

emqn

Quality assured | sample to interpretation

EMQN Onboarding Manual

Table of Contents

What your laboratory should do first 3
Purpose of EMQN participation 3
The onboarding journey for a newly joined laboratory 4
How to prepare for and participate in an EQA round 5
How EMQN assesses performance and determines the results you receive 6
How your laboratory should respond to poor performance or errors 6
Why repeat participation matters 7
Training, education, and best-practice adoption 7
Practical onboarding checklist for your first EQA cycle with EMQN 8
Evidence-linked summary by quality objectives 9
Contact us 9

EMQN onboarding manual for a laboratory that has just joined EMQN

A newly joined laboratory should treat **EMQN as both an external quality assessment (EQA) provider and a structured improvement partner**. The immediate goals are to **select the right EQA scheme(s) for your test menu, run each EQA exactly as routine clinical work, use the resulting reports and feedback to strengthen your quality system,** and **embed that learning into accreditation, staff competence, and continuous improvement activities.**

What your laboratory should do first

1. **Choose EQA schemes that match your real service scope.** Our EQA scheme scope varies by genomic specialty and test type, with some schemes focussing on technical performance while others assess analytical and clinical interpretation against best practice. Your first onboarding decision is therefore to match EMQN participation to the assays and report types you actually provide to patients.
2. **Prepare to use EQA as an improvement mechanism, not only as a pass/fail event.** Our EQAs should be used as a tool for competence and improvement, with tailored educational feedback, peer review, summary reports, and support to implement required changes. If you make a mistake, you can also use them to support root cause analysis, CAPA, and ongoing monitoring.

1. Purpose of EMQN participation

EMQN is a **global, science-led organisation** that provides quality assurance tools and knowledge through EQA schemes. Unlike many other EQA providers, our EQA schemes are designed to assess the **entire testing pathway** from sample handling through testing and interpretation to the final clinical report. For your laboratory, that means EMQN is not just checking whether a result is analytically correct; it is also examining whether the result is **interpreted and reported in a clinically defensible way.**

For laboratories, the main purpose of joining EMQN is to obtain an **independent measure of service quality,** benchmark against peers, reduce risk, and support accreditation and regulatory confidence. Key benefits include **regulatory compliance and accreditation, quality assurance and risk mitigation, objective evidence, standardisation and harmonisation, and continuous professional evaluation and development.**

2. The onboarding journey for a newly joined laboratory

Step 1: Become an EMQN member and explore our scheme catalogue



Create your account

Review available EQA schemes

Identify schemes relevant to your testing service

Step 2: Understand the participation lifecycle

From the participant laboratory perspective, the lifecycle of our EQA schemes is a cycle of **approximately six months:** the laboratory **receives samples and a mock clinical referral.** You have approximately eight weeks to **analyse samples using routine procedures, write a clinical report with interpretation and submit it on the EMQN website.** It takes us about twelve weeks to analyse the results and release your **preliminary results.** After that, you have **three weeks to appeal** before receiving **final results and a certificate of participation.**

Step 3: Run the EQA as routine work

Our EQA is intended to mimic **real clinical testing** as closely as possible. We'll send samples with "mock" referral information, and we ask you to perform testing using **normal procedures,** with routine workflows and reporting formats.

To get the most out of the EQA for your laboratory, you should not treat EQA as a special exercise. The real value of participation comes from testing the same process that would be used for a patient—sample handling, method selection, analysis, interpretation, and reporting—so that the resulting feedback reflects real service performance rather than an artificial best-case workflow.

DO

- Use routine staff
- Use routine methods
- Follow standard reporting

DON'T

- Create special EQA workflow
- Optimise specifically for EQA
- Create non-routine reports

3. How to prepare for and participate in an EQA round

Plan your EQA cycle

Before each EQA round begins, nominate a named lead to coordinate the cycle, confirm which staff will be involved, and map the key dates for sample receipt, testing, internal review, submission, provisional results, appeal window, and final reporting. Treat these dates as part of your laboratory's quality calendar, so that EQA work is planned alongside routine service activity rather than added at the last minute. A simple internal plan should identify who will receive the samples, who will perform and submit the results of your testing, who will review the feedback from EMQN, and where the final EMQN outputs will be stored for audit, accreditation, training, and continuous improvement purposes.

