 37+0 and 42+6 weeks of gestation, who experience a third- or fourth-degree tear**

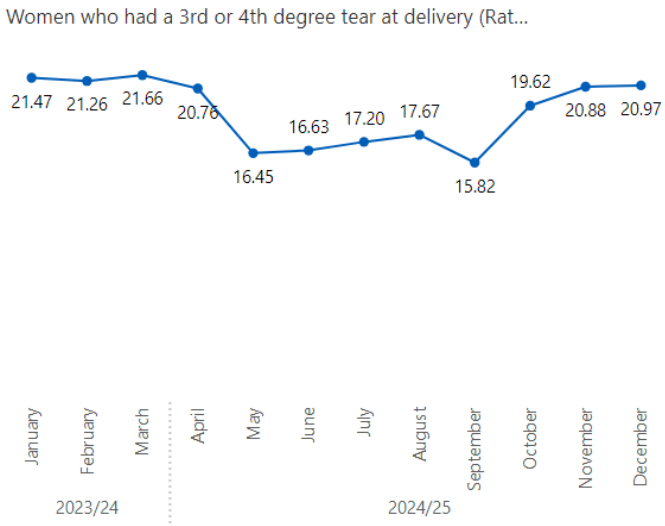
for births that took place in 2023.

We recognised our fluctuating rates over the past few years and have been proactive in a department-wide response. All obstetric anal sphincter injury (OASI) are reported via our Datix incident reporting system and the care provided is reviewed by an appropriate member of the team to identify themes and areas for learning and improvement. Our OASI data is reviewed monthly and reported quarterly in an ongoing audit.

We monitor our rates via the National Maternity Dashboard based on cases per 1000 births. In February 2023 this peaked to 35.18 per 1000 births. The range was 18.4 per 1000 births to 35.18 per 1000 births throughout 2023. See data image taken from Dashboard below:



To ensure Patient Safety and Quality Committee oversight, our OASI rates have been included on our Integrated Performance Review slides from July 2024 to September 2024. Given the sustained improvement in rates back to average levels in 2024, we no longer present the data at Patient Safety and Quality Committee and continue to monitor rates through our audit and governance process. See data image taken from dashboard below for 2024 data:



To summarise our improvement journey:

Pelvic Health Specialist Midwife role and OASI working group:

- In September 2023 we successfully recruited a Pelvic Health Specialist Midwife. This was initially a one-year funded post provided by NHS England to support the development of a Perinatal Pelvic Health Service (PPHS). The midwifery role was supported by Specialist Pelvic Health Physiotherapists and the maternity team.
- Our initial Pelvic Health Specialist Midwife was in post from September 2023 and January 2024 before going on maternity leave. Our next specialist midwife was in post from April 2024 and August 2024. We have recently received confirmation that this post will now be a permanent position for a full-time, three days a week, Band 7 midwife. Interviews are planned for 14/03/25.
- During this time, we established a new OASI working group to include our Pelvic Health Specialist Midwife, our Intrapartum Midwifery Matron, Urogynaecology Consultant, Senior Band 7 Midwifery team and interested Band 6 midwives. The group has led on a quality improvement project to strengthen the use of the OASI care bundle during pregnancy and birth and encouraged optimal maternal position during labour and second stage. As part of this project, midwives were encouraged to document fetal head position using the vaginal examination stickers and confirm the position at the time of birth.
- A self-referral system was introduced for women wishing pelvic health support in both the antenatal and postnatal period.
- Postnatal follow-up services were strengthened with the specialist physiotherapists and urogynaecology consultant. An endoanal ultrasound scanner has been purchased to support postnatal review of anal sphincter integrity.
- The Pelvic Health Specialist Midwife reviewed all OASI incidents to highlight trends and focuses for improvement. They reviewed the same drivers and risk factors that BSW Collaborative had been using to further audit our data in more detail. This included BMI, mode of birth, age, ethnicity, previous birth, onset of labour (spontaneous or induced), length of labour, birthweight, maternal position of birth and length of second stage.
- At the end of her secondment, our Pelvic Health Specialist Midwife produced a report demonstrating improvements in OASI rates for January – July 2024.
- The report reviewed the additional maternal and birth characteristics to provide areas for future development by the team. It was recognised that there was a higher-than-expected OASI rate in local women of Asian origin. This will be a focus to be explored by the OASI working group moving forward

OASI Deep Dive Audits:

- We recognised that our OASI rates had increased and required a more in-depth review of our OASI practice. We performed an obstetric-led retrospective review of OASI sustained between January to June 2022 which was published

following governance ratification in July 2023. This review focused on the documentation of fetal head position at birth, use of assistance (ventouse or forceps), requirement for rotation, use of episiotomy and sphincter repair method and documentation. The findings from this review were shared widely with the team and the recommended actions completed. This included team-wide education regarding the importance of documenting fetal head position at the time of birth (including spontaneous and assisted births), updating the Perineal Repair documentation proforma to assist staff to improve the accuracy and detail of the injury and repair method, ensuring access to the correct suture material within the Delivery Suite theatre and a training focus for obstetric resident doctors on reducing OASI at assisted vaginal birth.

- This audit was repeated to review OASI sustained between January 2024 to April 2024, and published in May 2024. There was a small improvement in overall compliance of the 13 criteria reviewed from 87.6% to 89.67% in this re-audit. The planned proforma update took time to be agreed and ratified through the governance process. They then took time to be printed and circulated. The data collected in this re-audit included the old proformas. There was also a subsequent update to our maternity electronic record to ensure fetal head position at birth, use of perineal protection and perineal examination became mandatory fields to complete in all births. Future re-audits will be collecting data utilising the new updated proforma and our updated electronic system (Careflow Maternity until January 2025, Badgernet post January 2025).

Obstetric Resident Doctor Education:

- We recognise as an obstetric team that more of our local assisted vaginal births are completed using forceps rather than ventouse. This appears to be a trend noted nationally and is associated with an increase in OASI rates as the risk is higher with forceps than ventouse.
- From September 2022 we have completed a rolling, hands-on practical training course for our resident doctors on a six-monthly basis. This focuses on the theory of safely performing an assisted vaginal birth (including the use of episiotomy and perineal protection) and supports the practice of technique on training models.
- Regular education sessions reviewing OASI and the use of the OASI Care Bundle at our resident doctor education programme. This included videos created by the RCOG and OASI Care Bundle team.
- OASI was a focus of our January 2024 monthly multidisciplinary Obstetrics and Gynaecology half day education session.
- Additional hands-on training models have been purchased in 2024 to support assisted vaginal birth training, perineal repair and OASI repair.

Midwifery and MDT Education:

- OASI learning package on ESR was created by our Pelvic Health Specialist Midwife and became mandatory for all midwives from July/August 2024.

- Midwifery in house training sessions both in the hospital and in community hubs completed by Pelvic Health Specialist Midwife.
- OASI focus on education board visible in Delivery Suite and in regular education emails to the team.
- Focus on maternal position in labour and second stage to support more upright hands-on births.
- OASI is now a focus topic on our mandatory multidisciplinary PROMPT training sessions for the training year September 2024 – August 2025.

Thank you for sharing your concerns with us at The Great Western Hospital. I hope that the above demonstrates our local recognition and response to our OASI rates. We look forward to employing a midwife to the permanent Pelvic Health Specialist role to continue to lead on our improvement journey.

With kind regards,

Dr Alexandra van der Meer
Consultant Obstetrician and Gynaecologist
Deputy Clinical Lead for Obstetrics and Gynaecology with focus on Obstetrics

On behalf of The Great Western Hospital Maternity Team

London North West University Healthcare NHS Trust

Honesty Equity Accountability Respect Teamwork
Quality at our HEART

NHS
London North West University Healthcare
NHS Trust

National Maternity and Perinatal Audit (NMPA)
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London
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Maternity and Neonatal Services
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02088692885

24 March 2025

Dear NMPA Senior Clinical Leads,

Thank you for your letter, dated 18/02/2025 alerting the Trust to being identified, by yourselves, as a potential alarm-level outlier for the clinical indicator 'Third- or Fourth-Degree tears' in your report on 2023 based on data received from the MSDS.

The Trust and department have reviewed the data that was submitted via MSDS and note, the data submitted relates only to months 1 – 8 in 2023 as due to the trust switch over to Cerner IT system in mid-August 2023. The quality of the Trust's MSDS submission was impacted due to an inability to provide full data sets. The Trust BI team have completed the following calculations when taking into consideration the full year data.

Year	Indicator	National Mean	Trust/Board Numerator	Trust/Board Numerator	Trust/Board Unadjusted Result (%)
2023	Third or Fourth Degre tears	3.40	92	1696	5.42%

Year	Indicator	National Mean	Trust/Board Numerator	Trust/Board Numerator	Trust/Board Unadjusted Result (%)
Jan to Aug 2023	Third or Fourth Degre tears	3.40	63	1063	5.93%

We however accept that even with the validation amendments above, our unadjusted rate of 5.42% remains above the 5.07% three standard deviations upper limit. The trending upwards of 3rd and 4th degree tear incidents was recognised and addressed by the maternity team in 2023.

Below is some background context and a brief summary of the learning and actions that arose during 2023 when it was noted that the rate was high. We have also included data for 2024 and brief details of our current action plan and improvement projects that are having positive results in reducing incidences of 3rd / 4th degree tears. The Trust and department would be more than happy to provide further detail should it be required.

Background context

There were 93 incidents reported to the datix platform between 1st January 2023 and 31st December 2023. Once this data was filtered and duplicates were removed, the total number of incidents was 90. The division identified the following contributory factors:

There were multifactorial contributing factors including;

- High vacancy rate in the midwifery workforce – We were a workforce outlier nationally with a 40% vacancy rate in the midwifery workforce. This resulted in increased use of bank and agency staff to achieve safe staffing levels with variations in clinical training and practise
- Setting up of a PPHS service and roll out of OASI Care bundle – The transformation project to deliver the service as recommended in the 3-year mat neo strategy was in the early project phase in the 1st 6 months of 2023 and entailed the recruitment of a dedicated PPHS team of physiotherapists, midwifery and obstetric leads to support the running of PPHS clinics and full roll out of the OASI care bundle
- Education – generic sharing of learning from OASI incidents, with missed opportunities for widespread training and bespoke teaching sessions.

- Demographic - local population with known high-risk contributory factors – ethnicity, BMI, language barriers, (in line with RCOG guidance, risk factor scoring system not recommended)

The increase in cases was noted and responded to with a deep dive audit of reported OASI incidents to identify reoccurring themes and create targeted safety actions to reduce the rates. This was reported in our quarterly quality and safety reports to the trust and ICB boards. Of note was the trust changeover to Cerner Electronic Patient Record system in August 2023 which impacted access to clinical data and an audit was commenced for Q4 and Q1 2024. Following this, a standardised proforma was created to ensure focused learning could be shared across the division. All of the OASI incidents are tracked monthly on our maternity dashboards in addition to local maternity incident trackers.

Learning & Action:

- Introduced a Severe Perineal Trauma MDT / OASI panel on alternate Friday pm to review all reported datix relating to 3rd / 4th degree tears.
- OASI in house full day workshop conducted 4 times per year
- Weekly hands-on teaching on delivery suite by MDT PPHS & the patient safety team
- Individualised supervision and sign off for midwives and junior doctors with individual reflection and discussion for those involved following incident reviews
- Instrumental births – MDT teaching, supervision and support
- OASI training on Mandatory Training by PPHS Specialist midwife
- OASI, suturing and Manual Perineal Protection Training for junior midwives and students
- Additional bespoke OASI teaching made available by maternity education and/or PPHS specialist team on an ad-hoc basis
- Quarterly teaching sessions with the community midwifery team to improve antenatal OASI discussions

Current position

With the above measures taken, internal analysis shows a significant reduction in incident of 3rd and 4th degree tears in 2024.

Year	Indicator	National Mean	Trust/Board Numerator	Trust/Board Numerator	Trust/Board Unadjusted Result (%)
2024	Third or Fourth Degre tears	3.40	74	2150	3.44%

We also have a significantly improved midwifery vacancy rate of <2% and a completely recruited PPHS team

Future plans

As we can see from the data, we have had a significant decline in 3rd and 4th degree tears in 2024, therefore we will continue to sustain the measures undertaken to ensure that local rates compare to national standards.

In addition, we continue to audit and address the impact of ethnicity on 3rd and 4th degree tears from both a physiological and societal perspective, addressing the way risk is communicated and adapting practice to meet the needs of our local population.

We would very much like to take up the opportunity of presenting the work that we have done as a case study for publication on the NMPA website.

Yours sincerely

Caroline Macrae
Director of Midwifery & Neonatology

Asra Saleem
Clinical Director for Women's Health

4

North Bristol NHS Trust

NHS North Bristol NHS Trust

Response to NMPA outlier alert for 3rd and 4th degree tears

In February 2025 North Bristol NHS Trust received notification from the National Maternity and Perinatal Audit (NMPA) team that we were flagging as an alarm level outlier for 3rd and 4th degree tears, based on the 2023 case-mix adjusted data shown in the table below.

Indicator	National mean (%)	Trust/board numerator	Trust/board Denominator	Trust/board unadjusted result	Trust/board adjusted result	Trust/board 3 SD limit
3rd or 4th degree tear	3.40	146	2700	5.41	4.89	4.45

Review of North Bristol NHS Trust's (NBT) Maternity Service Data Set (MSDS) data identified 136 women meeting the NMPA criteria for 3rd and 4th degree tears. In 2023 NBT changed its maternity patient record from Euroking to BadgerNet, going fully digital in this process. This made the MSDS submission particularly difficult and may account for the difference between NBT and NMPA figures. Hospital Episode Statistic (HES) data downloaded from CHKS (Caspe Healthcare Knowledge Systems, a healthcare intelligence company) identified 144 women who had been coded as having a 3rd or 4th degree tear. We have reviewed the notes of the nine women who appeared in the HES data but not the MSDS data, to understand discrepancies between coded and MSDS data. A summary is shown in the table below.

1	[redacted]
2	
3	
4	
5	
6	

7	[redacted]
8	
9	

Following our review of available data, we accept the NMPA results. Currently we have not identified any clinical or organisational factors that have impacted our tear rates. We are now undertaking a fuller review of our data to better understand the underlying trends and themes, and the reasons behind the change in tear rates from 2022.

University Hospitals Sussex NHS Foundation Trust

NHS
University Hospitals Sussex
NHS Foundation Trust

Dear NMPA Senior Clinical leads team,

Re: Outlier reporting

Thank you for your letter dated 19th February 2025 notifying the Trust of the outlier status for the following measure:

Proportion of women and birthing people giving birth vaginally to a singleton baby between 37+0 and 42+6 weeks of gestation, who experience a third- or fourth-degree tear.

