

RCPCH Detection and Management of Outlier Status for Clinical Indicators in Epilepsy¹²

V7.0 Last updated: December 2024

Review date: December 2025

Version	Update (section)
V7.0	<ul style="list-style-type: none"> - Removed case ascertainment measure
V6.0	<ul style="list-style-type: none"> - Addition of tertiary input criteria (2) - Addition of non-participation outliers (5) - Updated the management of potential outliers in England and Wales (6) - Updated definition of 'confirmed outlier status' (6) - Added section 8. Data entry errors and data inaccuracy (8) - Updated template letters and emails in the appendix
V5.0	<ul style="list-style-type: none"> - Stating two outlier metrics for use in Epilepsy12 (1) - Addition of methodology for funnel plots with non-normal data distributions (5)

Introduction

This document provides an overarching outlier policy statement for the Epilepsy12 national audit programme managed and maintained by the Royal College of Paediatrics and Child Health (RCPCH). This policy applies to Round 4 of the Epilepsy12 clinical audit, which includes patients with a first paediatric assessment for a paroxysmal episode from 1 December 2020. The outlier process is used to facilitate clinical improvement and reduce variation in practice by using audit data to identify areas where improvement may be required and to encourage units to use quality improvement methodologies.

The policy sets out:

- the process by which data submitted by participating providers to the audits will be analysed to detect potential outlier status (data that falls outside a predefined range) defined by each individual audit
- the process by which the RCPCH audit team will engage with any data provider to the audit and relevant regulator if data is identified as reaching outlier status.

The RCPCH has agreed analytical models for identifying outliers as part of the statistical and analytical plan for the Epilepsy12 audit. This bases the actions regarding outliers upon the Healthcare Quality Improvement Partnership (HQIP) 2017 guidance for management of outliers, [*Detection and management of outliers for National Clinical Audits*](#).

1. The Epilepsy12 performance indicators for outlier analysis

Epilepsy12 uses two performance indicators for the outlier analysis:

Epilepsy Specialist Nurse: The proportion of children and young people diagnosed with epilepsy that were seen by an Epilepsy Specialist Nurse in their first year of care.

Epilepsy specialist nurse is equal to the total number of children and young people diagnosed with epilepsy at first year AND who had input from by an epilepsy specialist nurse within the first year divided by the total number of children and young people diagnosed with epilepsy within the first year of care.

Tertiary input -The proportion of children and young people diagnosed with epilepsy that had tertiary input in their first year of care.

Tertiary input is the number of children and young people who met the criteria for tertiary input who had input from a paediatric neurologist or a referral to CESS within the first year of care. A patient meets the criteria for tertiary input if they are less than 3 years old at first assessment OR less than 4 years old with myoclonus OR had 3 or more maintenance AEDs at first year OR have ongoing seizures and meet CESS criteria.

Non – participation: From January 2024, Epilepsy12 started identifying ‘non-participation’ outliers for eligible services, in line with updated guidance. From 2025, ‘participation’ is

defined as submitting at least one completed patient records for the relevant clinical cohort before the specified annual data submission deadline, usually in January. 'Non-participation' services are therefore those not submitting any clinical data before the submission deadline.

2. How the indicators for outlier analysis are selected

Performance indicators were defined by the Epilepsy12 Methodology and Dataset Groups and endorsed by the Project Board for the audit. The performance indicators selection sought effective indicators which provide:

- a measure that the results are robust and representative of eligible patients,
- valid and accepted measures of a provider's quality of care which are included in the Epilepsy12 audit's Key Performance Indicators,
- occur frequently enough to provide sufficient statistical power for analysis to identify outlying performance.

The indicators were suitable if they were demonstrated to be based on professional standards, NICE guidelines, research evidence and audit board and methodological consensus.

Changes to evidence and guidelines are considered but dataset changes take some time to filter through to audit. Therefore, dataset changes and outlier performance indicators are subject to continual review, implementation planning and may be selected depending on participating provider data capture and clinical system updates.

The type and number of performance indicators set should not become a burden to the audit or the units. They should be limited to measures which can drive meaningful improvement and not those which may highlight country or system wide deficiencies, which could otherwise be highlighted within normal reporting and recommendation methods.

The audit board will be mindful of the burden on clinical staff and any consequent risk to patient care of highlighting a significant outlier status and ensure that there is sufficiently robust data available to be collected and analysed to support selected measures.

3. Choice of target (expected performance)

The expected performance may be based either on external sources, (research evidence, clinical judgment and audit data from elsewhere), or on internal sources, (such as average performance of all data providers to the audit, though it may exclude the provider in question or outliers as statistically appropriate). Generally, the target will reflect process, structure or outcome for a given participating provider and be agreed by the audit board.

Epilepsy12 calculates the proportion of cases at each NHS Health Board or Trust which meet the criteria of the performance indicator. For example, the proportion of children who had an epilepsy diagnosis and were seen by a specialist paediatrician, compared to those who had an epilepsy diagnosis but were not seen by a specialist paediatrician (in the first 12 months of their care). The mean (average) proportion for England and Wales is calculated to provide the level of 'expected performance' for each indicator.

The outlier analysis focuses on the variation of the proportions in each Trust or Health Board around this performance average for England and Wales. The pattern and spread of these values are taken into account by calculating measures of standard deviation from the mean, which is how Epilepsy12 identifies 'outlier' results which fall outside of the range of expected performance. In Epilepsy12, the range of 'expected performance' are the values which are within two standard deviations of the average for England and Wales.

A case-mix adjustment model is used by some national audits to calculate adjustments to the data to take into account statistically significant patient factors known to impact on a clinical outcome (note: only factors that are deemed outside the participating data providers' control). Epilepsy12 does not apply a case mix adjustment in the outlier process.

4. Data quality

The following aspects of data quality are considered:

- Case ascertainment: number of patients included compared to number eligible, derived from external data sources. This affects how representative the results are.
- Data completeness: review any missing performance indicator data and data on patient characteristics required for a consideration of the risk of bias from missing data.
- Data accuracy: tested using consistency and range checks.

The Epilepsy12 data submission platform used by the audit to capture participating provider data have built-in validations to check data completeness and data quality. Further data cleaning and checks are undertaken by the audit team and clinical lead, following a data download and prior to analysis.

5. Detection of a potential outlier

Epilepsy12's methodology uses funnel plots for outlier detection. This is a method often used in healthcare settings. For each of the three outlier metrics, each Trust or Health Board's data is plotted as a point on scatterplot chart, with lines marking distance from the average result. These lines make a 'funnel' shape and help identify results that are

unusually high or low. The lines are calculated at two and three standard deviations from the mean.

Detection of potential outliers in Epilepsy12 use statistically derived limits around the target (expected) performance or relevant target set in a national clinical standard. More than two standard deviations (SD) from the target is deemed an '**alert**'; more than three standard deviations are deemed an '**alarm**'. For positive outlier status 'excellent' or 'outstanding' performance are defined respectively at two and three standard deviations above the target (expected) performance.

'Alarm level' results indicate a potential outlier status and will be managed by the process described in section 6. Outlier metric data is shared with Care Quality Commission (CQC) in England and Welsh Government to populate trust dashboards for both alert and alarm level outliers.

'Non-participation' outliers include Health Boards and Trusts that were eligible to participate in the clinical audit and did not submit any completed patient records in the relevant cohort before the specified deadlines. Health Boards and Trusts are eligible for the audit if they have carried out a first paediatric assessment for suspected epilepsy for at least one patient in the relevant cohort period.

Where a Health Board or Trust has submitted partial data to the audit, such as only completing registration forms, but not any first year of care forms, they are still considered a non-participation outlier.

Analysis approach for different data distributions

Without adjustment, funnel plots are calculated based on a specific pattern of the frequency of data values called a 'normal' distribution, which is sometimes also called a 'bell curve' due to the shape it forms. In this type of distribution, most observations (data points) are clustered either side of a central 'mean' (average) to form the central peak of the bell curve. A minority of the observations are evenly split onto either side of the mean to form the tails of the bell curve.

For example, Figure 1. Illustrates a typical funnel plot where the data points are close to or normally distributed; the points are clustered around the central mean and evenly spread to each side.

As the number of total operations increases, you would expect the 30-day mortality rate to congregate closer to the mean and within the 2 standard deviation limits due to lesser variance between Trusts. Conversely, performing a lower number of total operations is likely to have a 30-day mortality rate further away from the mean due to higher possible variance between trusts. The higher variation is accounted for and creates a funnel shape using the 2 and 3 standard deviation limit lines; the funnel is wider where expected variation is greater, and narrower as expected variation

decreases. Trusts that fall outside these limit lines of 2 or 3 standard deviations could be considered outliers.