Review instructions and confirm scope

Before testing begins, you should confirm what the selected EQA assesses: some schemes evaluate the **full pathway including interpretation and reporting,** while others are more technically focused. This information is provided in the EQA scheme instructions.

EMQN's public EQA catalogue (https://www.emqn.org/catalog/) details the scope of each EQA by specialty and test type – you should expect expert assessment of results in relation to mock clinical referrals and a review of the final report for clarity and accuracy, where this is within scope.

Perform testing and submit results/report

Your laboratory should process the EQA sample using routine staff, **routine methods, and routine reporting conventions.** If your service includes interpretation and reporting in real patient work, then your EQA preparation should explicitly include those functions, because EMQN places emphasis on the full test pathway rather than analytics alone.

Observe deadlines and track submissions

Read the scheme instructions and abide by the EQA deadlines. **Do not leave your results submission to the last minute!** Log in to your EMQN online account and **monitor your progress in the EQA,** review provisional outputs promptly, and escalate any genuine assessment concern in time for the appeals window.

4. How EMQN assesses performance and determines the results you receive

EMQN works with a large expert assessor network and evaluates a laboratory's ability to **analyse samples, interpret results against mock referrals, and produce clear, accurate reports.** We assess your performance across three different marking categories: 1. **Analytical "genotyping" accuracy,** 2. **Clinical interpretation,** and 3. **Report structure and clerical accuracy.** Each marking category has a maximum assigned mark of 2.00, and marks are deducted from this for every error made. Your aim should be to score more than the mean score for that scheme and avoid a score of 0.00 for any category.

You will receive **tailored educational feedback** and support to implement improvements. In practice, this means that you will receive an **Individual Laboratory Report (ILR)** with feedback and educational advice, a report **summarising the scheme results,** and an annual **certificate of participation** summarising your scheme outcomes (Pass or Fail/Poor).

EMQN prefers to improve quality through **education and peer-group review rather than censure or penalty,** but we have a legal requirement to measure performance against defined criteria and national/international standards to identify laboratories that are performing poorly ("**Poor performance**"). As a laboratory that is new to EQA, your goal is not only to avoid failure but also to use the full EQA reporting package, including the ILR, summary report, appeal mechanism and certificate, to understand where your service is already performing well and where improvements are still needed.

5. How your laboratory should respond to poor performance or errors

EQA is most valuable when linked to **root cause analysis, corrective and preventive actions (CAPA), and ongoing performance monitoring.** The goal is **continuous improvement, not simply compliance.** This means that if your laboratory receives poor performance or a significant reduction in your EQA score, the required response is not merely to record the result; it is to investigate what failed in the real workflow and what must change to prevent recurrence.

We encourage laboratories to review the ILR, identify whether the issue arose in **sample handling, method limitations, bioinformatics, interpretation, reporting, or clerical accuracy,** document the root cause, implement corrective actions, and then track whether performance improves in later rounds. Our feedback is **targeted guidance** to help laboratories implement required improvements.

6. Why repeat participation matters

Don't treat the first round of EQA from EMQN as a one-off. An internal longitudinal analysis of our data shows strong evidence that repeated EQA participation is associated with better outcomes resulting in **improved average performance scores** and **reduced rates of poor performance over time.** We found that each additional prior EQA round was associated with a **21% reduction in the odds of scoring below full marks** and a positive increase in average performance score, indicating a learning effect with sustained participation. EMQN therefore advises that you should treat EQA as a **recurring part of the quality system,** because performance improvement is strongest in the early rounds and remains high thereafter.

7. Training, education, and best-practice adoption

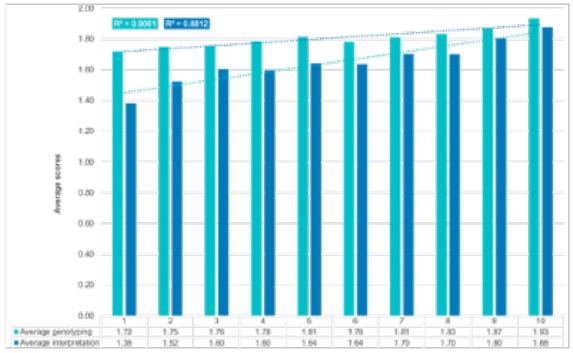
In addition to our **tailored educational feedback,** support to implement improvements, and access to a wider knowledge base built by expert assessors and key opinion leaders, EMQN has an active programme committed to educating genomic diagnostic service providers by **regularly publishing laboratory focused best practice guidelines.** We publish these guidelines in peer reviewed journals to ensure they are freely available to view and download.