The NMPA data for Obstetric Anal Sphincter Injury (OASI) reports 4255 women having vaginal birth with 218 experiencing OASI (4.85%) for 2023.

Indicator	National Mean (%)	Trust/Board Numerator	Trust/Board Denominator	Trust/Board Unadjusted Result (%)	Trust/Board Adjusted Result (%)	Trust/Board 3SD upper limit
Third- or fourth-degree tears	3.40	218	4255	5.12	4.85	4.24

We believe our OASI figures to be 4664 women having a vaginal birth to a registerable singleton baby between 37+0 and 42+6 weeks gestation over the period, of whom 163 experienced OASI (3.49%). We recognise that some data may not have been submitted via the MSDS. This could potentially be due to the change in maternity information system that occurred mid-June 2023 at two of our maternity sites (Worthing and St Richards) when they also moved to using the Badgernet digital maternity notes system. The data that we are including below in this response has been verified by Business Intelligence Team.

Indicator	Year	Numerator	Denominator	%
Third- or fourth-degree tears	2023	163	4664	3.49%
Third- or fourth-degree tears	2024	145	4346	3.34%

We are unable to reconcile with your data currently, however we hope the information below demonstrates the improvement work implemented since 2023 resulting in OASI rates sustained below the national mean.

As a result of the of NHS's Long Term Plan to improve access to all pelvic health specialities, the local perinatal pelvic health service (PPHS) was formed, funded by Sussex LMNS. UHSussex have been part of the 14 Early Implementers nationally.

NHS England » Perinatal pelvic health services

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NHS Foundation Trust

UH Sussex became a merged Trust on 1st April 2021, however merging of data systems has taken a phased approach and various data tools and IT systems have been used to gather the data on OASI rates.

The Trust covers 4 acute maternity hospitals:

Royal Sussex County Hospital, Brighton (RSCH)

Princess Royal Hospital, Haywards Heath (PRH)

Worthing Hospital (WH)

St. Richard's Hospital, Chichester (SRH)

Monthly reporting of OASI to the LMNS via the Maternity clinical indicators dashboard, which are reported per 1000 births, and not as a percentage.

Pelvic Health Specialist Midwives were appointed to post in November 2022

The service has produced new Trust merged Guidelines for Perineal tear and trauma, Bladder care pathway, produced SOP's (Standard Operating Procedures) for Perineal Infections, Clinic pathways and there is on-going work on further specific service improvement projects- with regards to home Trial With Out Catheter (TWOC) service and the use of Flaminal, an alginate product for perineal wounds.

Our merged services reflect, with perineal clinics held on two of our sites, SRH (Nov 2023) and PRH (March 2024), which comprise physiotherapist, specialist pelvic health midwife and consultant urogynaecologist trio specifically designed to see OASI patients.

Fail-safes to avoid missed OASI referrals were implemented at the end of 2023 to ensure all cases are identified, Datix generated, and cross referenced with the patient safety team. The PPHS team have acted upon and audited the months where spikes in OASI cases were identified, seeking to identify trends, and any potential themes addressed.

As a multidisciplinary PPHS team we invest a considerable amount of time to design, co-produce and implemented all our information materials for pelvic health, including leaflets, web design, and educational videos; and service specifications to match the KPI's.

Service improvement projects:

- In Sept 2023, RSCH and PRH sites implemented a two phased implementation of the OASI2 care bundle led by the specialist pelvic health midwife, to further mitigate our OASI rates. A notable improvement was noted within a 6-month period where OASI rates dropped to around 2.5% cumulative.
- Prompt sheets and information packages were made available under the 'Teams Education Channel' for all staff to access, including new starters and anyone requiring a refresher. Resources include RCOG- OASI2 care bundle and a locally filmed

educational video. https://www.rcog.org.uk/about-us/quality-improvement-clinical-audit-and-research-projects/the-oasi-care-bundle/

- Any spikes noted are actioned with reminders to all staff via the midwife in charge handovers, shared on staff social media pages, and addressed via the 'Maternity Message of the week' bulletin.

Prevention and education of women and people:

For our service users

- Since June 2023 all 4 sites within UH Sussex moved to digital maternity notes, which has allowed the pelvic health team to utilise this as an information sharing platform for written information. Through our digital maternity notes the service users are introduced to the Wellbeing and Exercise in Pregnancy Programme (WEPP) as early as 8 weeks of pregnancy. The link to the WEPP website is found via the Local Maternity and Neonatal System (LMNS) website and features information on all aspects of pelvic health including pelvic floor exercises, pelvic girdle pain, and perineal massage. Sussex WEPP | Sussex Wellbeing & Exercise in Pregnancy
- The LMNS website has accessibility features such as text to speech, translation to over 100 different languages and the text size and font as well as contrast can be altered for the visually impaired.
- Though research we know that perineal massage can prevent the occurrence of OASI. Perineal massage was not included in the OASI care bundle due to the difficulties in standardising practice, however we have produced written and video information for our service users to access via the LMNS. Perineal Massage - Sussex LMNS
- The RCOG short animation video, which promotes the OASI care bundle, is played through the screening in all our Ante natal clinics to promote the care bundle and what can be done to reduce the risk of birth related perineal trauma https://www.rcog.org.uk/for-the-public/perineal-tears-and-episiotomies-in-childbirth/reducing-your-risk-of-perineal-tears/
- At 34 weeks of pregnancy our service users are invited to access via Badgernet notes the RCOG information leaflet 'Perineal Health in pregnancy, birth and beyond' The OASI Care Bundle Information for expectant mothers This leaflet was co- produced by Obstetricians, Midwives and service users and has been updated since the research from the OASI2 care bundle has been published. The leaflet discusses the benefits of perineal massage and perineal warming during the second stage of labour which again is beneficial to prevent the occurrence of OASI. The leaflet highlights protective birthing positions and all elements of the OASI care bundle which our trust adopts as an effective tool in reducing OASI. The leaflet empowers our service users with antenatal information so that they can understand the risk of birth related perineal trauma but also empower them with the knowledge on what they can do to help prevent it from happening.

- At 34 weeks are service users are directed to read, via our electronic notes, the leaflet Episiotomy Should I have one Episiotomy-info-sheet-PRINT-1-1.pdf When OASI2 researchers surveyed over 1000 service user participants overwhelmingly spoke of the need for antenatal information, the second stage of labour was not the time to be learning about this. This leaflet was co-produced by Obstetricians, midwives and service users.
- Through the Antenatal pelvic health questionnaire completed by the community midwives at 16 weeks of pregnancy, or any time thereafter, service users are referred to our interactive online physiotherapy classes. These classes are designed for those deemed low risk of pelvic floor dysfunction. They are produced to educate about preventative measures that can be implemented to ensure that our service users can identify pelvic floor dysfunction, understand how they can seek face to face assessment and online self-referral to services. The classes teach the importance of life long pelvic floor exercises. Topics covered also include Pelvic girdle pain and perineal massage. A recorded copy of the class is also available to watch Via the LMNS Pelvic Health Physiotherapy - Sussex LMNS
- Self-referral to physiotherapy is a KPI for the perinatal pelvic health project which has been well received by our service users. The option to self-refer is available up to a year post birth. All maternity referrals are classed as urgent and triaged for an appointment within 3 weeks of referral https://sussexlmns.org/my-pregnancy/pelvic-health-physiotherapy/
- Our perineal clinic is designed to offer a one stop shop for those who sustain an OASI, as well as those who experience birth related perineal trauma which develop complications such as wound infection or miss alignment. The clinic is MDT with pelvic health midwives, physiotherapist and urogynaecologist attending. The clinic offers full pelvic floor assessment, wound management and the opportunity for Endo Anal Scanning which we hope to offer across all 4 sites of UH Sussex as the year progresses.

Staff education and teaching around pelvic health/ OASI tears:

- Our PPHS have focused on raising awareness about OASI type tears and pelvic health
- Pelvic Health and OASI tears are taught on the mandatory education programme for all midwives and doctors on a three yearly cycle (started late 2023).
    - The topics included were pelvic health awareness/ pelvic floor exercises/ POP- pelvic organ prolapse awareness/ perineal massage/ OASI tears and from 2024, the OASI 2 care bundle.
    - Over 80% staff attendance was achieved, and we have seen a reduction in our numbers of OASI tears (over 400 MWs and Drs per year).
- Production of new material for the in-house suturing workshops provided to midwives, student midwives and preceptees/new starters, which incorporated OASI tear awareness and the OASI2 care bundle elements

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NHS Foundation Trust

- The PPHS team teach undergraduates at the local Universities the subject of Pelvic Health which has recently broadened to include a mixture of physiotherapy and midwifery students with great success.
- We have produced information packages accessible for midwives and doctors with regards to OASI2 care bundle/ prevention strategies together with the RCOG learning package around OASI. This is located on Teams –Education Resources Channel. Potential plan to upload onto Iris learning platform. https://nhs.sharepoint.com/:f:/r/sites/msteams_01c221/Shared%20Documents/STAM%20and%20Education%20days/OASI2%20care%20bundle?csf=1&web=1&e=Fmn5KY
- Raising awareness of the PPHS, referral pathway and practice improvements has been included at the regular pre-handover teaching sessions held for obstetric and trainee doctors at the Princess Royal Hospital (PRH) site.
- As participants of the online national Pelvic Health Group, we have access to and share best-practice knowledge and information sharing across the country.

Education for specialist pelvic health midwives:

Our Pelvic Health Specialist Midwives have enrolled and attended several role specific courses including:

- Assessment of female pelvic floor muscle dysfunction - vaginal examination (practical course), De Smit Medical.
- Assessment of lower bowel dysfunction – anorectal examination and initial treatment (practical course), De Smit Medical.
- 3-day Endoanal Scanning Introduction Course organised by Guys' and St Thomas's in the Gordon Museum of Pathology, followed by in-house practice and further training
- Online courses and webinars for Suturing of perineal wounds; practice improvements and challenges; diagnosing OASI tears, Gynzone website.

We hope the information in this letter provides you with assurance that we have recognised OASI rates and developed a robust training programme for staff, improved quality and access to information for service users, and provided a multidisciplinary approach to supporting service users who have suffered OASI at birth.

Please let us know if you require further of information.

Yours sincerely,

Emma Chambers
Director of Midwifery

Seb Adamson
Clinical Director for Obstetrics

NHS Grampian

The Quality Risk and Governance team was aware that NHS Grampian was an outlier in 2023 for 3rd and 4th degree tears.

The team utilised quality improvement methodology to understand and reduce the OASI rates and continue with the implementation of the OASI care bundle. The changes included expanding the OASI review group, which now consists of Consultant Obstetricians, Quality Risk and Governance Midwife, Labour Ward Senior Charge Midwife, and Community Lead Midwife. The group's aim is to ensure robust quality assurance systems and processes are in place within NHS Grampian Maternity services. The group promotes a culture of quality improvement, candour, evidence-based practice and continuous development. The group reviews all 4th degree tears and randomises all 3rd degree tears for review. The learning from these reviews includes face-to-face shared learning events, communication via a newsletter and individualised feedback.

Since implementation of the new format, the OASI group has seen a reduction in 3rd and 4th degree tears in 2024, initial data would suggest that for 2024 this will be under 4%. Going forward the team plans a deep dive into the data collection for 2024, to tailor teaching in specific areas if required.

NHS Lothian

Lothian NHS Board

Women's Services NHS Lothian
Simpson's Centre for Reproductive Health
Royal Infirmary of Edinburgh
51 Little France Crescent
Old Dalkeith Road
Edinburgh
EH16 4SA

Direct Line: 0131 242 2500

[redacted]

Date 09 September 2025

Dear NMPA,

Response for our confirmation of outlier status in the forthcoming National Maternity and Perinatal Audit (NMPA) report, which covers births over 2023.

I confirm NHS Lothian has received your letter sent via email dated 09.06.25. I can also confirm that the details of this letter and prior correspondence, including the previous response, have been shared with the NHS Lothian Chief Executive Professor Caroline Hiscox.
I also copy in the Scottish Government Health Department as requested.

I confirm that the rates of tears had been identified as high by NHS Lothian through internal audits as well as from data from the Scottish Pregnancy, Births and Neonatal Data Dashboard (SPBAND). The 3rd/4th degree tear rate is of one of the measures of efficacy of care routinely monitored through NHS Lothian Women's Services Assurance Framework which is reported monthly at our local Maternity Operational Group, bi-monthly at the Women's Services Clinical Governance Meeting and annually at the NHS Lothian Healthcare Governance Committee.

Improvement work has commenced aiming to reduce the rates of 3rd and 4th degree tears within NHS Lothian. NHS Lothian maternity services have reported this in our 2025 Healthcare Governance Report presented to NHS Lothian Board Healthcare Governance Committee on the 20th of May 2025.

In response to the identified rate, an improvement project has been commenced as part of the local Scottish Patient Safety Perinatal Improvement Programme with an aim to reduce the NHS Lothian rate of 3rd & 4th degree tears in all vaginal deliveries to 4% by March 2026. St John's Hospital within NHS Lothian was an early adopter site when the OASI Care Bundle was originally trialled and the rates of tears at this site are considerably lower (a median of 2.7%).

Work has already started to ensure OASI implementation across the whole of NHS Lothian. This QI project is one of our current service QI priorities with weekly data audits ongoing for this work. Implementation audits include:

- Percentage of deliveries given leaflet and with antenatal discussion of OASI at 32 weeks appointment
- Percentage of notes audited with OASI discussion on arrival to Labour Ward
- Percentage of notes audited with perineal protection during delivery
- Percentage of notes audited with PV & PR documented after delivery
- Percentage of 3rd and 4th degree tears reviewed monthly at Intrapartum Operational Group and Maternity Operational Group meetings.

The OASI implementation bundle is discussed at the weekly QI huddles where the audit data is shared and focussed improvements are identified. For example, the OASI bundle online training is highlighted to staff. An ongoing awareness raising campaign is underway with a range of posters emphasising the importance of OASI bundle components.

In response to your question about how we provide independent assurance of the validity of our investigations, I can confirm that we follow the guidance published by the Scottish Government in 2021 on the maternity and neonatal (perinatal) adverse event review process. This guidance was issued as an addendum to Healthcare Improvement Scotland's Learning from Adverse Events Through Reporting and Review: A National Framework for Scotland. The framework outlines recommendations for the appropriate level of review and the extent of external input required. We adhere to these recommendations to ensure the robustness of our review process.