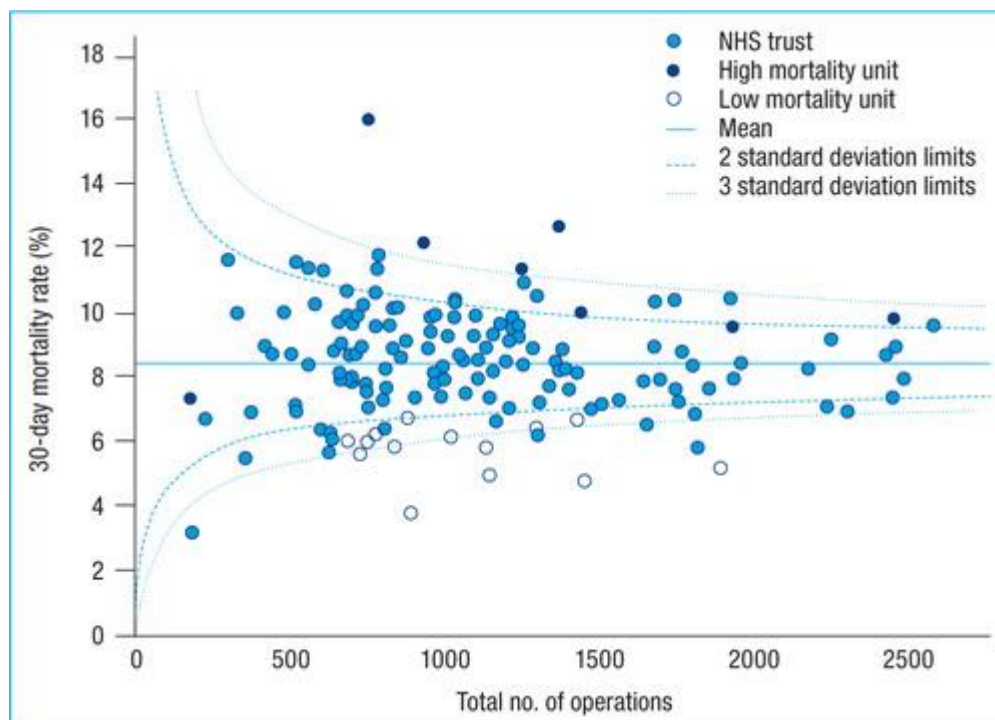


Figure 1. Funnel plot illustrating mortality rate based on number of operations - <https://www.magonlinelibrary.com/doi/abs/10.12968/hmed.2018.79.10.578>

However in Epilepsy12, we expect some of the selected performance indicator data will not follow a 'normal' distribution. As a result, plotting the boundaries of the funnel plot as they are in Figure 1, equally spaced from either side of the mean, would not reflect the pattern of the data. This could be misleading, especially for services with smaller patient numbers where we would expect greater variation from an average. Therefore for Epilepsy12, where our data quality tests identify non-normally distributed data, we will apply an adjustment to the funnel plots to better set the limit lines.

This would adjust the 2 and 3 standard deviation 'limit lines' to reflect the pattern of distribution in the data. There are several methods which can be used to adjust the standard deviation lines; previous Epilepsy12 data has been tested with applying a beta or binomial function to the standard deviation lines. We may use other methods of adjustment if beta or binomial functions are not appropriate to a given set of data.

Figure 2 is an example of how applying a Beta function to the standard deviations can change the shape of the funnel to better fit the data. In this example, the values above the mean (central dotted line) appear to have a high variance – that is they are spread further apart - compared to those below the mean. The Beta adjustment stretches the funnel shape wider above the mean to account for this variance and to better fit the data points. Likewise, if the variance was wider below the mean, the lines marking standard deviations would be adjusted wider to account for this.

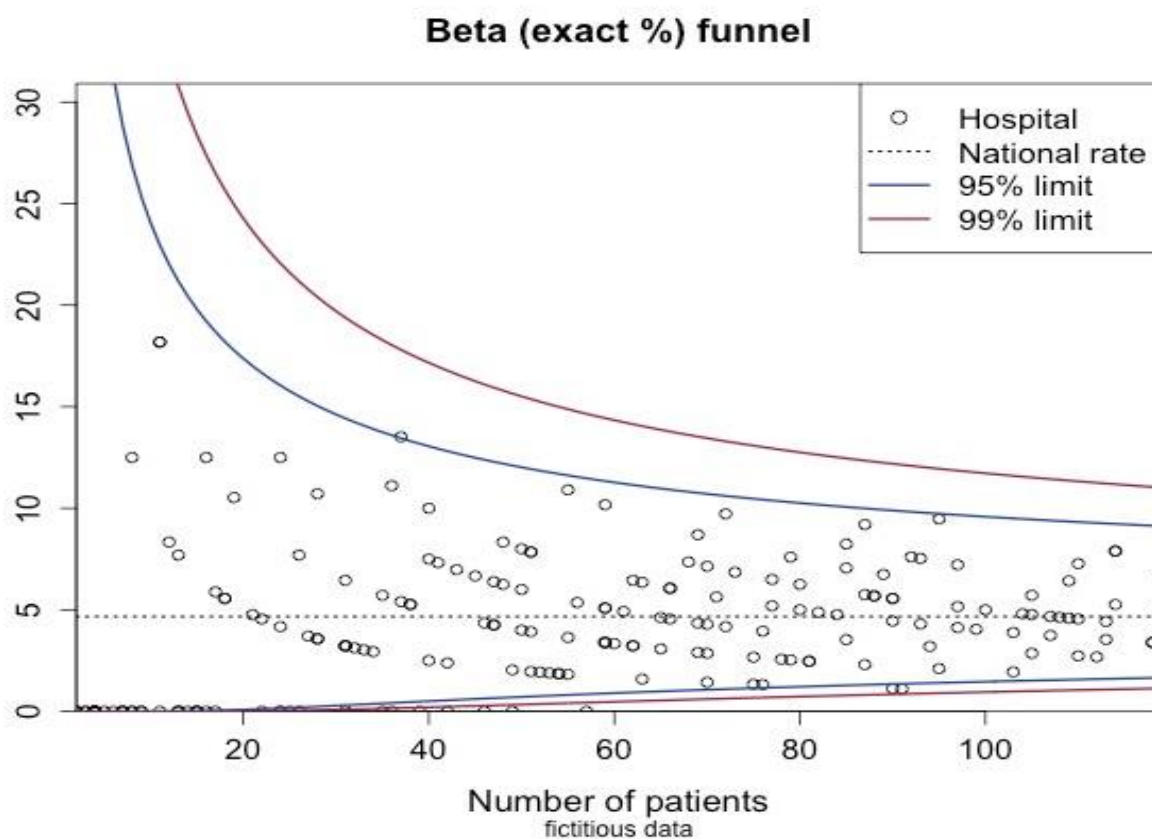


Figure 2. Beta funnel plot for non-normally distributed data

6. Management of a potential outlier

Management of a potential outlier involves several people:

- National Clinical Audit provider: the RCPCH Epilepsy12 team who are responsible for managing and running the audit nationally.
- National Clinical Lead for Audit: Dr Colin Dunkley
- Epilepsy12 Designated Leads: local clinicians designated as the lead contact for the audit in each NHS Trust/Health Board
- NHS provider organisation medical director and chief executive

The audit annual report and online outputs show comparisons of performance indicators between NHS Trusts/Health Boards, epilepsy network ('OPEN UK') regions, NHS England ICBs and regions, and nations. All results are in the public domain once the main national annual report has been published (note: [data disclosure risk policies](#) apply, and some results may be redacted in the public domain for confidentiality of patient data).

The Epilepsy12 Project Board will develop and agree a plan for each reporting period, to action outlier status notifications, in line with the table below but specific to the requirements of the audit.

Outlier analyses and outcomes of subsequent follow up will feed into the CQC/Welsh Government's routine monitoring of the Trust/Health Board. The CQC may continue to review risk and, once satisfied the risk is reduced, they can close the enquiry. Trust/Health Boards can still submit action plans if they wish to, and these can be developmental, realistic and appropriate. The CQC/Welsh Government will not usually take regulatory action if organisations are responding appropriately to each stage of the outlier management process.

England

The RCPCH hosted Epilepsy12 Project Board has a duty to identify potential outliers with respect to appropriate measures. Epilepsy12 will share this with CQC to consider as part of its monitoring process.

In England for all negative alarm level and non-participation outliers; the CQC will consider the data as part of its monitoring process. The CQC will not usually take regulatory action if organisations are responding appropriately to each stage of the outlier management process. The CQC does not mandate that outlier Trusts submit action plans in response to outlier notifications.

The outlier results will be passed onto inspection teams. During an inspection, alarm level outlier Trusts may be asked to:

- Identify any learning from their performance and show how this learning has been used to drive quality improvement.
- Describe how they are monitoring or plan to monitor their performance.
- Describe how they have made progress against their action plan.

The CQC will not follow-up with 'alert' level outliers. The expectation is that NHS Trusts should use 'alert' information as part of their internal quality monitoring process. They should review and 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.

Wales

In Wales for all alarm level and non-participation outliers; the Welsh Government monitors the actions of organisations responding to outliers and takes further action as and when required. Health Inspectorate Wales (HIW) does not act as regulator and cannot take regulatory action in relation to NHS providers. 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.

