NMPA

National Maternity & Perinatal Audit

Annual Clinical Report

Based on births in NHS maternity services in England, Scotland and Wales during 2024

Outlier Policy

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RCPCH Royal College of Paediatrics and Child Health
Royal College of Midwives
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 correspondence provided by a number of trusts/boards in response to their outlier status, including what they found when interrogating their own data and some opportunities 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 singleton births in NHS Maternity Services in England, Scotland and Wales during 2024. It has been reviewed and updated in line with the NCAPOP Outlier Guidance which was updated in October 2025 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 2024 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 singleton births occurring in 2024. The following additional supporting documents can be found on our website:

- Data flow diagrams
- NMPA online results at trust/board level
- 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
- Data completeness by trust and board
- State of the Nation report on births occurring in 2024
- Country-level summary results tables
- A glossary explaining the terminology and abbreviations used in our reports
- 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 4* 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. The types of non-participation and how they should be handled as part of the outlier process case be found in *Table 3*. 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	For alert level outliers relating to mortality, NCAPOP providers should inform the CQC (clinicalaudits@cqc.org.uk), using the outlier template, and include a copy of the project specific outlier policy, NHSE (england.clinical-audit@nhs.net), 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). The healthcare provider lead clinician should also be informed by the NCAPOP provider of any alert level outliers. However, unlike for alarm level outliers (see below) the CQC, NHSE, and HQIP are not mandating a formal notification and escalation process for alert level beyond notification of the relevant clinical team.	NCAPOP audit providers should inform the Welsh Government (wgclinicalaudit@gov.wales),HQIP associate director and project manager (http://www.hqip.org.uk/about-us/our-team/) and HQIP NCAPOP Director of Operations, Jill Stoddart (jill.stoddart@hqip.org.uk) of all outliers at the alert level. NCAPOP audit providers will need to ensure that in their regular local level Health Board performance reports, it is clear if a Health Board is an outlier at the alert level. The NMPA will also inform the Scottish Government Health Department (MaternalandInfantHealth@gov.scot) and HQIP of all outliers at the alert level.	NMPA
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 lead clinician Wales = Health Board Medical Directors Scotland = NHS Board Medical Directors

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

Greater than 3 standard deviations from expected performance start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
1	Healthcare providers with a possible performance indicator at alarm level require scrutiny of the data handling and analyses performed (in some cases this may not be possible for the audit provider and details of this can be included in the individual NCAPOP provider Outlier Guidance, see section 8.3) to determine whether: 'Alarm' status not confirmed: • Data and results revised in national clinical audit (NCA) records • Details formally recorded, and process closed 'Alarm' status confirmed: • Potential 'alarm' status: > proceed to step 2		NCAPOP audit provider team	10
2	Healthcare provider lead clinician informed about potential 'alarm' status and asked to identify any data errors or justifiable explanation(s). All relevant data and analyses should be made available to the lead clinician.		NCAPOP audit provider clinical lead	5
3	Healthcare provider lead clinician to provide written response to NCAPOP audit provider team.		Healthcare provider lead clinician	25
4	Review of healthcare provider lead clinician's response to determine: 'Alarm' status not confirmed:		NCAPOP audit provider clinical lead	20

Greater than 3 standard deviations from expected performance start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
	• It is confirmed that the data originally supplied by the healthcare provider contained inaccuracies. Re-analysis of accurate data no longer indicates 'alarm' status • Data and results should be revised in NCAPOP audit provider records including details of the healthcare provider's response 'Alarm' status confirmed: • Although it is confirmed that the originally supplied data were inaccurate, analysis still indicates 'alarm' status, or • It is confirmed that the originally supplied data were accurate, thus confirming the initial designation of 'alarm' status > proceed to step 5			
5	Contact healthcare provider lead clinician, prior to sending written notification of confirmed 'alarm' 3SD outliers and/or non participation outliers to healthcare provider CEO and copied to healthcare provider lead clinician and medical director. The letter should include the following request (which can be adapted to be relevant to a project): "Please ensure this letter is circulated to the appropriate people in the trust/health board within 5 working days. This may include, but is not limited to, the trust or health board's director of nursing, the clinical audit department manager / lead, any relevant clinical directors, and the trust chair (for England only)." For 3SD outliers, all relevant data and statistical analyses, including previous response from the healthcare provider lead		NCAPOP audit provider clinical lead/ team	5