Yours sincerely,

E. Doubal

Dr Emma Doubal

Consultant Obstetrician and Gyanecologist
Clinical Director for Obstetrics NHS Lothian

cc:

Prof Caroline Hiscox (NHS Lothian Chief Executive)
[redacted]
Mercedes Perez-Botella (Director of Midwifery)

Birmingham Women's And Children's NHS Foundation Trust

NHS
Birmingham Women's and Children's
NHS Foundation Trust

MNPA outlier for PPH >1.5 litre – Divisional Response

Situation

Following the National Maternity and Perinatal Audit (NMPA) analysis of Birmingham Women's and Children's Hospital's data on postpartum haemorrhage (PPH) for 2023, the Trust has been identified as an outlier at alarm-level for the number of women having a postpartum haemorrhage of 1500ml or more (Table 1).

Indicator	National Mean (%)	Trust/Board Numerator	Trust/Board Denominator	Trust/Board Unadjusted Result (%)	Trust/Board Adjusted Result (%)	Trust/Board 3SD upper limit
Postpartum haemorrhage	3.41	221	5404	4.09	4.37	4.15

Table 1

Background

Postpartum haemorrhage occurs in approximately 1% to 3% of all births and is the leading cause of obstetric morbidity and mortality worldwide. It accounts for up to 20% of maternal deaths in developed countries. It is traditionally categorised into minor (500-1000ml blood loss) or major (more than 1000ml). For reporting, the volume of blood loss is categorised into >500ml, >1500ml and >2000ml.

Brimingham Women's Hospital provides care for the most complex maternal and fetal medicine patients in the region and is the hub for the Abnormally Invasive Placenta Service. This increases the risk of PPH occurring significantly, along with our multi-ethnic and deprived patient population.

In 2024 Birmingham Women's Hospital (BWH) launched a quality improvement project to reduce the Trust's rates of postpartum haemorrhage to improve patient care and safety. The QI team is led by a consultant anaesthetist, a clinical fellow with a dedicated lead role in PPH QI, a consultant obstetrician and a senior midwife.

This document is to provide assurance to the CQC, those that access the MNPA report and most importantly our service users and their families that as a Trust, Birmingham Women's and Children's Hospital have taken action that has effectively reduced the rates of significant PPH.

Assessment

On receipt of the notification of outlier status, Birmingham Women's Hospital PPH QI team reviewed the data and challenged the accuracy of the denominator, as BWH data revealed a significant difference of 1,131 births between the data from the MSDS submission and our Trust Maternity Information System (BadgerNet).

Using this data BWH believe that the adjusted rate of patients with a PPH of 1,500ml or more is 3.57%, comparable to the national mean (table 2). Regardless of this, BWH remain committed to reducing the rates of PPH.

Calendar Year	Births*	PPH >= 500ml	% PPH >= 500ml	PPH >= 1500ml	% PPH >= 1500ml	PPH >= 2500ml	% PPH >= 2500ml
2020	7,625	2,539	33.30	177	2.32	24	0.31
2021	7,290	2,548	34.95	212	2.91	27	0.37
2022	6,969	2,571	36.89	185	2.65	24	0.34
2023	6,535	2,487	38.06	233	3.57	27	0.41
2024	6,972	2,624	37.64	216	3.10	24	0.34
2025	1,113	400	35.94	27	2.43	[redacted]	0.09

* Singleton births (all birth outcomes) between 34wks +0days and 42wks + days gestation

Table 2

It is important to recognise the significant increase in rates of PPH from 2022 to 2023. This coincides with a change in practice of measuring blood loss accurately instead of estimating. As expected, this resulted in a higher recorded number of larger volume postpartum haemorrhages, reflecting the reality of blood loss which was actually occurring rather than the under estimation which is well recognised to occur when visual estimation methods are used.

This information was submitted to the MNPA as per standard process, and after further review by MNPA we remain an outlier, although they acknowledge that the number of births reported by BWH is 20-25% lower than the number of births reported in Hospital Episodic Statistics.

In February 2024 we selected PPH as one of our pioneer projects for the new Patient Safety Incident Response Framework (PSIRF) leading to the launch of a significant Quality Improvement Project which has demonstrated significant improvement. As detailed in the above table our PPH rates have improved since 2023.

Following is the outline of the QI project and the measurable outcomes to date.

Countess Of Chester Hospital NHS Foundation Trust

NHS
Countess of Chester Hospital
NHS Foundation Trust

Countess of Chester Health Park
Liverpool Road
Chester
CH2 1UL

01244 365000
www.coch.nhs.uk

24/03/35

Dear Colleague,

Countess of Chester outlier response to National Maternity and Perinatal Audit (NMPA) report 2023.

We have been notified that for the year 2023 we are an outlier for the proportion of women and birthing people giving birth to a singleton baby between 34+0 and 42+6 weeks of gestation, who have a postpartum haemorrhage of 1500 ml or more.

Following further interrogation of the data there are some slight differences with the figures quoted although we accept that these figures would likely still highlight the trust as an outlier. See figure 1 below.

We have been aware of this when reporting both internally and regionally for 2023 and have responded in a number of ways.

We implemented the Obs Cymru PPH pathway in May 2022 which saw a significant change is clinical practice moving from estimating blood loss to measuring blood loss for all deliveries. As a result of this we expected an increase of PPH's overall for a period of time. We are aware that not all units have moved to this practice.

As a response to our rates and concerns with these we conducted a thematic review in 2024 as part of a safety improvement plan. This included a review of all PPHs above 1500ml from Jan 2024 to July 2024 to understand themes and commonalities for these cases. These cases had all undertaken either a 72 hour review (pre PSIRF), an after action review or a SWARM and had been presented to the Trust's executive led Patient Safety Oversight meeting.

Actions from the thematic review were disseminated a number of ways . These included via safety huddles, within PROMPT days where PPH remained a drill throughout 2024 emphasizing the learning from this, as well as posters with 6 steps to reducing PPH as a visual aid within the clinical area. Lightening learning for individual cases also took place during this time with these displayed on labour ward.

NHS
Countess of Chester Hospital
NHS Foundation Trust

Countess of Chester Health Park
Liverpool Road
Chester
CH2 1UL

01244 365000
www.coch.nhs.uk

The data for 2024 supports that our rates have reduced and we have ongoing work in progress including changes to the risk assessment process and medications given as a result of this. This is due to be implemented in the very near future as well as contributing to and adopting the regional PPH guideline when appropriately ratified.

Figure 1.

Denominator and numerator for the proportion of women and birthing people giving birth to a singleton baby between 34+0 and 42+6 weeks of gestation, who have a postpartum haemorrhage of 1500 ml or more in 2023 and 2024.

	Denominator	Numerator	%
2023	1804	89	4.93%
2024	1833	66	3.60%

As a result of these measures, we continue to be committed to improving the care of women with PPH at the Countess of Chester Hospital.

Yours sincerely,

Dr Victoria Finney
Clinical Director
Women's Health Care Group lead
[redacted]

Gateshead Health NHS Foundation Trust

NHS
Gateshead Health
NHS Foundation Trust

Gateshead Health NHS Foundation Trust response to National Maternity and Perinatal Audit (NMPA) alarm-level outlier status

In the National Maternity and Perinatal Audit (NMPA) report published on 11th September 2025, for births that took place in the NHS during 2023 in England, Scotland and Wales, Gateshead Health NHS Foundation Trust has been identified as an outlier for one of the reported indicators: postpartum haemorrhage of 1500ml or more. It should be noted that this information is from data submitted in 2023. Significant improvement work has been undertaken since that time.

The Trust is committed to the provision of safe and quality Maternity and Perinatal care; with openness, transparency and ongoing learning for improvement and has therefore taken the following actions for each indicator.

Proportion of women and birthing people giving birth to a singleton baby between 34+0 and 42+6 weeks of gestation, who have a postpartum haemorrhage of 1500 ml or more

Postpartum haemorrhage (PPH) over 1500ml is captured on the local Maternity clinical dashboard and is a reportable patient safety incident category onto the Trust incident management system. It is also reported monthly via the North East and North Cumbria Clinical Indicator Dashboard.

The service measures PPH via Statistical Process Control (SPC) charts and reviews this monthly through our internal governance arrangements. Therefore, the service, triggered a high SPC alert on the monthly dashboard monitoring in May 2023. This was reported via the Maternity Integrated Oversight Report (IOR) through governance processes (Quality Governance Committee) and was escalated to the Trust Board for oversight.

A thematic review was initiated and completed and learning and actions required were shared and agreed by the multidisciplinary maternity team in November 2023. The outcome of the review was discussed through the governance processes and the actions were agreed at the Quality Governance Committee. The same thematic review was repeated for Q3 2023/24 as the service continued to observe high rates.

Learning

Positive practice was observed from the review including appropriate antenatal risk assessment and optimisation of haemoglobin prior to delivery and excellent clinical management of the emergency with multidisciplinary teams and Consultant involvement.

A clear improvement was noted from the first thematic review learning with using measured blood loss (MBL) in the majority of cases rather than estimated (EBL) and increased consideration of eligibility and inclusion into the COPE research trial.

Gateshead Health NHS Foundation Trust

Delays were observed in the induction process, use of drugs, transfer to theatre and activation of MOHP. These were well documented.

Risk assessments were used well but there was lower compliance with updating them when a risk had changed or removing things no longer relevant.

Variation was observed in documentation – standards, use of proformas and inconsistent use of Badger forms.

A loss of situational awareness in some cases, particularly when the blood loss occurred over a sustained period, trickling, soaked into drapes/mixed with liquor. This was also improved with the increase in use of MBL.

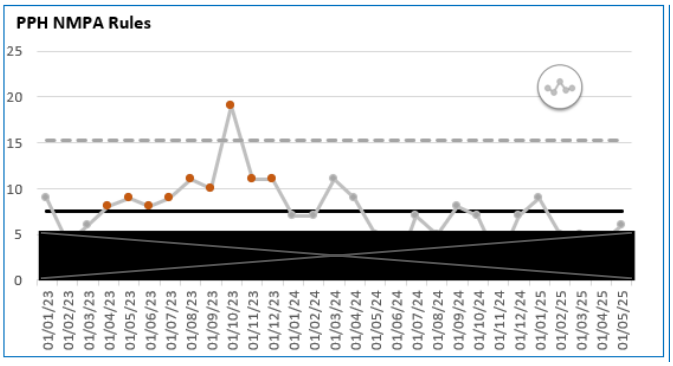
Some data discrepancies were identified where the blood loss was <1500ml but there had been entries by both surgeon and midwife to give a cumulative total. This scenario has also been noted by neighbouring Trusts and escalated to the Local Maternity and Neonatal Service (LMNS) digital user group for consideration and action.

Outcomes

Following the above PPH focussed work, the rates observed at the Trust have significantly reduced and been sustained at lower rates as seen on SPC charts.

This was highlighted by the LMNS as an example of learning from data and incidents to deliver improvement. Gateshead have also shared their improvement work via the North East and North Cumbria (NENC) Perinatal Patient Safety Learning Network.

This metric continues to be monitored via the NENC Clinical Indicator dashboard in both local and regional meetings, enabling earlier alarms signals to initiate prompt review and timely actions for improvement.



Source: Gateshead Health Maternity Dashboard

Gateshead Health
NHS Foundation Trust

For any further information please contact: ghnt.pals.service@nhs.net

Medway NHS Foundation Trust

Medway Fetal and Maternal Medicine Centre (MFMC)

NHS Medway NHS Foundation Trust

Women's Care Group
Women and Children Division
Direct line: 01634 825157

Medway Maritime Hospital
Windmill Road
Gillingham
Kent
ME7 5NY

Tel: 01634 830000

Date: 20th March 2025

National Maternity and Perinatal Audit (NMPA)
Royal College of Obstetricians and Gynaecologists,
10-18 Union Street
London SE1 1SZ

Dear NMPA team,

Re: Potential alarm-level outlier status for post-partum haemorrhage

Thank you for your letter dated 19th February 2025 informing us about an action required in view of the potential alarm outlier status with reference to our trust being identified as an outlier in relation to the benchmark for post-partum haemorrhage (PPH). We noted the incidence of PPH quoted in your letter for the national mean as well as that for our trust which are 3.4% and 4.3%, respectively. We agree with the rates quoted in your letter and thank you for bringing this to our attention. In response to your two specific questions, we agree that the rates were higher in 2023 but there have also been issues and concerns with reporting, capturing and extraction from the maternity electronic system.

We had ourselves noted this on our maternity dashboard as being relatively higher than the rates have historically been at our maternity unit. This was discussed in our labour ward forum and departmental governance meetings over the last several months and a robust action plan was made with a local Quality Improvement (QI) Project commenced to review the rates and the factors contributing to this. This is being regularly reviewed and discussed in the Maternity and Neonatal Safety Assurance Group (MNSCAG) as well as the Trust Quality Assurance Committee (QAC).

As part of the ongoing QI project, we have undertaken an audit over a period of 1 year from January to December 2024 and noted that our rates of PPH were higher than the national median as reported on the NHS Digital national maternity tool (Figure 1) but were not statistically different to national benchmark. The rate of PPH >1,500 mL in 2024 at our trust was 3.4% (151/4,394). We also reviewed our PPH rate compared to other similar maternity units which were tertiary referral centres for high-risk pregnancies from a maternity and neonatal perspective. This demonstrated that our rates were not dissimilar to other units with similar setting and infrastructure (Figure 2). We noted that the two main contributors to PPH rates were emergency CS and spontaneous vaginal deliveries. The contributory factors were noted to be advanced maternal age, body mass index and post-term pregnancies, but there was no significant association with location of delivery (delivery suite, midwifery-led unit or

home births), maternal ethnicity nor induction of labour. There was a trend for higher PPH rate in those that had a manual removal of the placenta but the contribution of this to the overall PPH rate was quite small.

The QI project is ongoing and we are continuing to monitor the PPH rates in the LW forum, MNSCAG and QAC meetings but the team is also reviewing protocols and policies for management of PPH as well as a review of the uterotonic agents used for prevention of PPH. There is ongoing education of maternity staff about the PPH rates with associated risk factors highlighted at various locations on maternity wards and delivery suite. This is included in the agenda for discussion in LW forum and senior obstetric staff are made aware of this ongoing QI project but also the need for senior supervision when high-risk pregnancies are being delivered.

The PPH rates at our trust over the last 2 quarters of 2024 have reduced and they are now within acceptable thresholds and comparable to national benchmarks (Figure 3). The senior obstetric and midwifery leadership team continue to monitor this as part of the QI project and review this with senior divisional and trust leaders in governance and quality meetings. We are currently assured that the interventions and improvements have contributed to a reduction in rates over the last 2 quarters of 2024 but we will continue to improve these further and monitor PPH rates on our dashboard.