Those providers identified at 'alert level' (normally identified at 2 SD) will not be subject to the outlier management process but will be identified and the unit will be

notified of the result. Alert level results are shared with the Welsh Government and HQIP for their information.

Table 1: Actions required for outliers at the alert level (>2 standard deviations from expected performance)

Step	Action	Owner
1	<p>The Health Board/Trust designated lead will be informed of any alert level outliers. Alert level outlier status will be made clear in the Health Board/Trust-level annual reports.</p> <p>In England, the CQC will not be informed of alert level outlier results.</p> <p>In Wales, the Welsh Government and HQIP will be informed of outliers at the alert level.</p>	RCPCH audit team
2	The expectation is that Health Boards and Trusts should use 'alert' information as part of their internal quality monitoring process. They should review and 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 Boards

Table 2: Actions required for outliers at alarm level (>3 standard deviations from expected performance and for non-participation).

Step	England	Wales	Owner	Within working days
1	<p>Healthcare providers with a possible performance indicator at alarm level require scrutiny of the data handling and analyses performed to determine whether:</p> <p><i>'Alarm' or 'non-participation' status not confirmed:</i></p> <ul style="list-style-type: none"> If there was data analysis error which was outside the control of the submitting unit. Re-analysis of accurate data may be considered and published if possible, depending upon timing and impact. But an indication will always be made stating that an outlier status is unlikely. Data and results should be annotated within RCPCH audit records at this stage and within details of the provider's response and the subsequent reports online and any CQC slides generated. <p><i>'Alarm' or 'non-participation' status confirmed:</i></p>		RCPCH audit team	10

	<ul style="list-style-type: none"> If it is confirmed that, although the data originally supplied by the participating provider were inaccurate. Where there have been errors in data entry by the clinical team, the outlier status is still confirmed. Issues with data quality must be addressed by the clinical team. <p>or</p> <ul style="list-style-type: none"> It is confirmed that the originally supplied data were accurate, thus confirming the initial designation of outlier status. <p>Potential 'alarm' status: > <i>proceed to step 2</i></p>		
2	Healthcare provider lead clinician informed about potential 'alarm' or 'non-participation' status and asked to identify any errors or justifiable explanation(s). All relevant data and analyses should be made available to the lead clinician.	RCPCH audit team	5
3	Healthcare provider lead clinician to provide written response to Epilepsy12 team.	Healthcare provider lead clinician	25
4	<p>Review of healthcare provider lead clinician's response to determine:</p> <p><i>'Alarm' or 'non-participation' status not confirmed:</i></p> <ul style="list-style-type: none"> It is found that, for potential 'non-participation' outliers, the provider was not eligible for the audit in the relevant cohort. For potential 'alarm' level outliers, it is confirmed that there was a data analysis error which was outside of the control of the submitting unit. Re-analysis of accurate data may be considered and published if possible, depending upon timing and impact, but an indication will always be made stating that an outlier status is unlikely. Data and results should be annotated within RCPCH audit records at this stage and within details of provider's response and the subsequent reports online and any CQC slides generated. <p><i>'Alarm' or 'non-participation' status confirmed:</i></p> <ul style="list-style-type: none"> For potential 'non-participation outliers', it is confirmed that the provider was eligible for the audit in the current cohort. For 'alarm' level outliers, where there have been errors in data entry by the clinical team, the outlier status is still confirmed. Issues with data quality must be addressed 	RCPCH audit team	20

	by the clinical team. OR <ul style="list-style-type: none"> It is confirmed that the originally supplied data were accurate =, thus confirming the initial designation of outlier status. > <i>proceed to step 5</i>			
5	<u>England</u> Contact healthcare provider 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, COO, and medical director. For 3SD outliers, all relevant data and statistical analyses, including previous response from healthcare provider lead clinician should be made available to the healthcare provider medical director and CEO. 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. Epilepsy12 will notify the CQC (clinicalaudits@cqc.org.uk) using the outlier template , and include a copy of the Epilepsy12 outlier policy, NHSE (England.clinicalaudit@nhs.net), and HQIP associate director and project manager of confirmed 'alarm' status. 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.	<u>Wales</u> Contact healthcare provider 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, COO, and medical director. For 3SD outliers, all relevant data and statistical analyses, including previous response from healthcare provider lead clinician should be made available to the healthcare provider medical director and CEO. In Wales, Epilepsy12 will notify the Welsh government (wgclinicalaudit@gov.wales) and HQIP associate director and project manager of confirmed 'alarm' status.	RCPCH audit team	5

6	<p><u>England</u></p> <p>The Epilepsy12 team will proceed to online public disclosure of comparative information that identifies healthcare providers as alarm level outliers or non-participation outliers.</p> <p>Healthcare providers who have an alarm status outlier investigation, that they or others have performed, will be published by the NCAPOP audit provider 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 be documented on the Epilepsy12 website where this information is presented.</p>	<p><u>Wales</u></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 Government.</p> <p>Healthcare provider CEO informed that Epilepsy12 team will publish information of comparative performance which will identify healthcare providers.</p>	<p>England = RCPCH audit team</p> <p>Wales = Healthcare provider CEO</p>	<p>England = Epilepsy12 report publication date</p> <p>Wales = 10</p>
7	<p><u>England</u></p> <p>The CQC advise that during their routine local engagement with the providers, the inspectors may:</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 	<p><u>Wales</u></p> <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 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</p>	<p>England = CQC, Trust medical director, RCPCH audit team</p> <p>Wales = Healthcare Inspectorate Wales</p>	<p>Determined by the CQC and HIW</p>

	<ul style="list-style-type: none"> Monitor progress against any action plan if one is provided by the Trust. <p>If an investigation has been conducted in the Trust into an alarm outlier status, it is required that the CQC and Epilepsy12 would be provided with the outcome and actions proposed.</p> <p>This would be published by Epilepsy12 alongside the annual results. Further if there were no response, Epilepsy12 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 findings is acceptable.</p>	where appropriate and advise on the robustness of plans in place to improve audit results and outcomes.		
8	<u>England</u> N/A	<u>Wales</u> 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.	RCPCH audit team	Wales = 15
9	<u>England</u> N/A	<u>Wales</u> Online public disclosure of comparative information that identifies healthcare providers.	RCPCH audit team	Epilepsy12 report publication date.

7. Management of outlier status - alerts and alarms

Clinical teams and governance leads need to understand the meaning of these terms and the responses that they will require. Identification and definitions for specific outlier selection will be defined within each individual audit.

8. Data entry errors and data inaccuracy

Participating data providers should be aware that while the RCPCH audit team has a duty to report on the data it holds, the RCPCH is not responsible for the accuracy and completeness of the data submitted. This responsibility rests with the clinical teams/NHS Trust or Health Board providing the service to patients. Complete and accurate data should be submitted by the audit deadline. Any changes made to the data after the data entry deadline will not be reflected in the annual reports or outlier analyses.

Issues with clinical audit data, whether; case ascertainment, data completeness or data quality must be addressed by the participating provider/Trust concerned. If a Trust/Health Board finds that their outlier status was due to errors in data entry, the outlier status is still confirmed and the Trust/Health Board is expected to take mitigating action to prevent further data entry errors.

Under exceptional circumstances, such as IT system errors, we will take these into consideration and note these within notifications to the CQC/Welsh Government.

The audits will support the units by identifying areas where data submission requires improvement, whilst providing consistent analysis of audit data, and in making the reports on structure, process and outcomes of care, publicly available. Clinical teams are encouraged to enter audit data prospectively throughout the year and engage with the frequent reporting dashboards and real-time feedback clinician dashboards to minimise data entry errors and monitor performance.

9. The role of the RCPCH Epilepsy12 audit team

The primary role of the Epilepsy12 audit team is to support clinical teams in providing high- quality, robust clinical audit data. It is anticipated that outlier status will be triggered rarely and that regular, transparent and accessible reporting will help to drive up clinical quality. The team are continuously evolving the audit to help teams with data entry and drive overall quality improvement in care.

Where such triggers are activated, the audit team will seek to support and provide additional help to providers wanting to review data entry and quality. Participating data providers or clinicians with concerns about data quality are urged to contact the audit team (epilepsy12@rcpch.ac.uk) at the earliest opportunity to discuss them. It is not the role of the Epilepsy12 audit team to performance manage units that are identified as having outlier status.

Appendix A – Template Communications

Template letter 1 (stage 2): Notification of provisional alarm outlier status to provider clinical lead (England)

[Name of Trust]

[date]

Dear [Clinical Lead Name],

Provisional notification of negative outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

[Trust] has provisionally been identified as a negative outlier for **[measure]** in the **[year]** analyses.

As part of its annual reporting process the Epilepsy12 audit has conducted Trust/Health Board outlier analyses on two audit measures for clinical cohort **[cohort number and date]** data. The purpose of the outlier process is to identify and highlight variation, enable local review of the causes of that variation and stimulate quality improvement.