Greater than 3 standard deviations from expected performance start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
	clinician should be made available to healthcare provider medical director and CEO. The relevant NCAPOP project specific outlier policy should also be provided to healthcare provider colleagues. At the same time, the following country-specific actions should be taken:			
	For England, the outlier confirmation letter should also include the details in Step 7 below, and a request that the Trust engage with their CQC local team. Notify the CQC (clinicalaudits@cqc.org.uk), using the outlier template, and include a copy of the project specific outlier policy, NHSE (england.clinical-audit@nhs.net), 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. **All three organisations should**	For Welsh providers, notify wgclinicalaudit@gov.wales, HQIP associate director and project manager (www.hqip.org.uk/ab out-us/our-team/), and HQIP NCAPOP Director of Operations, Jill Stoddart (jill.stoddart@hqip.org.uk) of confirmed 'alarm' status. The Welsh Government will provide a monthly report of all alarm and alert level outliers to its Quality Delivery Board. For Scottish providers, notify Scottish Government Health Department (MaternalandInfantHealth@go v.scot), HQIP associate director and project manager (www.hqip.org.uk/about-		

Greater than 3 standard deviations from expected performance start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
	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.	us/our-team/) and HQIP NCAPOP Director of Operations, Jill Stoddart (jill.stoddart@hqip.org.uk) of confirmed 'alarm' status.		
6	NCAPOP audit providers will proceed to public disclosure of comparative information that identifies healthcare providers as alarm level outliers or non participation outliers (e.g. NCAPOP provider annual report, data publication online). NCAPOP audit providers will publish any responses received from healthcare providers, including findings from investigations that they or others have carried out into the outlier alert, 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.	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 Government.	England = NCAPOP audit provider team Wales = Healthcare provider CEO Scotland = Healthcare provider CEO	NCAPOP audit provider report publication date

Greater than 3 standard deviations from expected performance start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
	Conversely, if there has been no response from the healthcare provider concerning their alarm outlier status, that will be documented on the NCAPOP audit provider's website where this information is presented.			
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 in collaboration with Welsh Government Scotland = Healthcare Improvement Scotland and Scottish Government	Determined by the CQC and Welsh and Scottish Governments
	If an investigation has been conducted in the Trust into an alarm outlier status, it is required that the CQC and audit provider	N/A	Trust medical director	

Greater than 3 standard deviations from expected performance start from step 1 Non-participation outliers are included from step 5				
Step	**England**	**Wales and Scotland**	**Owner**	**Within working days**
	would be provided with the outcome and actions proposed.			
	This would be published by the audit provider alongside the annual results. Further if there were no response, the audit 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.	N/A	NCAPOP audit provider team	
8	N/A	If no acknowledgement received, a reminder letter should be sent to the healthcare provider CEO, copied to Welsh Government and HQIP. If not received within 15 working days, Welsh Government notified of non-compliance in consultation with HQIP.	NCAPOP audit provider team	15
9	N/A	Public disclosure of comparative information that identifies healthcare providers (e.g. NCAPOP audit provider annual report, data publication online).	NCAPOP audit provider team	NCAPOP provider report publication date

Table 3 Types of non-participation and how they should be handled as part of the outlier process

Non-participation outliers				
	Issue	**Healthcare provider responsible for non participation?**	**Reporting of results by audit provider**	**Outlier process applied to metrics where provider is non participant?**
1	Healthcare provider is not eligible for any metrics in the audit. (Not eligible)	No	Nothing is published in relation to this healthcare provider for the specific audit. Healthcare provider is not included in the audit's published list of overall non participation.	No
2	Healthcare provider is eligible for at least one metric but has not participated in the audit at all. (Complete non participation)	Yes	Included in the audit's reporting, with results flagged with 'data not submitted by the healthcare provider'. Healthcare provider is included in the audit's published list of overall non participation.	Yes* Healthcare provider should be treated as an alarm level outlier and followed up via standard processes. All communications should make it clear that status is due to non participation.
3	Healthcare provider eligible for more than one metric (and had eligible cases in the cohort) but for one or some of these metrics has submitted no data.	Yes	Included in the audit's reporting, with specific metric results flagged with 'data not submitted by the healthcare provider'. Healthcare provider is	Yes* Healthcare provider should be treated as an alarm level outlier for all eligible metrics where they have not participated and followed up via standard

Non-participation outliers				
	Issue	**Healthcare provider responsible for non participation?**	**Reporting of results by audit provider**	**Outlier process applied to metrics where provider is non participant?**
	(Partial non participation)		not included in the audit's published list of overall non participation.	processes. All communications should make it clear that status is due to partial non participation.

*For non-participation, the outlier process (as outlined in *Table 2*) will start at step 5, with the healthcare provider lead clinician being notified that their non-participation is to be flagged up to the Trust/Health Board CEO and Medical Director, and the Outlier notification process continued with either:

- Notification of CQC, NHS England and HQIP (For English providers)
- Notification of the Welsh Government and HQIP (For Welsh providers)
- Notification of the Scottish Government and HQIP (For Scottish providers)

Table 4 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

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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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