We are thankful to the RCOG for flagging this up and bringing it to our attention. We feel reassured that our own departmental and trust governance process also identified these rates in a timely fashion last year prior to your kind letter and have an ongoing QI project to monitor this, which has led to a reduction in PPH rates. An important aspect that our QI project identified that there are discrepancies in reporting of data to the NHS Digital Maternity Services Data Set (MSDS) with the actual data being different to that which is reported on NHS Digital. An important aspect of capturing of accurate data is the maternity electronic database, which has several inflexible components, which add to data inaccuracy. We are in the process of procuring a new electronic maternity system not just at our trust but across the wider LMNS and ICB. We are also working with our Business Intelligence colleagues to improve the data submission in conjunction with improvements in the maternity system.

Please do let us know if any further information is required.

Yours sincerely,

R S Akolekar

Ranjit Akolekar

Professor of Fetal Medicine and Obstetrics,
Divisional Medical Director,
Women and Children's Division,
Medway NHS Foundation Trust

Figures:

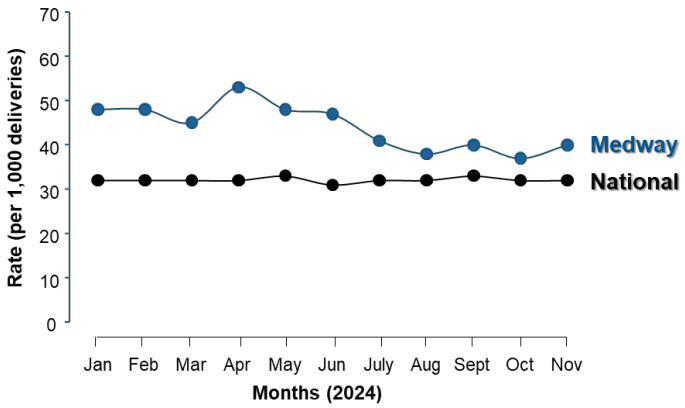


Figure 1: Rates of Post-partum haemorrhage (PPH) >1,500 mL at Medway NHS Foundation Trust (blue lines) compared to National PPH rates (black line) as reported on NHS Digital

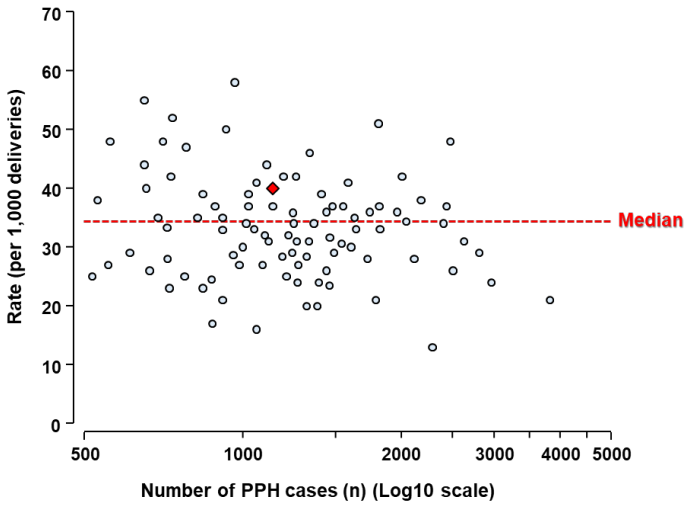


Figure 2: Rates of Post-partum haemorrhage (PPH) >1,500 mL at Medway NHS Foundation Trust (Red diamond) compared to PPH rates in similar trusts with tertiary maternity and neonatal units (blue circles) as reported on NHS Digital. The dotted red line is the national median.

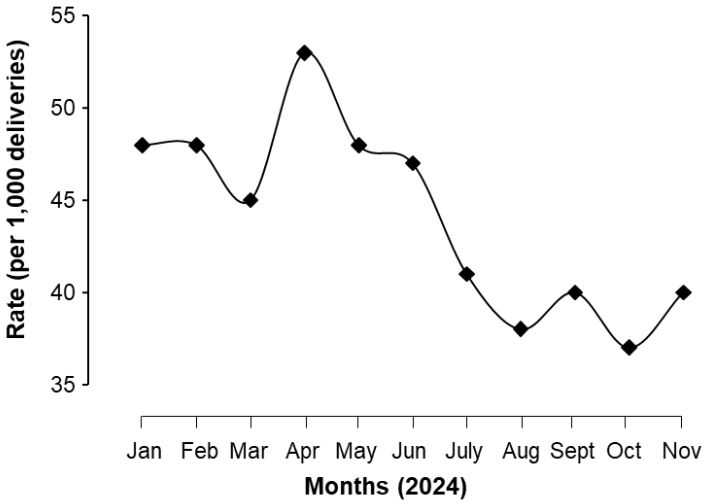


Figure 3: Rates of Post-partum haemorrhage (PPH) >1,500 mL at Medway NHS Foundation Trust as reported on maternity electronic database from January to November 2024

Mid Yorkshire Teaching NHS Trust

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Dr Katy L Harrison MBChB FRCOG
Consultant Obstetrician & Head of Clinical Service
(Obstetrics and Maternity)
Obstetric Department
Pinderfields Hospital
Aberford Road
Wakefield
WF1 4DG
Switchboard: 01924 541000

Date: 28/02/205

Many thanks for your email dated 19/02/205 regarding:

Proportion of women and birthing people giving birth to a singleton baby between 34+0 and 42+6 weeks of gestation, who have a postpartum haemorrhage of 1500 ml or more.

Web: www.maternityaudit.org.u **Indicator**	**National Mean (%)**	**Trust/Board Numerator**	**Trust/Board Denominator**	**Trust/Board Unadjusted Result (%)**	**Trust/Board Adjusted Result (%)**	**Trust/Board 3SD upper limit**
Postpartum haemorrhage	3.41	204	4937	4.13	4.35	4.18

As a Trust we accept that this is data is accurate and as such please see below steps that we have taken to address this concern.

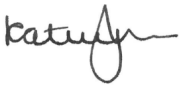
PPH Rate 2024: 3.6%

Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
5.9	3.4	3.8	4.3	2.5	3.5	3.4	3.6	3.6	2.8	3.3	3.4

Actions taken to reduce PPH Rate since 2023 data:

- Datix review of all PPH above 1500ml by labour ward leads (obstetric)
- Weighing scales introduced into every room and theatre in order to ensure accurate measurement of bloods loss at every delivery
- Changes to emergency processes to ensure that the emergency buzzer is activated for any blood loss over 500ml to summon timely assistance.
- Multi-disciplinary PPH Prevention Task and Finish group – on going
- Administration of a 2nd Uterotonic prior to transfer to theatre if required
- 16% of our women have an Hb blow 105 prior to delivery. Review of antenatal anaemia guideline underway and individual flagging of patients in labour with a low Hb
- Return to Syntometrine for 3rd stage rather than oxytocin where not contraindicated
- Women with BMI >35 IM deltoid injection of 3rd stage uterotonic to improve absorption and faster action
- Carbetocin for LSCS for prevention of PPH – Trust Medicines Oversight Group have approved, guideline update underway.
- Continued audit of all Major Obstetric Haemorrhage
- All women who have a retained placenta and start to bleed are taken to theatre prior to 500ml loss. MDT Audit demonstrates reduced blood loss.
- Trial of Veriset for bleeds in theatre as a replacement for floseal

Please do not hesitate to contact me if you have any further concerns or require any further information.



Dr K L Harrison

St George's University Hospitals NHS Foundation Trust

St George's PPH improvement actions

You will have the opportunity to provide details of the actions you have taken in response to this outlier alert, to be published alongside the report and data, as an appendix. This could describe the quality improvement activity taken in response to this outlier notification or provide local context that may help users to interpret it.

St George's is a centre for complex maternity and neonatal services, serving a diverse local population and taking referrals from across the country for some specialised services, including placenta accreta spectrum. We saw an increase in our PPH rates from the end of 2022 and took a number of steps to understand and address this, including actions taken in response to this outlier alert. Our aim is to reduce our rates of PPH >1500mls to below our Trust target of 4%, and we report on this regularly to our Trust Board. Since December 2024 we are pleased to see that our rate has fallen from 58/1000 to 32/1000 as a result of this focused work.

A detailed audit has been carried out which is being used to drive local learning and improvement. This demonstrates that PPH at St George's is associated with vaginal delivery following induction of labour, and with forceps delivery. Interestingly NHS England's maternity dashboard shows that we have the lowest rate in our region of caesarean section for Robson group 2 classification (nulliparous induction of labour or not in spontaneous labour). Vaginal births incur lower morbidity overall, but PPH is one of the possible adverse outcomes of this method of delivery. Our review of indications for, and management of, induction of labour is designed in part to identify further issues requiring intervention to improve PPH outcomes. We are looking at our management of PPH following delivery by forceps, where the likely cause of bleeding is trauma, to identify if any change in clinical approach is needed.

In consultation with other tertiary referral trusts in London the maternity unit has introduced a multi-disciplinary governance process to review PPH incidents and ensure themes and learning are rapidly identified. All Datixes are reviewed daily by the Divisional incident review group (DIRG) and appropriate initial review responses determined. PPH cases are reviewed by the governance team and a standardised review tool is completed to ensure consistency and accuracy of approach.

Cases are then presented at a bi-monthly MDT meeting which is open to all maternity unit staff. Care is graded by the MDT and actions and learning responses are identified. Actions are monitored in the monthly governance meeting and on the Learning From Patient Safety Events (LFPSE) reporting system. A monthly report of all case reviews is presented at the Divisional review group. PPH themes are identified and presented at monthly governance meetings and shared with staff via Governance boards, monthly newsletters, and communications email.

In Jan 2024 we introduced the thromboelastography (TEG) guided use of fibrinogen concentrate which has resulted in a reduction in the total amount of blood products used for transfusion, reduction in the mean total blood loss, and reduction in the number of admissions to intensive care. This is despite a 43% increase in placenta accreta syndrome referrals since 2023.

In addition to this we have done the following:

- Updated our haemorrhage guideline in line with Obs Cymru recommendations.
- Updated our PPH guideline following our audit findings.
- Introduced use of carbetocin for caesarean and instrumental deliveries in theatre.
- Introduced bi-annual PPH staff awareness weeks.
- Introduced a PPH station within our mandatory PROMPT training.
- Introduced in-situ simulation sessions for all staff.
- Introduced hands on instrumental delivery teaching for trainees.
- Worked towards aligning our maternity dashboard with Maternity Services Data Set (MSDS) metrics to ensure consistent reporting.

County Durham And Darlington NHS Foundation Trust

NHS
County Durham
and Darlington
NHS Foundation Trust

Trust response to potential NMPA alarm-level outlier status

Introduction

The National Maternity and Perinatal Audit (NMPA) is preparing to publish its report on outcomes for births that took place in the NHS during 2023 in England, Scotland, and Wales. Three measures have been selected as indicators which are subject to 'outlier reporting.' These indicators have been case-mix adjusted to consider the different maternal demographic and clinical characteristics at each trust/board, as far as is currently possible. The aim of the audit is to provide relevant and comprehensive information about maternity and neonatal services provided by the NHS in England, Scotland and Wales. This information will allow clinicians, NHS managers, commissioners and women to compare and evaluate services, and can be used to inform care quality improvements. Maternity service providers and commissioners can benchmark the care provided by their service against other, similar services, against regional and national averages, or against local or national standards. Together, these outputs from the audit will allow healthcare professionals, NHS managers, commissioners and policy makers to examine the extent to which current practice meets guidelines and standards and to identify areas for improvement.

The three indicators are:

Proportion of women and birthing people giving birth vaginally to a singleton baby between 37+0 and 42+6 weeks of gestation, who experience a third- or fourth degree tear.

Proportion of women and birthing people giving birth to a singleton baby between 34+0 and 42+6 weeks of gestation, who have a postpartum haemorrhage of 1500 ml or more.

Proportion of liveborn, singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute Apgar score less than 7

The Trust has been identified as a potential alarm level outlier for Apgar score <7 at 5 minutes. The Trust have explored this further, with a response to NMPA to confirm that the Trust accepts the results.

Methodology

In response to the NMPA outlier status, CDDFT commenced an audit covering quarter 1 2024-2025 reviewing births with Apgar Scores of less than 7 at 5 minutes of age. The rationale for the time period was to establish the most recent data to identify themes,

trends and learning. An audit of 39 retrospective cases selected at random was undertaken by Obstetric and Paediatric consultants reviewing metrics from each case. The use of the existing data allows identification of patterns, associations, or outcomes to be reviewed. The main objective of the audit was to review antenatal, intrapartum and neonatal care to identify any underlying problems, themes or trends. Limitations to the audit include the inability to assign controls, the outcome is known and can provide an element of recall bias or documentation bias.

Outcome of Review

- There were limitations to the study due to the methodology (Retrospective).
- There were limitations due to the numbers included within the review n=39 cases.
- The review was unable to identify any themes that may contribute to Low Apgar score pertaining to the care provided during pregnancy and birth.
- Inaccuracies were noted when assigning the Apgar Score (as noted by the documentation in the clinical records) N=13 cases were assigned the correct Apgar Score <7 at 5 minutes, n=16 cases were assigned an incorrect Apgar Score (this was determined by documentation of the neonates condition which did not match the scoring pattern allocated), n=10 inconclusive due to limited or missing documentation available.
- In many of the notes reviewed it was apparent that gaps in documentation meant audit findings may be unreliable.
- Apgar should be documented on maternity notes for all babies, with full details of resuscitation, utilising the structured proforma within the digital maternity records.
- Targetted training for Tier 1 trainees on assigning Apgar Scores.
- Educational practice reminder for wider staff groups
- If a baby required PEEP following initial assessment the Apgar score should be 2 when PEEP is used to assist transition and spontaneous breathing is observed. If the cohort audited are re scored this this recommendation applied then the Apgar rate per 1000 birth is reduced to 20% following previous trend.
- No direct correlation due to apparent higher low Apgar rates and admission to neonatal unit (55% admitted under heading of ‘respiratory’).

Recommendations

There were limitations to the design of the study (Retrospective Audit) and the number of cases reviewed (n=39) which will have had an impact on the results. A Prospective study is recommended. A Prospective study can look forward in time and observes events as they happen. Participants can then study without having a condition of interest. Observation in action allowing the study to focuses on identifying factors that increase or decrease the occurrence directly. Prospective studies are superior to retrospective studies because they are less susceptible to bias and confounding. In a Prospective study, the researchers can

specifically choose the methodology, variables, measurement procedures, equipment, personnel, and participants that can effectively answer their research question rather than relying on whatever subjects and their data that happen to be in available records.

Immediate learning was identified relating to Apgar scoring and training requirements. It is clear from the records reviewed that 41% of cases received an incorrect Apgar Score, 33% received a correct Apgar Score and 26% were inconclusive due to limited documentation. Whilst it is acknowledged that there are limitations to the study due to the study design and limited cases reviewed, it could be interpreted from the results that this in turn would lead to over-reporting of Low Apgar Scores at 5 minutes of age and likely negatively contributing to the outlier status.