With these considerations in mind, it is crucial that all teams, stakeholders and organisations understand that while Health Boards/Trusts could have outlying results, this does not automatically mean that there are performance issues. Since outlier status is defined statistically, there will inevitably always be a small number of units whose results show them as outliers for any specific measure. Furthermore, where verified results do show Health Boards/Trusts to be outlying for specific processes, this should be viewed as the beginning, or continuance, of a quality improvement process.

Metrics used for outlier definitions.

In our analysis, two metrics have been used to define outlier status within the Epilepsy12 audit:

1. Epilepsy Specialist Input (ESN) input – Percentage of children with epilepsy input by an epilepsy specialist nurse by first year.
2. Tertiary input - Percentage of children meeting defined criteria for paediatric neurology referral, with input of tertiary care and/or CESS referral by first year.

**Note that case ascertainment has been suspended from the outlier analyses due to methodological reasons.*

Information about how we calculate each measure can be found in our Round 4 [methodology overview](#). Epilepsy12 defines outlier status as being outside of 2 or 3 standard deviations from the national average). Depending on the measure, negative and positive outlier status can be defined. For negative outlier status ‘**alert**’ status is defined as outside 2 standard deviations from the performance mean and ‘**alarm**’ when outside of 3 standard deviations. For positive outlier status ‘excellent’ or ‘outstanding’ performance are defined respectively as 2 and 3 standard deviations above the average.

The data submission deadline for cohort [cohort number] clinical data was [date]. At which point, a definitive download of data was taken in order to carry out the annual analysis and reporting, including the outlier analysis. Any data submitted after this date was excluded from the analyses. Health Board/Trust level reports of these data were shared in [date], and the Epilepsy12 annual report on [year] data will be published in [date].

Figure 1 – Funnel plot for **[measure name]**

Analysis suggests that **[Trust]** is an outlier at **ALARM** level (negative outlier status by 3 or more standard deviations from the expected performance) for the audit measures **[measure name]**.

*Insert funnel plot and indicate via labelling the data point for this particular Trust/Health Board

Table 1 – Results table for [measure name].

	Trust numerator	Trust Denominator	Trust Percentage	England/Wales Average
[Trust/Health Board]				

What do you need to do next?

For full details, please see the [Epilepsy12 Outlier Policy](#). Epilepsy12 guidance follows the [Healthcare Quality Improvement Partnership \(HQIP\) outlier guidance for England and Wales](#).

Process for reporting outliers	
1.	Internal RCPCH validation of outlier identification.
2.	Clinical lead at participating provider informed about potential outlier status.
3.	Clinical lead to provide written response acknowledging potential outlier status and confirming that a discussion with senior management (including the Chief Executive Officer and Medical Director) has taken place.
4.	Audit team review response to determine whether outlier status is confirmed.
5.	Clinical lead informed of confirmed outlier status and advised of next steps.
6.	Written confirmation of alarm status sent to CEO, copied to the medical director, COO, clinical lead and regional network manager.
7.	The audit team will inform the CQC, NHS England, and HQIP. .
8.	Publication of the outlier analysis results.

As a next step (stage 3), please write to us by **[date]** to acknowledge the potential outlier status for **[measure name]** and confirm that you will discuss the status with senior management, including your trust Chief Executive and Medical Director, who will be notified of your unit's outlier status in due course. If you feel that there could be an error with your identification as an outlier, please contact us as soon as possible before this deadline.

Please also supply the names of your Chief Executive, Medical Director, Chief Operational Officer, and provide their Trust/ Health Board email addresses by return.

Please write to us at epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056.

CQC Monitoring

In England for all negative alarm level outliers; the CQC will consider the data as part of its monitoring process. The CQC will not usually take regulatory action if organisations are responding appropriately to each stage of the outlier management process. The CQC does not mandate that outlier Trusts submit action plans in response to outlier notifications.

The outlier results will be passed onto inspection teams. During an inspection, alarm level outlier Trusts may be asked to:

- Identify any learning from their performance and show how this learning has been used to drive quality improvement.
- Describe how they are monitoring or plan to monitor their performance.
- Describe how they have made progress against their action plan.

Epilepsy12 participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative. These outlier analyses will be published

following the publication of the [year] annual report and completion of this outlier management process.

Yours sincerely,

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template letter 2 (stage 2): Notification of provisional alarm level outlier status to provider clinical lead (Wales)

[Name of Health Board]

[date]

Dear [Clinical Lead Name],

Provisional notification of negative outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

[Health Board] has provisionally been identified as a negative outlier for **[measure]** in the **[year]** analyses.

As part of its annual reporting process the Epilepsy12 audit has conducted Trust/Health Board outlier analyses on two audit measures for clinical cohort **[cohort number and date]** data. The purpose of the outlier process is to identify and highlight variation, enable local review of the causes of that variation and stimulate quality improvement.

With these considerations in mind, it is crucial that all teams, stakeholders and organisations understand that while Health Boards/Trusts could have outlying results, this does not automatically mean that there are performance issues. Since outlier status is defined statistically, there will inevitably always be a small number of units whose results show them as outliers for any specific measure. Furthermore, where verified results do show Health Boards/Trusts to be outlying for specific processes, this should be viewed as the beginning, or continuance, of a quality improvement process.

Metrics used for outlier definitions.

In our analysis, two metrics have been used to define outlier status within the Epilepsy12 audit:

3. Epilepsy Specialist Input (ESN) input – Percentage of children with epilepsy input by an epilepsy specialist nurse by first year.
4. Tertiary input - Percentage of children meeting defined criteria for paediatric neurology referral, with input of tertiary care and/or CESS referral by first year.

**Note that case ascertainment has been suspended from the outlier analyses due to methodological reasons.*

Information about how we calculate each measure can be found in our Round 4 [methodology overview](#). Epilepsy12 defines outlier status as being outside of 2 or 3 standard deviations from the national average). Depending on the measure, negative and positive outlier status can be defined. For negative outlier status 'alert' status is defined as outside 2 standard deviations from the performance mean and 'alarm' when outside of 3 standard deviations. For positive outlier status 'excellent' or 'outstanding' performance are defined respectively as 2 and 3 standard deviations above the average.

The data submission deadline for cohort **[cohort number]** clinical data was **[date]**. At which point, a definitive download of data was taken in order to carry out the annual analysis and reporting, including the outlier analysis. Any data submitted after this date was excluded from the analyses. Health Board/Trust level reports of these data were shared in **[date]**, and the Epilepsy12 annual report on **[year]** data will be published in **[date]**.

Figure 1 – Funnel plot for **[measure name]**

Analysis suggests that **[Health Board]** is an outlier at **ALARM** level (negative outlier status by 3 or more standard deviations from the expected performance) for the audit measures **[measure name]**.

*Insert funnel plot and indicate via labelling the data point for this particular Trust/Health Board

Table 1 – Results table for **[measure name]**.

	Trust numerator	Trust Denominator	Trust Percentage	England/Wales Average
[Trust/Health Board]				

What do you need to do next?

For full details, please see the [Epilepsy12 Outlier Policy](#). Epilepsy12 guidance follows the [Healthcare Quality Improvement Partnership \(HQIP\) outlier guidance for England and Wales](#).

Process for reporting outliers	
1.	Internal RCPCH validation of outlier identification.
2.	Clinical lead at participating provider informed about potential outlier status.
3.	Clinical lead to provide written response acknowledging potential outlier status and confirming that a discussion with senior management (including the Chief Executive Officer and Medical Director) has taken place.
4.	Audit team review response to determine whether outlier status is confirmed.
5.	Clinical lead informed of confirmed outlier status and advised of next steps.
6.	Written confirmation of alarm status sent to CEO, copied to the medical director, COO, clinical lead and regional network manager.
7.	The audit team will inform the Welsh Government and HQIP.
8.	Health Board CEO to acknowledge receipt of notification confirming a local investigation will be undertaken.
9.	If no acknowledgement received, a reminder letter is sent and copied to Welsh Government and HQIP. If no response following an additional 15 working days, Welsh Government will be notified.
10.	Publication of the outlier analysis results.

As a next step (stage 3), please write to us by **[date]** to acknowledge the potential outlier status for **[measure name]** and confirm that you will discuss the status with senior management, including your trust Chief Executive and Medical Director, who will be notified of your unit's outlier status in due course. If you feel that there could be an error with your identification as an outlier, please contact us as soon as possible before this deadline.

Please also supply the names of your Chief Executive, Medical Director, Chief Operational Officer, and provide their Trust/ Health Board email addresses by return.

Please write to us at epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056.

Welsh Government Monitoring

In Wales for all alarm level outliers; the Welsh Government monitors the actions of organisations responding to outliers and takes further action as and when required. Health Inspectorate Wales (HIW) does not act as regulator and cannot take regulatory action in relation to NHS providers. 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.

Epilepsy12 participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative. These outlier analyses will be published following the publication of the **[year]** annual report and completion of this outlier management process.

