

National Maternity and Perinatal Audit (NMPA) Outlier Policy

Births in NHS Maternity Services in England, Scotland and Wales during 2023

1. Introduction

This document provides an overarching outlier policy statement for the National Maternity and Perinatal Audit (NMPA). 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](#).

2. 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 criteria¹, 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

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 Clinical Report on births during 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 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

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 Jun;125(7):857-865.

- 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 and Health Board in Scotland and Wales.

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 Technical Specifications.

3. 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).

4. 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 Health 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 Health Boards will have results for performance indicators within this range. These Trusts or Health 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 Health 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 Health Boards will be notified, as specified in Table 3 below.

5. Non-participation outliers

The NMPA makes use of centrally-collected datasets, which should include all eligible trusts/health 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/health 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/health 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/health 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.

6. 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 Health Boards need to invest the time and resources required to review the data when they are identified as a potential outlier. Trusts and Health Boards 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 Health 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	The NMPA team will inform, the Welsh Government (wgclinicalaudit@gov.wales) or Scottish Government Health Department ² and HQIP of all outliers at the alert level.	NMPA Team

Table 1: Actions required for outliers at the alert level			
Greater than 2 standard deviations above the mean			
Step	England	Wales and Scotland	Owner
	beyond notification of the relevant clinical 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	<p>Review of Clinical Directors' response to determine:</p> <p><i>'Alarm' status not confirmed:</i></p> <ul style="list-style-type: none"> • Review of information received from Clinical Director and/or further investigation of data held by NMPA demonstrates that the results are invalid². • 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. <p><i>'Alarm' status confirmed:</i></p> <ul style="list-style-type: none"> • 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 accurate, thus confirming the initial designation of 'alarm' status <ul style="list-style-type: none"> ○ <i>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.</i> <p>> proceed to step 5</p>	NMPA Team	20
5	<p>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.</p>	NMPA clinical lead/ team	5

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.

	<p>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.</p> <p>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 (www.hqip.org.uk/about-us/our-team/), and HQIP NCAPOP Director of Operations, Jill Stoddart (jill.stoddart@hqip.org.uk)</p> <p>All three organisations should confirm receipt of the notification.</p> <p>The CQC will provide NHS England with a quarterly report of all alarm- and alert-level outliers that have been notified to CQC.</p>	<p>For Welsh providers, notify wgclinicalaudit@gov.wales and HQIP associate director and project manager (www.hqip.org.uk/about-us/our-team/) of confirmed 'alarm' status.</p> <p>For Scottish providers, notify Scottish Government Health Department³ and HQIP associate director and project manager (www.hqip.org.uk/about-us/our-team/) of confirmed 'alarm' status.</p>		
6	<p>The NMPA will proceed to public disclosure of comparative information that identifies healthcare providers, on the NMPA website.</p> <p>Healthcare providers who have an 'alarm'-level outlier investigation,</p>	<p>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</p>	<p>England = NMPA team</p> <p>Wales / Scotland = Healthcar</p>	<p>England = NMPA State of the Nation report publication date</p>

³ MaternalandInfantHealth@gov.scot

	<p>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.</p> <p>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.</p> <p>Conversely, if there has been no response from the healthcare provider concerning their alarm outlier status, that will also be documented on the NMPA website as an addendum or footnote.</p>	<p>Government.</p> <p>Healthcare provider CEO informed that the NMPA team will publish information of comparative performance which will identify healthcare providers.</p>	<p>Healthcare provider CEO</p>	<p>Wales/ Scotland = 10</p>
7	<p>The CQC advise that during their routine local engagement with the providers, their inspectors will:</p> <ul style="list-style-type: none"> • 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. 	<p>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.</p>	<p>England = CQC</p> <p>Wales = Healthcare Inspectorate Wales</p>	<p>Determined by the CQC and HIW</p>
	<p>If an investigation has been conducted in the Trust into an 'alarm' outlier status, it is required that the CQC and audit</p>	<p>N/A</p>	<p>Trust Clinical Director</p>	

	provider would be provided with the outcome and actions proposed.			
	<p>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.</p> <p>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.</p>	N/A	NMPA Team	
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 publication 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	<p>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.</p> <p>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.</p>	<p>The NMPA team will inform the Welsh Government (wgclinicalaudit@gov.wales) or Scottish Government contacts⁴ and HQIP of all lower than expected alarm level outliers.</p>	NMPA Team

⁴ MaternalandInfantHealth@gov.scot