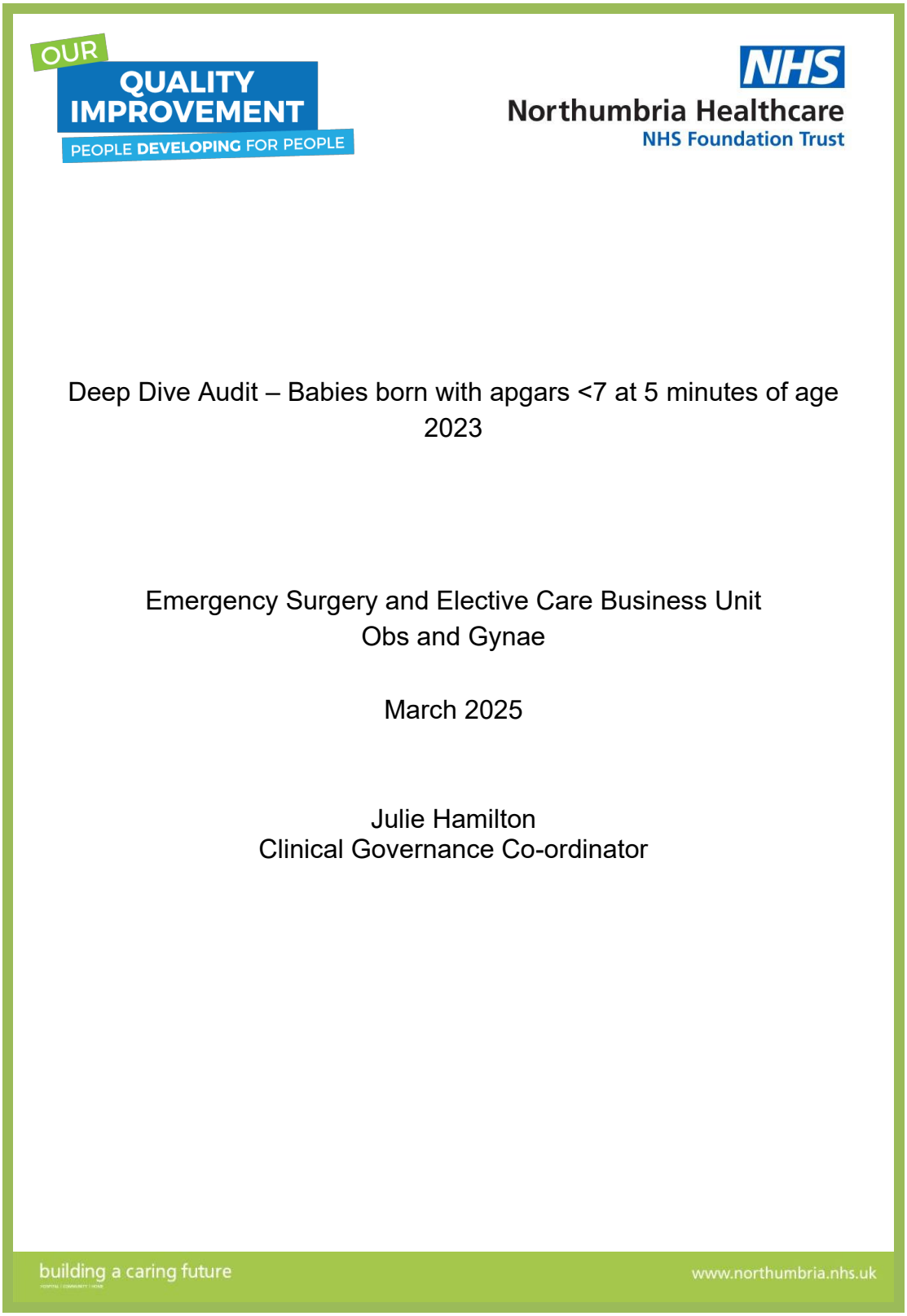
A Prospective study is recommended and training for all professionals in attendance at birth who use the Apgar Tool. A re-audit will be undertake following additional training with ongoing monitoring and surveillance through the Maternity Dashboard the North East North Cumbria Clinical Indicator Dashboard.

Conclusion

The Trust was alerted to safety signals from the NENC Clinical Indicator Dashboard and has completed comprehensive deep dives and audits to understand if there were any safety implications and learning. This learning was disseminated widely to inform practice. The review team completing the deep dive discovered errors in assigning Apgar Scores which may have influenced the potential alarm.

Kimberly Williams (Director of Midwifery)
Dr Ria Willoughby (Deputy Medical Director and Care Group Director – Family Health)

Northumbria Healthcare NHS Foundation Trust



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1. Executive Summary

Key Findings: [summarise the headline results of the audit – Max 100 words]	The audit has identified that there were 6 cases where the apgar was documented incorrectly and was more than 7 at 5 minutes. Despite this amended figure we remained an outlier in this metric, when compared to the national mean (NMPA).
Sample Size: [state the no. of records / patients etc. in the audit]	All singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute Apgar score less than 7 in 2023. 72 cases were identified; the electronic maternity records were accessed and reviewed to identify any key themes or learning.
Actions for Improvement: [summarise the key actions arising from the audit – Max 100 words]	Share audit findings and improvement actions with: • Multi – disciplinary clinical team • NMPA, LMNS & CQC • Business Unit governance and board meetings
Date Actions due to be completed: [when all the actions identified above are to be completed]	September 2025
Re-audit: [indicate if a re-audit is planned and if so, the date]	Is this area going to be re-audited? **Yes** ☑ **No** ☐ If Yes – please state the re-audit date: August 2025
Impact on patients: [identify what specific impact this audit has had on patient care]	This audit was to identify if care provided was managed appropriately and to understand local improvement actions in light of national outlier status.
Overall Results Rating: [indicate to what extent standards were met]	Outstanding Practice = standards exceeded no improvement needed; Good Practice = standards were met with no or only minor improvements needed; Requires Improvement = standards were not met and significant improvements are needed **Outstanding Practice** ☐ **Good Practice** ☐ **Requires Improvement** X
Risk Rating: [state what level of risk the audit findings present to the Trust.– see Risk Management Policy]	**None** ☐ **Very Low** ☐ **Low** ☐ **Moderate** x **High** ☐ **Very High** ☐

2 Background

The National Maternity and Perinatal Audit (NMPA) is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). NMPA is a large-scale audit of the NHS maternity services across England, Scotland and Wales.
Using high quality data, the audit aims to evaluate a range of care processes and outcomes in order to identify good practice and areas for improvement in the care of women and babies.
The NMPA is preparing to publish its report on outcomes for births that took in the NHS during 2023 in England, Scotland and Wales. The report will describe different aspects of maternity and perinatal care. Northumbria Healthcare NHS Foundation Trust was notified in February 2025 as a potential alarm-level outlier for: **Proportion of liveborn, singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute Apgar score less than 7.**

3. Aims and Objectives

The aim of this audit was to review all of the cases identified in 2023, to identify any themes and subsequent learning and improvement actions.

4. Audit Standards and Criteria

The information analysts used the NMPA technical specifications document which sets out the data sources used to construct the dataset.

The deep dive into each identified case reviewed the antenatal and intrapartum risk factors and the immediate newborn care.

5. Methodology and Sample

5.1. Method

This was a retrospective case note review audit of all singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute Apgar score less than 7 in 2023. Each case was explored in depth using numerous denominations to identify any key themes or trends.

5.2. Sample Size

All singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute Apgar score less than 7 in 2023- 72 electronic maternity records in total.

6. Key Findings

In total 72 women's BadgerNet records were audited.

Results regarding the outcomes of the review:-

Table 1

2023	
79% (n=57)	Women were assessed as high risk
36% (n=26)	Women were taking prescribed SSRIs in antenatal period.
26% (n=19)	Women were diagnosed with gestational diabetes in pregnancy
35% (28)	Women had a BMI of 35 or over
47% (n=34)	Babies were admitted to SCBU, 5 transferred to level 3 care
44% (n=32)	Babies had a lower apgar at 5 mins than 1 min
15% (n=11)	Apgar scores were documented incorrectly - identified from clinical noting or baby notes.
8% (n=6)	Cases of incorrectly documented apgar which would have increased it to >7 at 5 mins
26% (n=19)	Cord gases were not taken
39% (n=28)	Arterial blood gas normal despite low apgar
44% (n=32)	Datix completed and had MDT discussion

Table 2

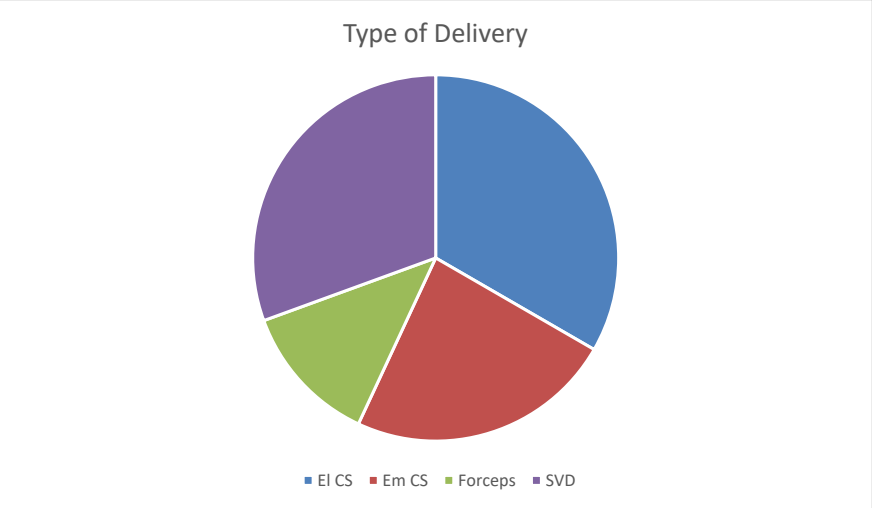


Table 3

Deep dive - apgars less than 7 at 5 mins-

7. Conclusion

The audit has identified that there were 6 cases where the apgar was documented incorrectly and was more than 7 at 5 minutes. This confirmed that even with this readjusted figure we remained an outlier in this metric, when compared to the national mean (NMPA).
Several of the themes identified during the audit (Table 1)
were expected i.e. High risk, GDM and raised BMI. The high incidence of SSRI medication will require further investigation, as to whether this is prevalent in the wider pregnancy population. Despite the low apgars, 39% of cases had normal blood gases.

Addendum (August 2025)

A safety alert was recently shared with Trusts from the North East and North Cumbria Local Maternity and Neonatal System. The alert identified that following a thematic analysis across the system regarding apgar score at 5 minutes, two common themes had emerged:

- Incomplete documentation
- Scoring inconsistent with clinical condition

The thematic analysis highlighted a difference in recording the respiration score. This occurred when PEEP was administered. It is recommended that if a baby requires PEEP following initial assessment. The following APGAR score for breathing should be used:

Apgar 2	PEEP is administered to assist Transition only and spontaneous regular breathing is observed.
Apgar 1	IPPV is required to support irregular breathing
Apgar 0	No respiratory effort/Intubated.

If the Neonatal team are in attendance; the Apgar score should be confirmed with the neonatal team prior to entering on Badger notes. APGAR should be documented on maternity notes for all babies.

In view of this published safety alert a further in-depth analysis of the Northumbria cases for 2023 was conducted, this identified a further 8 cases where the agpar was incorrected calculated and recorded when applying the above principles. The majority of inaccurate scores were due to a respiratory score of 1 being incorrectly assigned to babies receiving facial PEEP with regular respiratory effort.

Therefore, in total there were 14 cases which should have had an apgar of more than 7 at 5 minutes.

This further audit concurred with the findings from the LMNS regarding data entry errors; incomplete documentation errors and scoring inconsistent with clinical condition. It does however have to be highlighted that the BadgerNet EPR had not long been launched within the Trust and was still being embedded in practice throughout 2023.

8. Recommendations

1. Share results of audit with OGGB
2. Inform CQC and LMNS of outlier status
3. Continue Avoiding Term Admissions to SCBU work stream
4. Understand the prevalence of SSRIs
5. Update Care in labour guideline to include criteria for performing card gases
6. Neonatal clinical condition, PEEP and apgar score guidance to be taught on Neonatal Life Support MDT mandatary training syllabus
7. Continue to monitor performance

9. Action Plan

Action	Date to be completed	Lead	Risk Rating (of non-completion of action to Trust / patients)	Added to Risk Register? (as agreed by the Business Unit Gov. Group)
Share results of audit with OGGB & SQI Committee	March 25	K Lissaman	None	No
Inform CQC and LMNS of outlier status	April 25	K Lissaman	None	No
Continue Avoiding Term Admissions to SCBU work stream ➢ MDT case review ➢ Quarterly Audit ➢ QI initiatives in practice	Ongoing	C Abbott-Sharp	None	No
Understand the prevalence of SSRI medicated pregnant population	August 25	G Thompson	None	No
Update Care in labour Guideline to include criteria for cord gases	August 25	J Hamilton	None	No
Local Maternity Performance dashboard amends ➢ SPC chart ➢ Align to NMPA alert levels	August 25	H Hornsby	None	No
Neonatal clinical condition, PEEP and apgar score guidance memo shared with MDT and taught on Neonatal Life Support mandatary MDT training syllabus	July 2025	E. Atzeni	None	No
Continued audit to monitor performance	September 25	J Hamilton	None	No

Portsmouth Hospitals University National Health Service Trust

'In response to the NMPA notification of Portsmouth Hospitals University NHS Trust being an outlier for the NMPA metric: Proportion of liveborn, singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute Apgar score of less than 7, maternity services have conducted an internal quality review of the 2023 birth outcome data. The 2023 maternity dashboard metric data was reviewed, showing that Portsmouth Hospitals University NHS Trust reported an average of 1.84% term (37-42 weeks) babies with a 5-minute Apgar of less than 7.

Since the implementation of the digital maternity records the maternity safety team monitor the number critical incidents reported. These results are reported monthly at Care Group, Divisional Governance, Perinatal Safety Forum, Maternity and Neonatal committee and Quality and Performance committee with Trust Board oversight. In April and May 2023, the above process highlighted an increase in the number of babies born with an Apgar of <7 at 5 minutes and a thematic review was instigated. The recommendations from the Thematic Review concluded with an action plan to include clear guidance on when to call for Neonatologists to ensure the right professionals present at the time of birth and implementation of the SBAR handover tool to provide a consistent approach to postnatal observations and monitoring of a babies condition after birth.

A further thematic review of all babies born with a 5-minute Apgar score of less than 7 was performed in 2024. In summary, the findings showed a decrease in the number of babies born with a 5-minute Apgar score of less than 7 with an average rate of 1.2%.