Yours sincerely,

RCPCH 2024 Outlier Management Policy V6.0

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template letter (stage 2): Notification of provisional non-participation outlier status to provider clinical lead (England)

[Name of Trust]

[date]

Dear [Clinical Lead Name],

Provisional notification of non-participation outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

[Trust] has provisionally been identified as a non-participation outlier in the [year] analyses.

As part of its annual reporting process the Epilepsy12 audit has conducted Trust/Health Board outlier analyses on two audit measures for clinical cohort [cohort number and date] data. The purpose of the outlier process is to identify and highlight variation, enable local review of the causes of that variation and stimulate quality improvement.

With these considerations in mind, it is crucial that all teams, stakeholders and organisations understand that while Health Boards/Trusts could have outlying results, this does not automatically mean that there are performance issues. Since outlier status is defined statistically, there will inevitably always be a small number of units whose results show them as outliers for any specific measure. Furthermore, where verified results do show Health Boards/Trusts to be outlying for specific processes, this should be viewed as the beginning, or continuance, of a quality improvement process.

The data submission deadline for cohort [cohort number] clinical data was [date]. At which point, a definitive download of data was taken in order to carry out the annual analysis and reporting, including the outlier analysis. Any data submitted after this date was excluded from the analyses. Health Board/Trust level reports of these data were shared in [date], and the Epilepsy12 annual report on [year] data will be published in [date].

How do we determine outlier status?

Eligible Health Boards and Trusts who had not submitted at least one first year of care form within the current cohort were identified as non-participation outliers. Eligibility is defined as having undertaken a first paediatric assessment for one of more patients with suspected epilepsy.

What do you need to do next?

For full details, please see the [Epilepsy12 Outlier Policy](#). Epilepsy12 guidance follows the [Healthcare Quality Improvement Partnership \(HQIP\) outlier guidance for England and Wales](#).

Process for reporting outliers	
1.	Internal RCPCH validation of outlier identification.
2.	Clinical lead at participating provider informed about potential outlier status.
3.	Clinical lead to provide written response acknowledging potential outlier status and confirming that a discussion with senior management (including the Chief Executive Officer and Medical Director) has taken place.
4.	Audit team review response to determine whether outlier status is confirmed.
5.	Clinical lead informed of confirmed outlier status and advised of next steps.
6.	Written confirmation of alarm status sent to CEO, copied to the medical director, COO, clinical lead and regional network manager.
7.	The audit team will inform the CQC, NHS England, and HQIP. .
8.	Publication of the outlier analysis results.

As a next step (stage 3), please write to us by [date] to acknowledge the potential non-participation outlier status. Please confirm that you will discuss the status with senior management, including your trust Chief Executive and Medical Director, who will be notified of your unit's outlier status in due

course. If you feel that there could be an error with your identification as an outlier, or that you are not eligible for the Epilepsy12 audit, please contact us as soon as possible before this deadline.

Please also supply the names of your Chief Executive, Medical Director, Chief Operational Officer, and provide their Trust/ Health Board email addresses by return.

Please write to us at epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056.

CQC Monitoring

In England for all negative alarm level outliers; the CQC will consider the data as part of its monitoring process. The CQC will not usually take regulatory action if organisations are responding appropriately to each stage of the outlier management process. The CQC does not mandate that outlier Trusts submit action plans in response to outlier notifications.

The outlier results will be passed onto inspection teams. During an inspection, alarm level outlier Trusts may be asked to:

- Identify any learning from their performance and show how this learning has been used to drive quality improvement.
- Describe how they are monitoring or plan to monitor their performance.
- Describe how they have made progress against their action plan.

Epilepsy12 participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative. These outlier analyses will be published following the publication of the [year] annual report and completion of this outlier management process.

Yours sincerely,

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template letter (stage 2): Notification of provisional non-participation outlier status to provider clinical lead (Wales)

[Name of Health Board]

[date]

Dear [Clinical Lead Name],

Provisional notification of non-participation outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

[Health Board] has provisionally been identified as a non-participation outlier for **[measure]** in the **[year]** analyses.

As part of its annual reporting process the Epilepsy12 audit has conducted Trust/Health Board outlier analyses on two audit measures for clinical cohort **[cohort number and date]** data. The purpose of the outlier process is to identify and highlight variation, enable local review of the causes of that variation and stimulate quality improvement.

With these considerations in mind, it is crucial that all teams, stakeholders and organisations understand that while Health Boards/Trusts could have outlying results, this does not automatically mean that there are performance issues. Since outlier status is defined statistically, there will inevitably always be a small number of units whose results show them as outliers for any specific measure. Furthermore, where verified results do show Health Boards/Trusts to be outlying for specific processes, this should be viewed as the beginning, or continuance, of a quality improvement process.

The data submission deadline for cohort **[cohort number]** clinical data was **[date]**. At which point, a definitive download of data was taken in order to carry out the annual analysis and reporting, including the outlier analysis. Any data submitted after this date was excluded from the analyses. Health Board/Trust level reports of these data were shared in **[date]**, and the Epilepsy12 annual report on **[year]** data will be published in **[date]**.

How do we determine outlier status?

Eligible Health Boards and Trusts who had not submitted at least one first year of care form within the current cohort were identified as non-participation outliers. Eligibility is defined as having undertaken a first paediatric assessment for one of more patients with suspected epilepsy.

What do you need to do next?

For full details, please see the [Epilepsy12 Outlier Policy](#). Epilepsy12 guidance follows the [Healthcare Quality Improvement Partnership \(HQIP\) outlier guidance for England and Wales](#).

Process for reporting outliers	
1.	Internal RCPCH validation of outlier identification.
2.	Clinical lead at participating provider informed about potential outlier status.
3.	Clinical lead to provide written response acknowledging potential outlier status and confirming that a discussion with senior management (including the Chief Executive Officer and Medical Director) has taken place.
4.	Audit team review response to determine whether outlier status is confirmed.
5.	Clinical lead informed of confirmed outlier status and advised of next steps.
6.	Written confirmation of alarm status sent to CEO, copied to the medical director, COO, clinical lead and regional network manager.
7.	The audit team will inform the Welsh Government and HQIP.
8.	Health Board CEO to acknowledge receipt of notification confirming a local investigation will be undertaken.

9.	If no acknowledgement received, a reminder letter is sent and copied to Welsh Government and HQIP. If no response following an additional 15 working days, Welsh Government will be notified.
10.	Publication of the outlier analysis results.

As a next step (stage 3), please write to us by **[date]** to acknowledge the potential non-participation outlier status. Please confirm that you will discuss the status with senior management, including your trust Chief Executive and Medical Director, who will be notified of your unit's outlier status in due course. If you feel that there could be an error with your identification as an outlier, or that you are not eligible for the Epilepsy12 audit, please contact us as soon as possible before this deadline.

Please also supply the names of your Chief Executive, Medical Director, Chief Operational Officer, and provide their Trust/ Health Board email addresses by return.

Please write to us at epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056.

Welsh Government Monitoring

In Wales for all alarm level outliers; the Welsh Government monitors the actions of organisations responding to outliers and takes further action as and when required. Health Inspectorate Wales (HIW) does not act as regulator and cannot take regulatory action in relation to NHS providers. 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.

Epilepsy12 participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative. These outlier analyses will be published following the publication of the **[year]** annual report and completion of this outlier management process.

Yours sincerely,

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template letter 3 (stage 2): Notification of provisional alert outlier status to provider clinical lead (England)

[Name of Trust]

[date]

Dear [Clinical Lead Name],

Provisional notification of negative outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

[Trust] has provisionally been identified as a negative outlier for **[measure]** in the **[year]** analyses.

As part of its annual reporting process the Epilepsy12 audit has conducted Trust/Health Board outlier analyses on two audit measures for clinical cohort [cohort number and date] data. The purpose of the outlier process is to identify and highlight variation, enable local review of the causes of that variation and stimulate quality improvement.

With these considerations in mind, it is crucial that all teams, stakeholders and organisations understand that while Health Boards/Trusts could have outlying results, this does not automatically mean that there are performance issues. Since outlier status is defined statistically, there will inevitably always be a small number of units whose results show them as outliers for any specific measure. Furthermore, where verified results do show Health Boards/Trusts to be outlying for specific processes, this should be viewed as the beginning, or continuance, of a quality improvement process.

Metrics used for outlier definitions.

In our analysis, two metrics have been used to define outlier status within the Epilepsy12 audit:

1. Epilepsy Specialist Nurse (ESN) input – Percentage of children with epilepsy input by an epilepsy specialist nurse by first year.
2. Tertiary input - Percentage of children meeting defined criteria for paediatric neurology referral, with input of tertiary care and/or CESS referral by first year.