From a laboratory onboarding perspective, education should be built into your EQA participation plan. We recommend that you review relevant best-practice guidance before the first EQA scheme round, use EMQN's report commentary to identify training gaps, and make guideline review and post-round reflection part of routine staff competence development.

Regular EQA participation improves lab performance

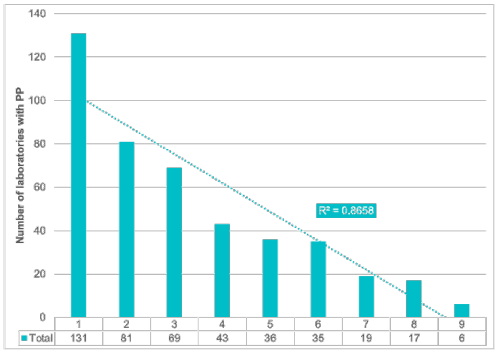
emqn

Average scores per number of participations



Number of participations in scheme

Poor performance per number of participations



Number of participations in scheme

Regular participation in EQA leads to measurable improvement.

Data presented taken for internal EMQN analysis of longitudinal performance trends in the NSCLC [tissue] EQA scheme (2011 to 2025)

What we consistently observe:

- Improved average performance scores
- Reduced rates of poor performance over time

8. Practical onboarding checklist for your first EQA cycle with EMQN

Use the following checklist as your first-cycle standard operating procedure:	
☐	Confirm your testing scope and select relevant EMQN schemes using the catalogue and scheme pages, choosing the schemes that match your actual patient service rather than aspirational future scope.
☐	Create or activate your EMQN account, obtain access to the relevant EQA schemes, and review the current scheme details and deadlines from the catalogue / scheme page.
☐	Review the scheme instructions carefully, then run the EQA as routine work using normal staff, methods, and reporting practice, because EMQN's model is designed to test the real clinical pathway rather than a special EQA-only workflow.
☐	Submit your EQA results using the EMQN web platform, then monitor for the provisional ILR and review it promptly within the appeal window if anything needs to be challenged or clarified.
☐	After final results are issued, file the final ILR, summary scheme report, and certificate of participation in your quality records and use them as evidence for quality review, staff development, and accreditation support.
☐	If performance is poor or significant marking deductions occur, complete root cause analysis, implement CAPA, and track whether changes are effective in later EQA rounds.
☐	Use EMQN's educational outputs—best-practice guidelines, expert feedback, and additional support—to turn each EQA cycle into a structured improvement cycle rather than a compliance-only event.

9. Evidence-linked summary by quality objectives

Quality objective	What laboratories are trying to achieve	Evidence from EMQN activities
1. Core objectives for joining EMQN	Independent quality improvement, benchmarking, harmonisation, and objective evidence across the whole testing process—not just analytical accuracy.	Our EQA schemes test the whole analytical process from sample to final report. EQA is an external measure of service quality, a way to benchmark against other laboratories, prevent future errors, and support education/training.
2. QA & accreditation goals	Build or evidence a credible quality management system (QMS), align testing and reporting with recognised standards, and prepare for accreditation / regulatory scrutiny.	Accreditation to ISO 15189 (or equivalent) verifies both a laboratory's quality management system and its competence. Choosing suitable EQA programmes for both examinations and interpretation is a mandatory requirement of ISO 15189 accreditation.
3. EQA participation / performance goals	Monitor performance, identify error patterns, reduce poor performance, and drive continuous improvement through repeat participation and feedback.	An internal longitudinal analysis of EMQN data found that each additional prior EQA round was associated with a 21% reduction in the odds of scoring below full marks and a positive increase in average performance score, indicating a learning effect with sustained participation.
4. Training, education, and best practice goals	Turn participation into staff development, better interpretation/reporting, and adoption of current best practice.	EMQN regularly publishes best practice guidelines which are freely available. We also publish numerous educational webinars.

10. Contact us

If you have any concerns, doubts or questions related to your EQA participation, contact us at **office@emqn.org.**

Our staff are always happy to help you.

Visit our website for more information

www.emqn.org

EMQN Office

Third Floor, ICE Building
3 Exchange Quay, Salford
M5 3ED, England

Contact us

+44 161 757 1591
office@emqn.org
EMQN CIC
@EMQN

V.1 09/2026