Learning themes identified from the 2024 thematic review included risk assessment, fetal monitoring, appropriate mode and timing of birth, and neonatal attendance at birth.· The next steps identified include incorporating mannequins with different skin tones into mandatory training to improve the identification of expected skin colour in neonates from ethnic minority groups. Ongoing quality improvement efforts will focus on enhancing the completion of “fresh eyes” a cardiotocograph assessment tool in labour. Additionally, we will continue to benchmark data and conduct rolling annual thematic reviews.'

South Tyneside And Sunderland NHS Foundation Trust

NHS
South Tyneside and Sunderland
NHS Foundation Trust

Ref: SG/AC

Sunderland Royal Hospital
Kayll Road
Sunderland
Tyne & Wear
SR4 7TP

Tel: 0191 5656256 [redacted]

[redacted]

21st March 2025

Sent by email
nmpa@rcog.org.uk

NMPA Clinical Leads
Sam Oddie, NMPA Senior Clinical Lead (Neonatology)
James Harris, Senior Clinical Lead (Midwifery)
Asma Khalil, NMPA Senior Clinical Lead (Obstetrics)

Re : Potential alarm-level outlier status

To NMPA Clinical Leads

Following your letter dated 18th February 2025 (received by email 19th March 2025) we write with regards South Tyneside and Sunderland NHS Foundation Trust being identified as a potential alarm-level outlier for one indicator, this being Apgar score.

In line with you request we have reviewed our data and can advise that we accept the results as they are. On investigation of 2024 data it was identified that several babies had inaccurate scoring applied and the majority of inaccurate scores where due to a respiratory score of '1' being incorrectly assigned to babies receiving facial PEEP with regular respiratory effort. This should have been a score of '2'. We acknowledge our investigation was of more recent data however speculate that this practice was occurring in 2023 resulting in our outlier status.

Please do not hesitate to get in touch via email if you have any questions about our response.

Yours sincerely

Sarah Gatiss
Clinical Director
Maternity, Neonatal and Gynaecology

The path to excellence

NHS Fife

National Maternity & Perinatal Audit Response

The National Maternity and Perinatal Audit (NMPA) have identified that NHS Fife is an outlier for 'Proportion of live born singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute APGAR score less than 7' based on 2023 data.

Internal data review showed the number of singleton babies born with an APGAR score of less than 7 at five minutes were 77 in number. The numbers of liveborn singleton babies for the given gestation were 2646, giving a rate of 2.9% which makes NHS Fife an outlier.

We currently use Datix reporting as a means for identifying any unexpected admission of the newborn to the neonatal unit. We undertake serious adverse event review and complex case reviews for unexpected admissions to the neonatal unit and report at the monthly Clinical Governance meetings. These reviews are undertaken using a National Perinatal Review Tool. We are actively involved with the Perinatal Collaborative strand of the Scottish Patient Safety Programme and are working on a number of quality improvement projects. One such project is unexpected admissions to the NNU after 37 weeks gestation.

In response to the outlier alert we have commenced a deep dive into all the cases, to ensure that we have not missed any cases of low APGARs not already captured in our data that we have collected and examined. We aim for the staff leading the stabilisation and resuscitation of any newborn infant to be a certified NLS provider. Furthermore, we have started a regular neonatal simulation program that focuses on the stabilisation of newborns, involving the multidisciplinary neonatal team.

We welcome the inclusion of Scottish data in the NMPA report. We use these reports and other measures to inform and plan our current and future quality improvement projects.

NHS Lanarkshire

Maternity & Neonatal Services
University Hospital Wishaw
50 Netherton Street
Wishaw
ML2 0DP
www.nhslanarkshire.co.uk

Private and Confidential

Date 31st March 2025
Our Ref LG/SG

Dear NMPA,

I am writing to accept NHS Lanarkshire data is an outlier for the performance measure of Apgar <7 at 5 minutes in 2023. The data provided by NPMA (table1) has been corrected after identifying data issues but still confirms this measure is above the 3 SD upper limit at 2.78.

Indicator	National Mean (%)	Trust/Board Numerator	Trust/Board Denominator	Trust/Board Unadjusted Result (%)	Trust/Board Adjusted Result (%)	Trust/Board 3SD upper limit
Apgar score	1.45	115	3762	3.06	3.08	2.03

Table 1: Data supplied by NMPA

A review of this performance measure was undertaken. The following details review of the data with adjusted figures where data quality issues have been rectified. Relevant clinical features have been described.

Data quality

Data quality was reviewed. A manual Badgernet search of deliveries with recorded Apgar score <7 at 5 minutes from 1st January 2023 to 31st January 2023 was performed. This identified 122 records. Of these, 8 babies were born at <34 weeks gestation leaving 114 babies. There was no delivery after 42+6 weeks gestation.

Numerator

Data quality issues were noted with babies who had been scored 0 for Apgar at 5 minutes. There were 8 records with score of 0. [redacted] born without signs of life and had extensive resuscitation therefore in keeping with score allocated. For 6 further patients, Apgar scores >7 (all were 9 at 5 minutes) were written within clinical notes and were in keeping with clinical picture at birth and progress suggesting that score of 0 was wrongly assigned. [redacted] had missing data for Apgar at 5 minutes although was complete for 1 and 10 minutes. [redacted]

Continued

Denominator

Data for number of live singleton births were reviewed and detailed below. This shows a different denominator than provided by NMPA but we appreciate there may have been exclusions made for other reasons.

The following table shows births in Lanarkshire in 2023

Gestation at birth	Total
34 -36 + 6 weeks	252
37-41+6 weeks	3703
42 + weeks	30
Total	**3985**

Removing the following for multiple births

Type	Total	No of babies
Twins	[redacted]	
Triplets		
Total Multiple births / babies	**72**	**145**

Removing the number of stillbirths

Gestation at birth	Total
34 -36 + 6 weeks	[redacted]
37-41+6 weeks	
42 + weeks	
Total*	

* [redacted]

Therefore, the total figure of singleton live births from 34 weeks to 42 + weeks for 2023 would be 3836.

This therefore gave updated values as:

Indicator	National mean (%)	Trust/board numerator	Trust/board denominator	Trust board unadjusted result	Trust/board 3SD upper limit
Apgar score	1.45	107	3836	2.79	2.03

Table 2: Data following data quality review

Following cleaning of data, the measurement of Apgar score still remains higher than the 3SD upper limit. Therefore, it is accepted that NHS Lanarkshire is an outlier for this measurement.

In reviewing the data, the following clinical features were recognised:

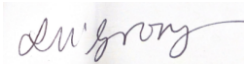
Clinical Features: Maternal medication

In 27 cases (25%) a general anaesthetic was administered to the mother or the mother received opiates within 3 hours of birth. These are both associated with increased need for resuscitation in neonates and can result in lower Apgar scores.

21 mothers received general anaesthetic and 6 received opiates. 10 of the GAs were administered for maternal clinical reasons only (e.g. history of spinal surgery) and 11 were associated with emergency C-section where there was also an abnormal CTG.

Please accept this letter as confirmation of outlier status of APGAR <7 with differences noted in data provided.

Your sincerely,



Dr Lorraine McGrory
Consultant Neonatologist
University Hospital Wishaw
NHS Lanarkshire

NHS Tayside

We accept the results presented as they are consistent with local data. We have reviewed our data

Themes

1. 65% of these cases were delivered by caesarean section. (Cat 1 -23%, Cat 2 -41%, Cat 3 -11%, Cat 4-25%)
2. Majority of births are delivered within recommended time frames for Category 1 & 2 C/Sections): Few delays due to clinical activity for category 2 C/ Sections.
3. We have noted a higher General Anaesthetic (GA) rate than expected (clinical indications for GA are appropriate)
4. 48% of these babies required admission to NICU.

Areas for improvement

1. Timely calls for neonatal team presence for births with fetal bradycardia for CTG concerns
2. Review of all GA cases for clinical audit
3. Consistent paired cord gases for babies with low APGARS
4. Improvements in documentation of decision to delivery intervals and on going audit.
5. Datix reporting of all cases that are not delivered within recommended time frames.

Trust/board data quality responses

This section displays the responses received from a number of trusts which describe issues they discovered when investigating their data quality. Where the details provided may breach data sharing rules or individual confidentiality, such as where the results are less than five, information has been redacted. Click on the trust/board name in the list below to read to their response.

Third- and fourth-degree perineal tears

Bolton NHS Foundation Trust

University Hospitals of North Midlands NHS Trust

Postpartum haemorrhage of ≥1500 ml

Northumbria Healthcare NHS Foundation Trust

West Suffolk NHS Foundation Trust

Apgar score <7 at 5 minutes

Gateshead Health NHS Foundation Trust

Postpartum haemorrhage of ≥1500 ml and Apgar score <7 at 5 minutes

The Newcastle Upon Tyne Hospitals Foundation Trust

Bolton NHS Foundation Trust

Vision | Openness | Integrity | Compassion | Excellence

NHS Bolton NHS Foundation Trust

[redacted]

24th March 2025

Musgrave House
Royal Bolton Hospital
Minerva Road
Farnworth
Bolton
BL4 OJR
www.boltonft.nhs.uk

To: NMPA Senior Clinical Leads

RE: ACTION REQUIRED: Potential alarm-level outlier status

Thank you for contacting Bolton NHS Foundation Trust and informing us that we may be potential alarm-level outliers for third or fourth degree tears and allowing us time to review the results and respond.

With the assistance of our business intelligence team we have reviewed our data against your parameters and time frame and have identified data quality discrepancies. At this point we do not accept the data you have presented as accurate.

Our teams have reviewed the data recorded on Euroking(E3) and LE2.2(Patient Administration System) from January 2023 to December 2023, for all singleton deliveries from 37^{+0} to 42^{+6} weeks gestation. This information has been compared with clinical documentation. We have identified the following issues with the data:
Numerator

- Recording and coding errors
- Data entries not corrected after clinician review and grading reduced

We have identified 9 cases that should not be included in the numerator.

And

Denominator
Differences in denominators have reduced our actual denominator by 4%, therefore inflating our rate

- NMPA denominator 2738
- Bolton internally calculated denominator 2854

We have been unable to risk adjust our data but we calculate our unadjusted result at 3.9% (NMPA 4.31%).

As a result of our analysis so far, we have implemented the following actions:

1. Undertaking a review of data recording and accuracy, which will include staff education and training
2. Training from the coding team to improve data quality
3. Prospective audit of data recording on E3 and LE2.2 for 2025 with a retrospective audit of data over 2024.

In addition to the data quality improvements we have ongoing work streams and training around the implementation of OASI bundles.

... for a better Bolton

University Hospitals of North Midlands NHS Trust

NHS
University Hospitals of North Midlands
NHS Trust

Simon Cunningham
Clinical Director for Maternity, Neonatal Medicine & Womens Health

Royal Stoke University Hospital
Maternity, Neonatal and Gynecology Services
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Staffordshire
ST4 6QG
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NMPA Senior Clinical Leads
Sam Oddie NMPA Senior Clinical Lead (Neonatology)
James Harris NMPA Senior Clinical Lead (Midwifery)
Asma Khalil, NMPA Senior Clinical Lead (Obstetrics)

Letter of response to confidential letter from National Maternity and Perinatal Dataset re outlier status

Dear NMPA Team,

Thank you for your email dated 7th May 2025. We full accept the NMPA choice of indicators for outlier reporting, their validity, fairness and the need to reflect our service publicly.

We understand that it demonstrates that we appear to be an outlier for this incidence of third/fourth degree tears in women and pregnant people birthing at 37 weeks or above during 2023 (based on the HES dataset which is derived from our MSDS data).

We respectfully challenge the accuracy of the figure based on the denominator data used because we understand from checking our MSDS dataset that approximately 30-70 births per month are lost. These are subsequently not fed into the HES data used by your Team. This lost dataset has been assessed by our quality and risk and data analysts who assure me unequivocally that they retain valid inclusion characteristics to be added to the denominator aspect of calculation. That is, no third or fourth degree tears in vaginal births after 37 weeks occurred within the lost dataset. They retain the accuracy of this by the extended use and reliability of governance process to submit a datix risk incident episode when a third or fourth degree tear occurs.

The effect of this would move our 2023 rate of third / fourth degree tear from 4.31% to 3.9%, which we accept is still above the national average. We therefore respectfully ask for this correction based on the dataset demonstrated below which presents our eligible births and OASI by each month.

In summary we therefore respectfully ask for amendment of the dataset presented in accordance with the NMPA data outlier policy. We also respect that this highlights the need to improve our data quality as highlighted within the NMPA outlier policy.

It would be helpful if we could promote our current rate of 2.8% to demonstrate our considerable improvement since 2023 in order to avoid reputational damage. I respect that this may be beyond the remit of NMPA report but maintain it as part of our response to be considered to be included when providing information to ancillary bodies such as the Care Quality Commission.

Please can I also highlight our current measures to reduce and treat OASI injury that have transformed our 2025 dataset:

- Monthly reporting with OASI as part of our data quality bundle with the LMNS (which will also be defined by the eligibility criterion set by NMPA going forward).
- Monthly compulsory OASI workshops for midwifery teams and twice per year for medical teams.
- The OASI care bundle was built into our Athena EPR in February 25 to enable audit data and raise awareness. The four components of OASI are now shown on every woman's admission. This data is now highlighted to promoted Team awareness.
- We currently run an annual training day for the medical team to promote the use of OASI in conjunction with repair ethos and techniques.
- Annual thematic analysis by our quality and risk department.

- All women and pregnant people who sustain an OASI are reviewed 6-12 weeks following birth within a long-standing perineal care clinic. This provides a care for those who have sustained a recent tear and also promotes awareness and decision making for those who now pregnant again following an OASI injury.

- We have a newly launched Perinatal Pelvic Health Service (PPHS) again launched in February 25 which is becoming well established.

- A plan is underway to promote improvement in data quality – this stems from omissions made in the care record. We are seeing improvement in quality and are auditing this.

- OASI is one of the strands for post-partum birth trauma steering group that we have established to address concerns with the recent Birth Trauma report.

Finally, please can I sincerely thank your Team for the important work that you are doing.

Yours sincerely,

Simon Cunningham

Clinical Director for Maternity, Neonatal Medicine & Gynaecology

Northumbria Healthcare NHS Foundation Trust

Number of women and birthing people giving birth to a singleton baby between 34+0 and 42+6 weeks of gestation, who have a postpartum haemorrhage of ≥1500 ml.

Following the organisations notification on 16th June 2025, I have taken some time with our local data analyst team to further understand the quality of the data regarding postpartum haemorrhage of ≥ 1500 ml.