**Note that case ascertainment has been suspended from the outlier analyses due to methodological reasons.*

Information about how we calculate each measure can be found in our Round 4 [methodology overview](#). Epilepsy12 defines outlier status as being outside of 2 or 3 standard deviations from the national average). Depending on the measure, negative and positive outlier status can be defined. For negative outlier status 'alert' status is defined as outside 2 standard deviations from the performance mean and 'alarm' when outside of 3 standard deviations. For positive outlier status 'excellent' or 'outstanding' performance are defined respectively as 2 and 3 standard deviations above the average.

The data submission deadline for cohort [cohort number] clinical data was [date]. At which point, a definitive download of data was taken in order to carry out the annual analysis and reporting, including the outlier analysis. Any data submitted after this date was excluded from the analyses. Health Board/Trust level reports of these data were shared in [date], and the Epilepsy12 annual report on [year] data will be published in [date].

Figure 1 – Funnel plot for [measure name]

Analysis suggests that [Trust/Health Board] is an outlier at **ALERT** level (negative outlier status by 2 standard deviations from the expected performance) for the audit measures [measure name]

Table 1 – Results table for [measure name].

	Trust/Health Board numerator	Trust Denominator	Trust Percentage	England/Wales Average
[Trust/Health Board]				

What do you need to do next?

The process of notifying and managing outliers follows a staged process, the full details of which are found in the [Epilepsy12 Outlier Policy](#). Epilepsy12 guidance follows the [Healthcare Quality Improvement Partnership \(HQIP\) outlier guidance for England and Wales](#).

As an outlier at alert level, you will not be required to follow the full outlier management process set out in the Epilepsy12 policy; However, we would be grateful if you acknowledge receipt of this letter by [date] by emailing epilepsy12@rcpch.ac.uk.

If you feel that there could be an error with your identification as an outlier, please contact us as soon as possible before this deadline. If you have any questions, you can contact us at epilepsy12@rcpch.ac.uk.

Please write to us at epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056

CQC Monitoring

In England, the CQC will be notified of alert level outliers. The CQC are not mandating a formal NHS Trust notification or response process for alert level. However, CQC plan to include such alert information as part of their "soft" intelligence and it might come up in a Trust inspection so it should also be clear in the local level NHS Trust performance reports if a Trust is an outlier at the alert level. The expectation is that NHS Trusts should use 'alert' information (available within local NHS Trust 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.

Epilepsy12 participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative. These outlier analyses will be published following the publication of the [year] annual report and completion of this outlier management process.

Yours sincerely,

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template letter 4 (stage 2): Notification of provisional alert outlier status to provider clinical lead (Wales)

[Name of Health Board]

[date]

Dear [Clinical Lead Name],

Provisional notification of negative outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

[Health Board] has provisionally been identified as a negative outlier for **[measure]** in the **[year]** analyses.

As part of its annual reporting process the Epilepsy12 audit has conducted Trust/Health Board outlier analyses on two audit measures for clinical cohort [cohort number and date] data. The purpose of the outlier process is to identify and highlight variation, enable local review of the causes of that variation and stimulate quality improvement.

With these considerations in mind, it is crucial that all teams, stakeholders and organisations understand that while Health Boards/Trusts could have outlying results, this does not automatically mean that there are performance issues. Since outlier status is defined statistically, there will inevitably always be a small number of units whose results show them as outliers for any specific measure. Furthermore, where verified results do show Health Boards/Trusts to be outlying for specific processes, this should be viewed as the beginning, or continuance, of a quality improvement process.

Metrics used for outlier definitions.

In our analysis, two metrics have been used to define outlier status within the Epilepsy12 audit:

1. Epilepsy Specialist Nurse (ESN) input – Percentage of children with epilepsy input by an epilepsy specialist nurse by first year.
2. Tertiary input - Percentage of children meeting defined criteria for paediatric neurology referral, with input of tertiary care and/or CESS referral by first year.

**Note that case ascertainment has been suspended from the outlier analyses due to methodological reasons.*

Information about how we calculate each measure can be found in our Round 4 [methodology overview](#). Epilepsy12 defines outlier status as being outside of 2 or 3 standard deviations from the national average). Depending on the measure, negative and positive outlier status can be defined. For negative outlier status 'alert' status is defined as outside 2 standard deviations from the performance mean and 'alarm' when outside of 3 standard deviations. For positive outlier status 'excellent' or 'outstanding' performance are defined respectively as 2 and 3 standard deviations above the average.

The data submission deadline for cohort [cohort number] clinical data was [date]. At which point, a definitive download of data was taken in order to carry out the annual analysis and reporting, including the outlier analysis. Any data submitted after this date was excluded from the analyses. Health Board/Trust level reports of these data were shared in [date], and the Epilepsy12 annual report on [year] data will be published in [date].

Figure 1 – Funnel plot for [measure name]

Analysis suggests that [Health Board] is an outlier at **ALERT** level (negative outlier status by 2 standard deviations from the expected performance) for the audit measures [measure name]

Table 1 – Results table for [measure name].

	Trust/Health Board numerator	Trust Denominator	Trust Percentage	England/Wales Average
[Trust/Health Board]				

What do you need to do next?

The process of notifying and managing outliers follows a staged process, the full details of which are found in the [Epilepsy12 Outlier Policy](#). Epilepsy12 guidance follows the [Healthcare Quality Improvement Partnership \(HQIP\) outlier guidance for England and Wales](#).

As an outlier at alert level, you will not be required to follow the full outlier management process set out in the Epilepsy12 policy; However, we would be grateful if you acknowledge receipt of this letter by [date] by emailing epilepsy12@rcpch.ac.uk.

If you feel that there could be an error with your identification as an outlier, please contact us as soon as possible before this deadline. If you have any questions, you can contact us at epilepsy12@rcpch.ac.uk.

Please write to us at epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056

Welsh Government Monitoring

In Wales, the Welsh Government and HQIP will be informed of outliers at alert level. Alert level outliers will not be subject to the outlier management process but will be identified and the unit will be notified of the result. The expectation is that Health Boards should use 'alert' information (available within local NHS Trust 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.

Epilepsy12 participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative. These outlier analyses will be published following the publication of the [year] annual report and completion of this outlier management process.

Yours sincerely,

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template letter 5 (stage 2): Notification of provisional positive outlier status to provider clinical lead (England and Wales)

[Name of Trust or Health Board]

[date]

Dear [Clinical Lead Name],

Provisional notification of positive outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

[Trust/Health Board] has provisionally been identified as a positive outlier for [measure] in the [year] analyses.

As part of its annual reporting process the Epilepsy12 audit has conducted Trust/Health Board outlier analysis on two audit measures for clinical cohort [cohort number and date] data. The purpose of the outlier process is to identify and highlight variation, enable local review of the causes of that variation and stimulate quality improvement.

Metrics used for outlier definitions.

In our analysis, two metrics have been used to define outlier status within the Epilepsy12 audit:

1. Epilepsy Specialist Nurse (ESN) input – Percentage of children with epilepsy input by an epilepsy specialist nurse by first year.
2. Tertiary input - Percentage of children meeting defined criteria for paediatric neurology referral, with input of tertiary care and/or CESS referral by first year.

**Note that case ascertainment has been suspended from the outlier analyses due to methodological reasons.*

Information about how we calculate each measure can be found in our Round 4 [methodology overview](#). Epilepsy12 defines outlier status as being outside of 2 or 3 standard deviations from the national average). Depending on the measure, negative and positive outlier status can be defined. For negative outlier status 'alert' status is defined as outside 2 standard deviations from the performance mean and 'alarm' when outside of 3 standard deviations. For positive outlier status 'excellent' or 'outstanding' performance are defined respectively as 2 and 3 standard deviations above the average.

The data submission deadline for cohort [cohort number] clinical data was [date]. At which point, a definitive download of data was taken in order to carry out the annual analysis and reporting, including the outlier analysis. Any data submitted after this date was excluded from the analyses. Health Board/Trust level reports of these data were shared in [date], and the Epilepsy12 annual report on [year] data will be published in [date].

Figure 1 – Funnel plot for [measure name]

We are pleased to confirm that [Trust/Health Board] has been identified as an **[EXCELLENT/OUTSTANDING]** outlier for the audit measure [measure name].

Table 1 – Results table for ESN input.

	Trust numerator	Trust Denominator	Trust Percentage	England/Wales Average
[Trust/Health Board]				

Congratulations to you and your team on this achievement. Please to pass on a copy of this letter to your trust Medical Director and Chief Executive Officer. If you would like to be involved in peer support for other teams who were not positive outliers, or if you have a quality improvement project or approach to share relating to your achievement in this measure, Epilepsy12 would be keen to hear from you.

Please contact the team via epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056.

More information about the Epilepsy12 outlier management

The process of notifying and managing outliers follows a staged process, the full details of which are found:

- [Epilepsy Outlier Policy](#)
- Epilepsy12 guidance follows the [Healthcare Quality Improvement Partnership \(HQIP\) outlier guidance for England and Wales](#)

Epilepsy12 participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative. These outlier analyses will be published following the publication of the [year] annual report and completion of this outlier management process.