It appears the basis of the exclusion relates to <70% completeness check for this data item:

The MSDS data comes from the MSD302 table where the code is 719051004. We only populate the data where the PPH value is 500 ml or greater. The reason we do not submit the data less than 500ml is because the SNOMED mapping looks like the below, which implies that we would only submit values >500mls under the below codes:

C	D	E	F	G
National Code	**National Code Definition**	**SNOMED CT code**	**SNOMED CT Description**	**Data Item in MSDS v2.0**
02	PPH >=500ml and <=999ml	719051004	Quantity of postpartum maternal blood loss (observable entity)	CODED OBSERVATION (CLINICAL TERMINOLOGY)
03	PPH >= 1000ml and <=1499ml			
04	PPH >= 1500ml			

Therefore, the omission of the normal blood loss values <500mls appears to have impacted on the completeness data quality checks.

We have now amended our submission scripts so all patients (including those with <500mls blood loss) will be included to ensure >70% completeness.

West Suffolk NHS Foundation Trust

This discrepancy was due to a few overlying problems with how the system is, firstly is user input secondly is system build, if by accident the staff added to the wrong encounter slice and then correctly added back on to the current encounter the system would add both results together, this would then feed in to the MSDS as a patient having a 2000pph and a total 4000pph.

We had a service request to get this issue fixed but due to the build of Cerners eCare it wasn't possible.

I submit the MSDS and had missed that this problem would flow into our submission, since seeing that we were an outlier on your dashboard we looked into this problem more and raise another ticket to Cerner but this was unable to be corrected as well so now we have manual steps in place to cross check all PPH patients and there results to the dashboard that Karen has already provided you.

You should see that our latest submissions are showing much lower numbers which are now inline with our internal reporting which is validated by Kaytlin & our Digital Midwife on a weekly and monthly basis.

Gateshead Health NHS Foundation Trust

NHS
Gateshead Health
NHS Foundation Trust

Gateshead Health NHS Foundation Trust response to National Maternity and Perinatal Audit (NMPA) alarm-level outlier status

Karen Parker, Associate Director of Midwifery/SCBU

1. Introduction

The National Maternity and Perinatal Audit (NMPA) is preparing to publish its report on outcomes for births that took place in the NHS during 2023 in England, Scotland and Wales. The report will describe various aspects of maternity and perinatal care.

Three measures have been selected as indicators which are subject to 'outlier reporting'. These indicators were chosen because they represent adverse outcomes for women/birthing people or babies with potential serious or long-term effects.

A trust or board is classed as a potential outlier if it has a significantly higher than expected result for one of the NMPA outlier indicators. The data has been case-mix adjusted to take into account the different maternal demographic and clinical characteristics at each trust/board, as far as is currently possible.

Having a high rate does not necessarily mean that the trust or board is providing 'sub-standard' care; there may be a number of contributing factors, for example better detection of tears or blood loss.

The three indicators are:

- Proportion of women and birthing people giving birth vaginally to a singleton baby between 37+0 and 42+6 weeks of gestation, who experience a third- or fourth-degree tear
- Proportion of women and birthing people giving birth to a singleton baby between 34+0 and 42+6 weeks of gestation, who have a postpartum haemorrhage of 1500 ml or more
- Proportion of liveborn, singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute Apgar score less than 7

Gateshead Health has been identified as an alarm-level outlier for postpartum haemorrhage >1500ml and 5-minute Apgar score <7.

Indicator	National Mean (%)	Trust/Board Numerator	Trust/Board Denominator	Trust/Board Unadjusted Result (%)	Trust/Board Adjusted Result (%)	Trust/Board 3SD upper limit
Apgar score	1.45	53	1712	3.10	3.15	2.32
Postpartum haemorrhage	3.41	111	1715	6.47	6.58	4.72

Gateshead Health
NHS Foundation Trust

NMPA pre-alert report, 2023 births

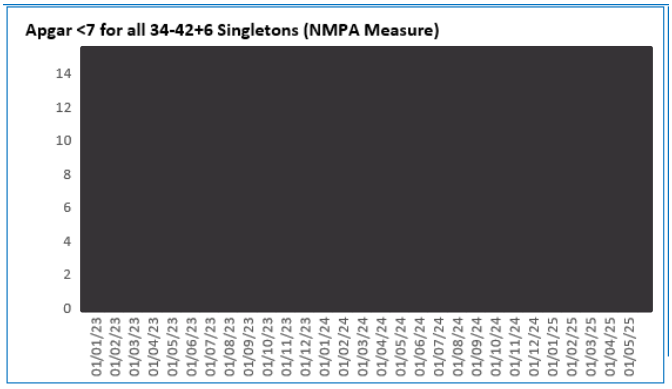
A pre-alert of the Trust outlier status was received in February 2025 which required a response to confirm the accuracy of data submitted and any organisational or clinical factors which may have contributed to the alert status if applicable. The data was validated and a response sent to the NMPA by the Obstetric Clinical Lead in March 2025.

Confirmation of the outlier status and required actions was received by the Trust in June 2025 prior to the planned publication date of 10th July 2025.

2. Apgar<7 at 5 minutes' outlier indicator

Several Trusts within the NENC ICB have triggered safety alerts in relation to Apgar scores <7 at 5 minutes. A regional audit proforma was developed and used across providers within the region to standardise review process and enable shared learning.

Apgars <7 did not flag on the routine Maternity dashboard monitoring, and a retrospective SPC analysis also did not result in a high flag.



Source: Gateshead Health Maternity Dashboard

Gateshead Health have audited all eligible cases from 2023 births and a more recent case note mix from April and May 2025 to determine current position.

In total, maternal and neonatal records from 53 babies born in 2023 were audited by the multidisciplinary team using the NENC proforma. There was triangulation of learning from ATAIN (Avoiding Term Infant Admissions to Neonatal Units) and InPhase reporting. 7 cases from 2025 were reviewed, [redacted] excluded from the data analysis as there was no fetal heart present prior to birth.

In 2023, there were [redacted] babies that had low cord gases, no babies treated with therapeutic hypothermia and no brain injuries.

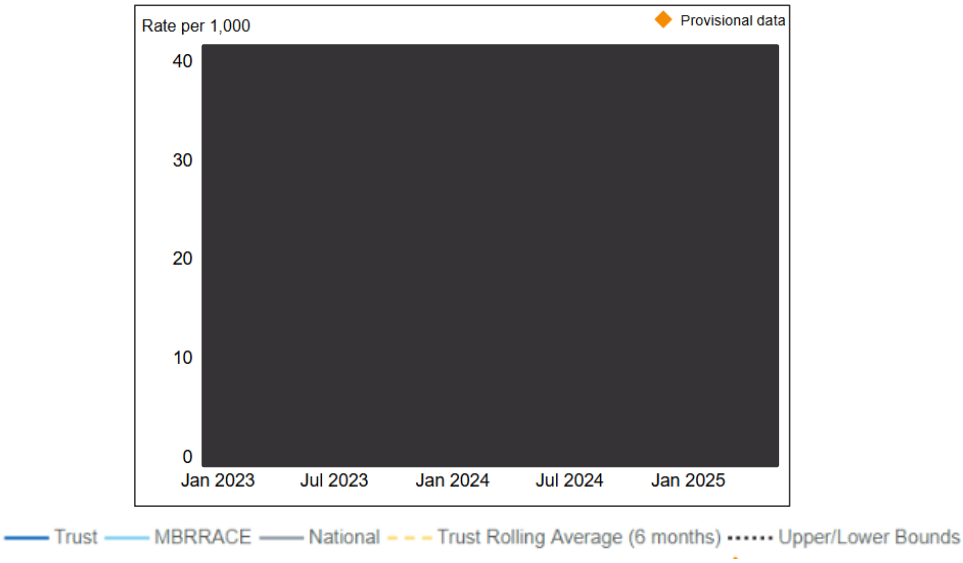
11 babies were admitted to SCBU; 6 had maternal medications which may have affected neonatal transition and 9 were born by caesarean section.

Learning and actions

Learning from other NENC completed audits led to the development of an LMNS "Safety alert" around accurate assessment of Apgar scores, specifically scoring of respiratory effort when infants were receiving PEEP support with regular respiratory effort (Appendix 1).

In 20 out of the 53 births in 2023, Apgar scores were recalculated using the LMNS safety advice about PEEP scores and had an adjusted Apgar score of >7 at 5 minutes. This was also the case for [redacted] out of the 7 babies from 2025 reviewed. The regional alert was received in April 2025 and shared with all teams. There are therefore still assessment inaccuracies observed in the 2025 data so far but we expect to see ongoing improvements in this following embedding of the alert with supportive education. All but [redacted] babies had apgars of 7 or more by 10 minutes of age.

There was difficulty identifying if the NLS algorithm has been followed due to poor documentation of resuscitation, both hand written and with variable detail. A review of the current Apgar scoring sheet to include a resuscitation proforma is underway with emphasis on improving documentation to be delivered through "tea trolley teaching" and NLS training sessions. Bespoke training for Healthcare assistants on effective scribing skills is to be developed.



Source: NHSE National Maternity Dashboard

3. Conclusion

Gateshead Health has accepted the NMPA data and its subsequent outlier status for both PPH and low apgar rates based on the 2023 data submitted to the NMPA report.

Both indicators were subjected to a deep dive analysis to understand any patient safety concerns, learning or actions.

PPH rates had already been recognised in a timely manner by the Trust during 2023 and immediate audits and subsequent action plans developed and completed. Rates of PPH continue to be monitored and the Trust is proud to demonstrate a clear and sustained improvement in this criteria. Learning from these audits has been shared widely with the NENC maternity services to support system quality improvements.

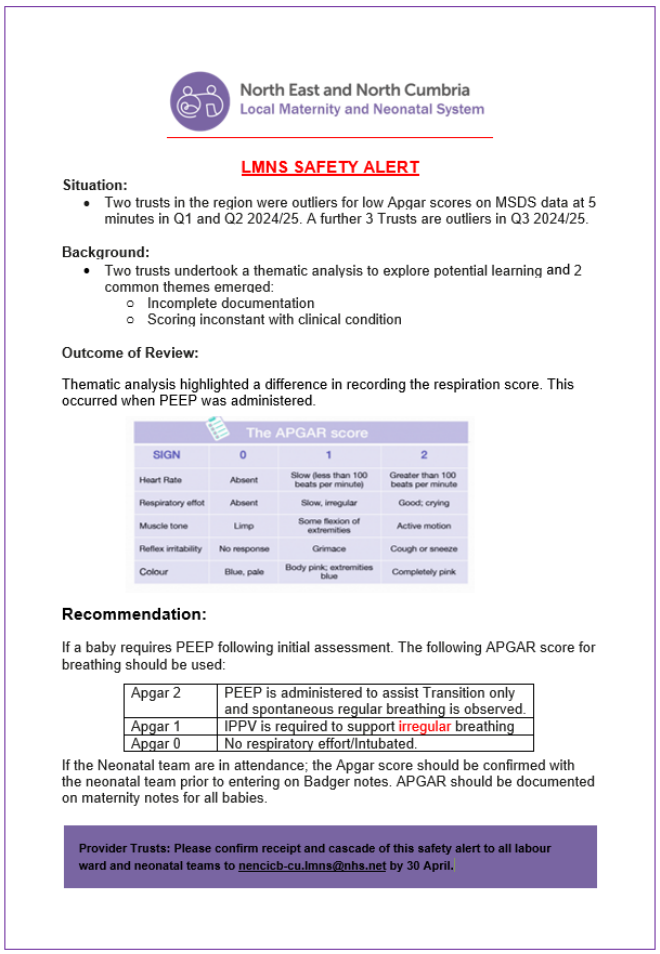
The service was not alerted to the apgar status at the time as it did not flag on local SPC and the NENC Clinical Indicator Dashboard did not report apgars at that time. Amendments to the NENC Dashboard now enables the NENC maternity services to have timely alarm signals for NMPA and other clinical measures to prompt immediate learning and actions.

Gateshead Health NHS Foundation Trust

This retrospective low apgar deep dive demonstrated data quality issues with 38% of cases containing incorrect classification of Apgar score at 5 minutes. This is line with the finding of other Trusts within NENC and has led to the development of a regional "safety alert" to focus on correct scoring. There were no patient safety concerns flagged with the cases reviewed against relevant neonatal outcome criteria, including unavoidable admissions to the SCBU, low cord gases or HIE rates. Gateshead Trust believes that had the correct scoring been applied in all cases, the service would not flag as an outlier for this measure.

4. Appendices

a. NENC LMNS safety alert



North East and North Cumbria
Local Maternity and Neonatal System

LMNS SAFETY ALERT

Situation:

- Two trusts in the region were outliers for low Apgar scores on MSDS data at 5 minutes in Q1 and Q2 2024/25. A further 3 Trusts are outliers in Q3 2024/25.

Background:

- Two trusts undertook a thematic analysis to explore potential learning and 2 common themes emerged:
  - Incomplete documentation
  - Scoring inconstant with clinical condition

Outcome of Review:

Thematic analysis highlighted a difference in recording the respiration score. This occurred when PEEP was administered.

The APGAR score

SIGN	0	1	2
Heart Rate	Absent	Slow (less than 100 beats per minute)	Greater than 100 beats per minute
Respiratory effot	Absent	Slow, irregular	Good; crying
Muscle tone	Limp	Some flexion of extremities	Active motion
Reflex irritability	No response	Grimace	Cough or sneeze
Colour	Blue, pale	Body pink; extremities blue	Completely pink

Recommendation:

If a baby requires PEEP following initial assessment. The following APGAR score for breathing should be used:

Apgar 2	PEEP is administered to assist Transition only and spontaneous regular breathing is observed.
Apgar 1	IPPV is required to support irregular breathing
Apgar 0	No respiratory effort/Intubated.

If the Neonatal team are in attendance; the Apgar score should be confirmed with the neonatal team prior to entering on Badger notes. APGAR should be documented on maternity notes for all babies.

Provider Trusts: Please confirm receipt and cascade of this safety alert to all labour ward and neonatal teams to nencicb-cu.lmns@nhs.net by 30 April.

Humber Health Partnership

Response to potential alarm-level outlier status - National Maternity and Perinatal Audit (NMPA)

Introduction
On 19 February 2025, Maternity Services at Hull University Teaching Hospital (HUTH) received a letter from the Royal College of Obstetricians and Gynaecologists (RCOG) regarding a potential alarm level outlier status in the forthcoming National Maternity and Perinatal Audit (NMPA) report, which covers births during 2023.

As part of the audit process, three measures have been selected as indicators which are subject to 'outlier reporting'. These indicators have been case-mix adjusted to take into account the different maternal demographic and clinical characteristics at each trust/board.