Yours sincerely,

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template email 1 (stage 3): Acknowledgement to clinical lead ahead of confirmation of outlier status.

Dear [Epilepsy12 Designated lead name],

Thank you for responding to the letter notifying you of the provisional outlier status for one or two outlier measures in the Epilepsy12 audit.

[Thank you for providing/ Please can you provide] us with the contact emails for your Trust/Health Board's CEO, COO, and Medical Director. We will email you separately in response to your comments, but I wanted to provide you with information on the next steps of the outlier management process.

At this stage, we are asking you to discuss this finding with the senior management within your trust, including the CEO, as we will contact them at a later date. Please get in touch by [date] with a written confirmation confirming that discussions with senior management have taken place. If you feel that there was an error in our analysis, please also let us know by [date]. Please note, where there have been errors in data entry by the clinical team, the outlier status is still confirmed. Issues with data quality must be addressed by the clinical team.

We will then review your response and contact you by [date] to confirm your outlier status. A confirmation of your service's outlier status will also be sent to your Trust/Health Board's CEO and your OPEN UK network lead, and shared with the CQC (England) or Welsh Government (Wales).

CQC and Welsh Government Monitoring

In England for all negative alarm and alert level outliers; the CQC will consider the data as part of its monitoring process. The CQC will not usually take regulatory action if organisations are responding appropriately to each stage of the outlier management process. The CQC does not mandate that outlier Trusts submit action plans in response to outlier notifications.

The outlier results will be passed onto inspection teams. During an inspection, alarm level outlier Trusts may be asked to:

- Identify any learning from their performance and show how this learning has been used to drive quality improvement.
- Describe how they are monitoring or plan to monitor their performance.
- Describe how they have made progress against their action plan.

In Wales for all alarm level outliers; the Welsh Government monitors the actions of organisations responding to outliers and takes further action as and when required. Health Inspectorate Wales (HIW) does not act as regulator and cannot take regulatory action in relation to NHS providers. 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.

Further information on our outlier management policy can be found here. Please get in touch by emailing epilepsy12@rcpch.ac.uk if you have any queries.

Kind Regards,

[Project manager name]

Template email 2 (stage 5): Confirmation of outlier status to clinical lead,

Dear [clinical lead name],

Thank you for responding to the notification of provisional outlier status for one or more outlier measures in the Epilepsy12 audit for [year].

Following review of your response, we can **confirm the initial designation of outlier status**. As a next step, we will write to the Chief Executive of your Trust/Health Board to confirm outlier status, copying in the Medical Director, and your regional network manager. We will also notify the Care Quality Commission (England) or Welsh Government (Wales) to confirm the outlier results.

CQC and Welsh Government Monitoring

In England for all negative alarm and alert level outliers; the CQC will consider the data as part of its monitoring process. The CQC will not usually take regulatory action if organisations are responding appropriately to each stage of the outlier management process. The CQC does not mandate that outlier Trusts submit action plans in response to outlier notifications.

The outlier results will be passed onto inspection teams. During an inspection, alarm level outlier Trusts may be asked to:

- Identify any learning from their performance and show how this learning has been used to drive quality improvement.
- Describe how they are monitoring or plan to monitor their performance.
- Describe how they have made progress against their action plan.

In Wales for all alarm level outliers; the Welsh Government monitors the actions of organisations responding to outliers and takes further action as and when required. Health Inspectorate Wales (HIW) does not act as regulator and cannot take regulatory action in relation to NHS providers. 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.

Further information on our outlier management policy can be found [here](#). Please get in touch by emailing epilepsy12@rcpch.ac.uk if you have any queries.

Kind Regards,

[Project manager name]

Template letter 4 (stage 6): Confirmation of Alarm level outlier status to provider chief executive (England)

[Name of Trust]

[date]

Dear [CEO name],

Confirmation of negative outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

We recently wrote to [clinical lead name], Epilepsy12 designated clinical lead for the [Trust]'s paediatric epilepsy service to notify them of provisional negative outlier status for one or more Epilepsy12 national audit measures. I have enclosed this letter for your reference.

We received acknowledgement from the clinical lead along with [other information]. We are now writing to confirm the outlier status and to advise you of the next steps.

This letter is to confirm with you that [Trust] has been identified as a negative outlier at alarm level for [measure] in the [year] analyses.

How do we determine outlier status?

As part of its annual reporting process the Epilepsy12 audit has conducted Trust/Health Board outlier analysis on two audit measures for clinical cohort [cohort number and date] data. The purpose of the outlier process is to identify and highlight variation, enable local review of the causes of that variation and stimulate quality improvement.

Epilepsy12 defines outlier status as being outside of 2 or 3 standard deviations from the national average). Depending on the measure, negative and positive outlier status can be defined. For negative outlier status 'alert' status is defined as outside 2 standard deviations from the performance mean and 'alarm' when outside of 3 standard deviations. For positive outlier status 'excellent' or 'outstanding' performance are defined respectively as 2 and 3 standard deviations above the average.

Since outlier status is defined statistically, there will inevitably always be a small number of units whose results identify them as outliers for any specific measure. However, **it is crucial that all stakeholders and organisations understand that while these units could have outlying results, this does not automatically mean that there are performance issues**, especially in the context of any improvement that may be evident in this year's results.

Furthermore, where verified results do show units to be outlying for specific processes, this should be viewed as the beginning, or continuance, of a quality improvement process. Unit level results should be assessed in relation to previous performance in addition to comparison with national results.

Your Trust's Status

Now that the analyses have been validated, we are writing to confirm the outlier status and to advise you of the next steps.

We can confirm that [Trust] is an outlier at alarm level (negative outlier status by 3 or more standard deviations from national performance) for the audit measure [ESN input/Tertiary input].

[results table]

What do you need to do next?

Epilepsy12 follows an outlier management process aligned with the RCPCH and the Healthcare Quality Improvement Partnership (HQIP) guidance on Detection and Management of outlier for National Clinical Audits. The Epilepsy Outlier Management policy can be found [here](#).

[We would be grateful if you could please acknowledge receipt of this letter by emailing epilepsy12@rcpch.ac.uk.](mailto:epilepsy12@rcpch.ac.uk)

The CQC will not usually take regulatory action if organisations are responding appropriately to each stage of the outlier management process. Please note that the CQC does not mandate that outlier Trusts submit action plans in response to outlier notifications, and any action plans developed do not require submission to the Epilepsy12 audit. Outlier notifications will be passed onto inspection teams.

During an inspection, outlier Trusts may be asked to:

- Identify any learning from their performance and show how this learning has been used to drive quality improvement.
- Describe how they are monitoring or plan to monitor their performance.
- Describe how they have made progress against their action plan.

We also advise that you inform commissioners and NHS improvement (via nhsi.medicaldirector@nhs.net).

The Epilepsy12 audit participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative.

Please write to us at epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056.

Yours sincerely,

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template letter 6 (stage 6): Confirmation of Alarm level outlier status to provider chief executive (Wales)

[Health Board]

[date]

Dear [CEO name],

Confirmation of negative outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

We recently wrote to [clinical lead name], Epilepsy12 designated clinical lead for the [Health Board]'s paediatric epilepsy service to notify them of provisional negative outlier status for one or more Epilepsy12 national audit measures. I have enclosed this letter for your reference.

We received acknowledgement from the clinical lead along with [other information]. We are now writing to confirm the outlier status and to advise you of the next steps.

This letter is to confirm with you that [Health Board] has been identified as a negative outlier at alarm level for [measure] in the [year] analyses.

How do we determine outlier status?

As part of its annual reporting process the Epilepsy12 audit has conducted Trust/Health Board outlier analysis on two audit measures for clinical cohort [cohort number and date] data. The purpose of the outlier process is to identify and highlight variation, enable local review of the causes of that variation and stimulate quality improvement.

Epilepsy12 defines outlier status as being outside of 2 or 3 standard deviations from the national average). Depending on the measure, negative and positive outlier status can be defined. For negative outlier status 'alert' status is defined as outside 2 standard deviations from the performance mean and 'alarm' when outside of 3 standard deviations. For positive outlier status 'excellent' or 'outstanding' performance are defined respectively as 2 and 3 standard deviations above the average.

Since outlier status is defined statistically, there will inevitably always be a small number of units whose results identify them as outliers for any specific measure. However, **it is crucial that all stakeholders and organisations understand that while these units could have outlying results, this does not automatically mean that there are performance issues**, especially in the context of any improvement that may be evident in this year's results.

Furthermore, where verified results do show units to be outlying for specific processes, this should be viewed as the beginning, or continuance, of a quality improvement process. Unit level results should be assessed in relation to previous performance in addition to comparison with national results.

Your Trust/Health Board's Status

Now that the analyses have been validated, we are writing to confirm the outlier status and to advise you of the next steps.

We can confirm that [Trust] is an outlier at alarm level (negative outlier status by 3 or more standard deviations from national performance) for the audit measure [ESN input/Tertiary input].

[results table]

What do you need to do next?

Epilepsy12 follows an outlier management process aligned with the RCPCH and the Healthcare Quality improvement Partnership (HQIP) guidance on Detection and Management of outlier for National Clinical Audits. The Epilepsy Outlier Management policy can be found [here](#).

As a next step, please acknowledge receipt of this letter by **[date]** by emailing epilepsy12@rcpch.ac.uk, copying in the Welsh Government via (wgclinicalaudit@gov.wales). Please provide confirmation that a local investigation will be undertaken with independent assurance of the investigation's validity.

If no acknowledgement is received by **[date]**, a reminder will be sent, copied to Welsh Government and HQIP. If acknowledgment is not received after an additional 15 working days, the Welsh Government will be notified of non-compliance in consultation with HQIP.

The Welsh Government monitors the actions of organisations responding to outliers and takes further action as and when required. 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.

We also advise that you inform commissioners and NHS improvement (via nhsi.medicaldirector@nhs.net).

The Epilepsy12 audit participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative.

Please write to us at epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056.

Yours sincerely,

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template letter 7 (stage 6): Confirmation of non-participation outlier status to provider chief executive (England)

[Name of Trust]

[date]

Dear [CEO name],

Confirmation of non-participation outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

We recently wrote to [clinical lead name], Epilepsy12 designated clinical lead for the [Trust]'s paediatric epilepsy service to notify them of non-participation outlier status for the Epilepsy12 national audit. I have enclosed this letter for your reference.

We received acknowledgement from the clinical lead along with [other information]. We are now writing to confirm the outlier status and to advise you of the next steps.

This letter is to confirm with you that [Trust] has been identified as a non-participation outlier in the [year] analyses.

How do we determine outlier status?

Eligible Health Boards and Trusts who had not submitted at least one first year of care form within the current cohort were identified as non-participation outliers. Eligibility is defined as having undertaken a first paediatric assessment for one of more patients with suspected epilepsy.

What do you need to do next?

Epilepsy12 follows an outlier management process aligned with the RCPCH and the Healthcare Quality improvement Partnership (HQIP) guidance on Detection and Management of outlier for National Clinical Audits. The Epilepsy Outlier Management policy can be found [here](#).

We would be grateful if you could please acknowledge receipt of this letter by emailing epilepsy12@rcpch.ac.uk.

The CQC will not usually take regulatory action if organisations are responding appropriately to each stage of the outlier management process. Please note that the CQC does not mandate that outlier Trusts submit action plans in response to outlier notifications, and any action plans developed do not require submission to the Epilepsy12 audit. Outlier notifications will be passed onto inspection teams.

During an inspection, outlier Trusts may be asked to:

- Identify any learning from their performance and show how this learning has been used to drive quality improvement.
- Describe how they are monitoring or plan to monitor their performance.
- Describe how they have made progress against their action plan.

We also advise that you inform commissioners and NHS improvement (via nhsi.medicaldirector@nhs.net).

The Epilepsy12 audit participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative.

Please write to us at epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056.

Yours sincerely,

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template letter 8 (stage 6): Confirmation of non-participation outlier status to provider chief executive (Wales)

[Name of Health Board]

[date]

Dear [CEO name],

Confirmation of non-participation outlier status for National Clinical Audit for Seizures and Epilepsies in Children and Young People; Epilepsy12 [year] measures

We recently wrote to [clinical lead name], Epilepsy12 designated clinical lead for the [Health Board]'s paediatric epilepsy service to notify them of non-participation outlier status for the Epilepsy12 national audit. I have enclosed this letter for your reference.

We received acknowledgement from the clinical lead along with [other information]. We are now writing to confirm the outlier status and to advise you of the next steps.

This letter is to confirm with you that [Health Board] has been identified as a non-participation outlier in the [year] analyses.

How do we determine outlier status?

Eligible Health Boards and Trusts who had not submitted at least one first year of care form within the current cohort were identified as non-participation outliers. Eligibility is defined as having undertaken a first paediatric assessment for one of more patients with suspected epilepsy.

What do you need to do next?

Epilepsy12 follows an outlier management process aligned with the RCPCH and the Healthcare Quality Improvement Partnership (HQIP) guidance on Detection and Management of outlier for National Clinical Audits. The Epilepsy Outlier Management policy can be found [here](#).

As a next step, please acknowledge receipt of this letter by [date] by emailing epilepsy12@rcpch.ac.uk, copying in the Welsh Government via (wgclinicalaudit@gov.wales). Please provide confirmation that a local investigation will be undertaken with independent assurance of the investigation's validity.

If no acknowledgement is received by [date], a reminder will be sent, copied to Welsh Government and HQIP. If acknowledgment is not received after an additional 15 working days, the Welsh Government will be notified of non-compliance in consultation with HQIP.

The Welsh Government monitors the actions of organisations responding to outliers and takes further action as and when required. 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.

We also advise that you inform commissioners and NHS improvement (via nhsi.medicaldirector@nhs.net).

The Epilepsy12 audit participates in the National Clinical Audit Benchmarking (NCAB) project, a collaboration between the Healthcare Quality Improvement Partnership (HQIP) and Care Quality Commission (CQC), and the Clinical Outcomes Publication initiative.

Please write to us at epilepsy12@rcpch.ac.uk. If you have any questions, you can email us or call 020 7092 6056.

Yours sincerely,

[Clinical lead signature, name and position]

[Project manager signature, name and position]

Template email 3 (stage 9): Reminder to CEO following confirmation of outlier status to the chief executive (Wales)

Dear [Chief executive name],

This is a reminder to acknowledge receipt of this letter by [date], copying in the Welsh Government via wgclinicalaudit@gov.wales. If we do not receive a response by this date, we will advise the Welsh Government and HQIP accordingly.

Further information on our outlier management policy can be found here. Please get in touch by emailing epilepsy12@rcpch.ac.uk if you have any queries.

Kind Regards,

[Project manager signature, name and position]

Template email 4 (stage 9): Notification of non-responding outliers to the HQIP (Wales)

To: wgclinicalaudit@gov.wales

Subject: Notification of non-responding outlying providers in the Epilepsy12

Dear colleague,

Following on from our previous email notifying you of the providers who have been identified as outliers in Epilepsy12, we are writing to advise you that the chief executives of the following Trusts have not responded to acknowledge outlier status.

NHS Trust/Health board	Audit Measure

Epilepsy12 has completed its outlier management process in line with the RCPCH policy for the Detection and Management of Outlier Status for Clinical Indicators in Epilepsy12. We trust you will follow up directly with the Trust regarding the action plan.

Kind Regards.

[Project manager name]

Template letter 9 (stage 10): Public disclosure of comparative information

[Year] Outlier Identification and Management Process

As part of its annual reporting process the Epilepsy12 audit has conducted Trust/Health Board outlier analyses on two audit measures for clinical cohort [cohort number and date] data. The purpose of the outlier process is to identify and highlight variation, enable local review of the causes of that variation and stimulate quality improvement.

Positive and negative outliers

In our analysis, two metrics have been used to define outlier status within the Epilepsy12 audit:

1. **Epilepsy Specialist Input (ESN) input** [Performance Indicator 2] – Percentage of children with epilepsy input by an epilepsy specialist nurse by first year.
2. **Tertiary input** [Performance Indicator 3] - Percentage of children meeting defined criteria for paediatric neurology referral, with input of tertiary care and/or CESS referral by first year.

**Note that case ascertainment has been suspended form the outlier analyses due to methodological reasons.*

Information about how we calculate each measure can be found in our Round 4 [methodology overview](#). Epilepsy12 defines outlier status as being outside of 2 or 3 standard deviations from the national average). Depending on the measure, negative and positive outlier status can be defined. For negative outlier status ‘alert’ status is defined as outside 2 standard deviations from the performance mean and ‘alarm’ when outside of 3 standard deviations. For positive outlier status ‘excellent’ or ‘outstanding’ performance are defined respectively as 2 and 3 standard deviations above the average.

Funnel plots were created to display the results of the outlier analyses and identify Health Boards/Trusts as positive and negative outliers for ESN and Tertiary input, and these are included on the next page.

Non-participation outliers

Eligible Health Boards and Trusts who had not submitted at least one first year of care form within the current cohort were identified as non-participation outliers. Eligibility is defined as having undertaken a first paediatric assessment for one of more patients with suspected epilepsy.

Outlier Health Boards and Trusts

The data submission deadline for cohort [cohort number] clinical data was [date]. At which point, a definitive download of data was taken in order to carry out the annual analysis and reporting, including the outlier analyses. Any data submitted after this date was excluded from the analyses. Health Board/Trust level reports of these data were shared in [date], and the Epilepsy12 annual report on [year] data will be published in [date].

Figure 1 – Funnel plot for ESN

Figure 2 – Funnel plot for Tertiary Input

Table 1 – List of outlier Trusts/Health Boards identified in the [year] outlier analysis.

Trust/Health Board	Audit Measure	Outlier Status