The indicator where HUTH has been identified as having a potential alarm-level outlier is as follows:

- **Proportion of liveborn, singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute Apgar score less than 7**

Indicator	National Mean (%)	Trust/Board Numerator	Trust/Board Denominator	Trust/Board Unadjusted Result (%)	Trust/Board Adjusted Result (%)	Trust/Board 3SD upper limit
Apgar score	1.45	100	4334	2.31	2.46	1.99

The table above shows that HUTH has an adjusted result of 2.46% which lies outside the expected range of values for a trust/board of this size and is higher than the upper 99.8% control limit (greater than 3 standard deviations above the mean).

Method of Data Submission
No data is submitted to the NMPA, data is sourced from the Maternity Services Data Set (MSDS) and supplied directly to the NMPA by NHS England.

Acceptance / rejection of potential outlier status
The Trust were asked to review the quality and completeness of data for accuracy and reply to the NMPA by 25 March 2025 with the outcome of the review. The review confirmed that data errors have been identified which call into question the accuracy of the results.

Investigation
The Information Services team provided a patient sample to include liveborn all singleton babies born between 34+0 and 42+6 weeks of gestation between 1 January 2023 and 31 December 2023. From this, liveborn singleton babies born between 34+0 and 42+6 weeks of gestation with an Apgar score of less than 7 at 5 minutes of age were identified.

Whilst the notification specifies a numerator of 100 cases with an Apgar score below 7 at 5 minutes, the sample provided by Information Services identified slightly more cases (106). The difference may be due to records excluded by the national team as per the technical guidance i.e. missing information such as gestational age, number of babies (multiplicity), or fetus outcome (stillbirth or livebirth).

For the 106 cases identified it was agreed that a representative sample (25 cases) were to be reviewed to identify potential data quality issues and continued review of the remaining cases if issues were identified.

This entailed checking the Apgar scores recorded in the handheld labour and delivery record against the scores recorded on the MSDS to check for accuracy. Data was collected by the HUTH Maternity Audit and Compliance Manager.

Findings
An initial sample of 29 cases were reviewed. The Apgar scores were correctly input in 16 (55%) cases. The remaining 13 (45%) records reviewed found that 11 had an Apgar of 7 or above. As a result, all remaining records were requested for review due to data errors. In total, 104 maternal notes were reviewed. The remaining 2 records were unavailable and therefore unable to validate.

Of the 104 cases, 67 (64%) matched the Apgar score submitted. 37 (36%) cases were found to differ from the data submitted. 3 cases had an Apgar score below 7 and 34 had a score of 7 or above. Of the 34 that had an Apgar score of 7 or above, 29 of these had an Apgar score of '0' submitted. When reviewing the handheld records, it appeared in the majority of cases, that there had been a data input error where the Apgar score had been missed by the Midwife when documenting on the electronic system.

It was noted that [redacted] of the cases were classed as 'born before arrival' (BBA) and born out of the hospital with no Midwife present. These are therefore assumed from parents' explanations and [redacted], the midwife did not document any Apgar score due to uncertainty, resulting in a submission of '0'.

From reviewing maternal records, 70 babies had an Apgar of below 7 (including the 2 notes that were unavailable). **This alters the <u>unadjusted</u> result for the Trust from 2.31% to 1.62% and below the upper control limit.**

Further Assurance

- Since 2023, further monitoring and review mechanisms have been put in place. At present, HUTH has a Quality and Safety Maternity Matron and two clinical governance midwives. If a baby has an Apgar score below 7 at 5 minutes, this should be reported through the Datix system. Cases are then reviewed at a Maternity Incident Review Meeting. If the baby is over 37 weeks and the baby is admitted to the neonatal unit, it will be included in an ATAIN (avoiding term admission into neonatal units) review. The clinical governance team conduct weekly data validation of the term admissions and thematic reviews every 2 weeks of these cases. Apgar scores are highlighted in this. Any concerns from the Neonatal Governance meeting are also escalated into a Maternal Governance meeting.
- In March 2024, Hull University Teaching Hospitals NHS Trust migrated to 'BadgerNet', a digital system for documentation. Apgar scores are a mandatory field on BadgerNet. The system allows documentation of Apgar scores under 'BBA/NA' but does not ask for a numerical figure – this may need reviewing and considering for future submissions.

The Newcastle Upon Tyne Hospitals Foundation Trust

The Newcastle upon Tyne Hospitals
NHS Foundation Trust

Trust response to potential NMPA alarm-level outlier status

1. Introduction

The National Maternity and Perinatal Audit (NMPA) is preparing to publish its report on outcomes for births that took place in the NHS during 2023 in England, Scotland, and Wales. Three measures have been selected as indicators which are subject to 'outlier reporting.' These indicators have been case-mix adjusted to consider the different maternal demographic and clinical characteristics at each trust/board, as far as is currently possible.

The three indicators are:

- Proportion of women and birthing people giving birth vaginally to a singleton baby between 37+0 and 42+6 weeks of gestation, who experience a third- or fourth degree tear.
- Proportion of women and birthing people giving birth to a singleton baby between 34+0 and 42+6 weeks of gestation, who have a postpartum haemorrhage of 1500 ml or more.
- Proportion of liveborn, singleton babies born between 34+0 and 42+6 weeks of gestation, with a 5-minute Apgar score less than 7

The Trust has been identified as a potential alarm level outlier for Apgar score <7 and postpartum haemorrhage >1500mls, this warrants further exploration and investigation with a response to NMPA to confirm that the Trust either accepts the results or has identified data errors.

2. The North East North Cumbria Clinical Indicator Dashboard

The North East NHSE Analytics team, in conjunction with the North East North Cumbria Integrated Care Board (NENC ICB) and Local Maternity and Neonatal System (LMNS), have developed a Clinical Indicator Dashboard and safety signal process. The Trust has been influential in developing the dashboard and the safety signal process to alert to any potential trends and outliers. Analysis of this dashboard by clinical experts and the LMNS Head of Quality and Safety occurs quarterly, with further analytics supported by the NHSE team if indicated.

This may include:

- Benchmarking against the rest of the country (for instance, via funnel plots) to robustly identify outliers.
- Understanding variation for any given metric by patient cohorts. This may include factors specific to a pregnancy (for instance, gestational age or delivery method), as well as health inequalities (for instance, socio-economic deprivation or ethnicity)

- Produce analysis which highlights variation in MSDS data quality and can be used to drive improvements.

The broader analytical objectives of the clinical indicator dashboard and maternity analytics programme is to.

- Encourage and embed insight driven analysis.
- Continuous improvement of data processing to ensure outputs are designed efficiently and automated.
- Rigorous quality assurance to be at the heart of all outputs to ensure accuracy of information.
- Ensure all dashboards, routine reports and ad hoc analysis use high quality visualisations that enable insight to be drawn from the analysis.
- Work in collaboration with analytical teams across NHSE to further enhance our analytical capability.
- Promote matrix working as a mechanism for reducing duplication, ensuring dashboards are fit for purpose, enhancing subject matter expertise knowledge and utilising wider skillsets that sit outside of our team.
- Stakeholders receive a consistent high quality analytical service, which includes fit for purpose self-serve dashboards, resource to meet ad hoc requests and consultancy to drive forward insight driven analysis.

3. Postpartum haemorrhage safety signal generated by NENC Clinical Indicator Dashboard

The Trust triggered a safety signal from the NENC Clinical Indicator Dashboard in Q3 & Q4 2022/23 and so a review was instigated in November 2023 to understand the data and any safety implications.

Further analysis of the data by the NHSE analytics team revealed that the higher rate of PPH was for women delivered by caesarean section, both emergency and elective, which allowed the deep dive to focus on these cases. The deep dive aims were to explore:

- Validation of cases
- Data quality
- Patient demographic and risk factors
- Adherence to guidelines for improvement

The data collection period was 10 January 2023- 31 June 2023 (note the Trust went live with BadgerNet ePR on 10 January therefore PPH between 1- 9 January 2023 were excluded from the review). There were 140 PPH >1500mls January- June 2023, all were reviewed in the deep dive.

Validation of data

The review team learned during the deep dive that some workflows in BadgerNet allow for blood loss to be entered twice, for example the midwife and obstetrician may enter the blood loss in the record and this will be recorded as a cumulative total. The digital midwifery

team validated each record and blood loss entry and found 13 cases where the blood loss was <1500mls but there had been double entry of the measured blood loss by the surgeon and midwife and this had been added together as a cumulative total. The review noted the impact of the recent introduction of BadgerNet, and the variable quality of documentation within the record. The reviewers also noted that despite guidance outlining the requirement to use a measured blood loss there were examples of blood loss being 'rounded up' or 'rounded down' as 6 women had a blood loss of exactly 2000mls and 12 women had a blood loss of exactly 1500mls.

Patient demographics

The Trust provides the Fetal Medicine, Maternal Medicine, and Placenta Accreta Spectrum (PAS) service for the region and receives referrals from the 7 other Trusts within the ICB.

- 9 of the women in the sample has been referred for suspected PAS, of which 8 had interventional radiology and gynaecology input in theatre prior to delivery as part of the planned PAS service.
- [redacted] ad planned hysterectomies, [redacted] lanned wedge resection, [redacted] myomectomy.
- There were no unanticipated/unplanned hysterectomies.
- [redacted] dmitted to Intensive Therapy Unit (ITU) [redacted]

Of the patient group not included within the PAS service, 54% had multiple risk factors.

Learning and action points

- Data input errors – clear communication needed to reduce double data entry.
- Measured blood loss not embedded and culture of 'rounding up.'
- Data issues to be reported to LMNS Digital User Group
- Continue consultant presence for high risk cases.

4. **APGAR <7 at 5 minutes safety signal generated by NENC Clinical Indicators Dashboard.**

The Trust was one of many within the ICB who triggered a safety signal in regard to APGAR score <7 at 5 minutes of age. This signal was monitored for 3 quarters before a deep dive was commenced in 2024/25.

Four key areas were identified by NENC LMNS to be explored:

1. Data Accuracy
2. Evidence of potential harm
    a. number of babies with cord gases pH ≤7.0 or Base Deficit (BD) ≥12
    b. number of babies who received Therapeutic Hypothermia (TH) or had diagnosis of Hypoxic Ischaemic Encephalopathy (HIE)
3. Evidence of other harm
    a. Number of babies admitted for Neonatal Care
    b. ventilation/hypoglycaemia/other significant neonatal morbidity

4. Evidence that guidelines were followed:
    a. Maternity (CTG/Infection/Other guidelines)
    b. Neonatal (resuscitation/admission/subsequent care)

Using data collected from BadgerNet Unit Reports, all babies who were delivered at term (≥37 weeks gestation) were identified. Cross checks of data were undertaken against neonatal mortality data; ATAIN (Avoiding Term Infants Into Neonatal Units) database and babies who received therapeutic hypothermia.

Validation of data

In Q1 there were 36 cases initially identified with an APGAR score <7 at 5 minutes of age. There were 6 'missing APGAR score'. When these were reviewed [redacted] elivered unattended, [redacted] noted to have an APGAR score of 7/1 and [redacted] score of 6/1 but no score for 5 minutes had been recorded for either case. The neonatal expert reviewing the cases felt that 14 babies were inaccurately scored at 5mins of age.

In Q2, 35 cases were initially identified with an APGAR score <7 at 5 minutes of age. There were 19 cases with 'missing APGAR score'. The neonatal expert reviewing the cases felt 12 babies were inaccurately scored at 5mins of age.

The majority of inaccurate scores were due to a respiratory score of 1 being incorrectly assigned to babies receiving facial PEEP with regular respiratory effort.

Evidence of harm/adherence to guidance

In Q1, there were 5 babies who had low cord gases (or neonatal gas within first hour/ pH ≤ 7.0 and/or BD≥12). [redacted] treated with therapeutic hypothermia. No infants had confirmed injury on MRI. There were no deaths.

In Q2, 5 babies had low cord gases (or neonatal gas within first hour/ pH ≤ 7.0 and/or BD≥12). In Q2, [redacted] received therapeutic hypothermia. [redacted] MRI was performed which did not show evi ence o HIE. There were no deaths.

In Q1 & Q2 there were no cases where NLS algorithm or neonatal guidance was not followed.

CTG guidance compliance during Q1 and Q2 with prompt recognition of a suspicious or pathological CTG.

Learning and action points

- Incorrect calculation of Apgar score when babies are receiving facial positive end expiratory pressure (PEEP) and have regular respiratory effort. A score of 1 is often assigned when this should be 2.
- In Q1 & 2 there were [redacted] cases where care issues were identified which were not felt to have impacted on the outcome.
- No significant long term morbidity or mortality associated with an APGAR<7 at 5 mins in Q1 and Q2.
- BadgerNet generated report for Apgar score <7 at 5 minutes of age does not capture all data.

- There were APGAR scores missing from some records.

5. Conclusion

The Trust was alerted to safety signals from the NENC Clinical Indicator Dashboard and has completed comprehensive deep dives and audits to understand if there were any safety implications and learning. This learning was shared with the LMNS and ICB at the time of the reviews to inform practice, and the clinical teams and analysts who support the LMNS and Trusts.

The review team completing the PPH deep dive discovered the errors in the workflows in the BadgerNet system which allowed for double data entry, and therefore a cumulative blood loss, which was often doubled due to midwifery and obstetric data entry. The Trust also provide the PAS service for the ICB, hence care for a more complex case mix which impacts the rates of PPH.

The review team completing the APGAR <7 at 5 minutes review found missing data in records and the incorrect classification of APGAR score when babies are receiving PEEP with regular respiratory activity.

On this basis the Trust has identified data entry errors and clinical factors which have influenced the potential alarm.

Report of Michelle Russell & Jenna Wall
Clinical Director & Director of Midwifery
25 March 2025

Acknowledgements

This report was prepared by the NMPA project team:

Kirstin Webster, Clinical Fellow (Neonatology); **Dr Amar Karia**, Clinical Fellow (Obstetrics); **George Dunn**, Audit Lead; **Amy Lloyd**, Project Coordinator; **Alissa Frémeaux**, Statistician; **Buthaina Ibrahim**, Statistician; **Dr Ipek Gurol-Urganci**, Senior Methodological Advisor; **Professor Asma Khalil**, Senior Clinical Lead (Obstetrics); **Professor Sam Oddie**, Senior Clinical Lead (Neonatology); **Dr James Harris,** Senior Clinical Lead (Midwifery); **Fran Carroll**, Head of Clinical Quality Projects; **Louise Thomas**, RCOG Head of Quality Improvement; **Professor Jan van der Meulen**, Senior Methodologist and Audit Chair.

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For further information and resources, please visit the NMPA website where you can also subscribe to the email newsletter for regular audit updates: https://maternityaudit.org.uk
Alternatively, you can contact us at: nmpa@rcog.org.uk

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