

Quality Standards Specialist Group (QSSG)

Note of the QSSG meeting held on 12 January 2021, via teleconference.

1. Welcome and introductions

- 1.1 The Chair, the Forensic Science Regulator (the 'Regulator'), welcomed all to the meeting. See Annex A for a list of representatives present. It was noted a new NPCC representative would need to be sought, to replace the previous representative who had retired.

Action 1:

- 1.2 Secretariat to liaise with the incoming Regulator to identify a suitable replacement for the NPCC portfolio staff officer.

2. Minutes and actions

- 2.1 The minutes of the previous meeting held on 16 March 2020 had been approved by members prior to the meeting and were available on the [GOV.UK](https://www.gov.uk) website.

- 2.2 All actions were complete.

3. Code of Practice and Conduct update

- 3.1 The Regulator's Codes of Practice and Conduct (the Codes) were being updated to incorporate the provisions on data security that were issued as a Regulatory [Notice](#). The Regulatory Notice was in response to a cyber security issue that had significantly affected a forensic science provider and the Criminal Justice System. The National Cyber Security Centre (NCSC) had advised specific requirements covering IT security.

- 3.2 The updated version of the Codes included minor additions to the section on electronic information security, and some changes to the timescales for specific forensic science disciplines required for achieving compliance with the required quality standards.
- 3.3 The estimation of uncertainty guidance was also updated in the Codes to clarify that if testing was conducted at incident scenes there may be a requirement to estimate the uncertainty of measurement.
- 3.4 Members were asked if they had any comments on the amendments to the codes. The Transforming Forensics representative suggested adding more guidance within the codes for Incident Scene Examination, for example as an appendix document specifically for Incident Scene Examination.
- 3.5 The FSRU representative presenting the item replied this had been considered previously and it was decided the UKAS RG201 document would be sufficient.
- 3.6 The UKAS representative noted that RG201 had been helpful to forensic science providers in directing them to the requirements, and RG201 would be updated following inspection visits for incident scene examination.
- 3.7 It was suggested that the appendix be reconsidered after RG201 had been updated, and required information not included in RG201 could be added to an appendix to the Codes instead. The UKAS representative confirmed UKAS would be willing to work with the FSRU on this piece of work.
- 3.8 The Cambridgeshire Constabulary representative agreed with the suggestion, but noted it was also important the guidance was not spread over multiple documents. A single document that contained the guidance, and requirements would be more beneficial useful for organisations, rather than multiple documents.
- 3.9 The Regulator explained these suggestions would be added to a list of items that should be added to the next version of the Codes. Whether to include this in the Codes would be a matter for the new Regulator.
- 3.10 The Cellmark representative suggested future versions of the Codes should also include terminology that makes it clear it is not just referring to testing laboratories, but also activities performed at incident scenes.

Action 2:

- 3.11 FSRU to consider what further detail on incident scene might be appropriate to add for future versions of the Codes.

Action 3:

- 3.12 FSRU to discuss with new Regulator whether an appendix to the Codes to specifically cover incident scenes would be useful. This would be predicated on agreement being reached with UKAS to retire the vast majority of RG201.
- 3.13 Due to the impact of COVID-19, and the limitations on site assessment visits for accreditation it was agreed the accreditation deadlines for Incident Scene Examination, and Digital Forensics Incident Scene activity would be further extended from October 2021 as detailed in the Regulatory Notice, to October 2022.
- 3.14 The Regulator sought the views of the QSSG on the impact of the COVID-19 lockdown restrictions on an organisation's ability to host UKAS assessor visits. Members made the following observations:
- UKAS assessor visits could be hosted successfully using guidance rules for visitors, and a COVID secure working environment with the necessary controls in place to reduce the risk to staff and visitors.
 - A blended assessment approach had worked well.
 - Last minute changes, for example assessors being unavailable, had made planning challenging and this had an impact on future planned UKAS visits.
 - Limited access to technology for some police forces had made conducting remote assessments difficult.
 - Use of lateral flow COVID-19 testing on all visitors before being allowed access could be implemented. Staff wellbeing was a priority, and there were also challenges for the UKAS assessors conducting the inspections for example, travelling to and from assessments.

4. Proficiency trials

4.1 The FCN representative provided the QSSG with an overview on the Proficiency Testing Oversight Group (PTOG) the FCN was looking to establish and the main points were:

- There were two types of testing - Proficiency Testing (PT) was an exercise from a central independent hub, that organisations participate in, and receive feedback on their performance. Inter Laboratory Comparison (ILC) was where a group of laboratories worked together to conduct similar trials and compare results.
- The three main challenges with accessing PT for police forces PT were, availability, quality and cost.
- The PTOG would work with policing and forensic science providers to address these issues and improve provision and oversight of proficiency testing for UK forensics.
- The PTOG would conduct a number of activities to improve the PT provision. This included, understanding the PT and ILC landscape and developing catalogues of available PT and ILC, developing a mechanism to monitor evaluation of PT and ILC to ensure it was robust. The group would also work with FCN Commercial to identify gaps in the market.
- The FCN had engaged with forensic leads, stakeholders, the Association of Forensic Science Providers (AFSP), and the National Quality Managers Group, and there had also been discussions with ILC leads.
- The FCN proposed the Proficiency Testing Oversight Group include, quality managers, technical managers, and representatives from forensic science providers and the Forensic Science Regulatory Unit. PT providers would be invited to engage with the PTOG when required. The first meeting of the PTOG would be held in February 2021.
- The PT catalogue had been produced and was available. The PT landscape had also been reviewed using information provided by police forces.

- The next steps would be to continue to build on the PT catalogue and landscape review, identify gaps in the national PT market, and support roll out of ILC schemes.
- Feedback on the risks identified would be collated and escalated to the QSSG and NPCC Quality Board.

4.2 The Regulator highlighted the importance of PT in terms of complying with accreditation requirements. The Regulator was keen for this work to be rolled out across the whole forensic science landscape, and not just policing. More organisations participating in this scheme would ensure greater comparison of performance between different organisations.

4.3 The FCN representative was asked if the PT catalogue could be shared with the QSSG, as it would be useful to identify new and different PT's. This was agreed.

Action 4:

4.4 FCN representative to share PT catalogue document with the QSSG.

4.5 The Chartered Society of Forensic Sciences representative queried how the FCN would demonstrate independence in this scheme, and how would it would address issues for example if the PT had been performed and the results did not meet expectations. The Chartered Society of Forensic Sciences representative also suggested including a representative from the Chartered Society of Forensic Sciences on the Proficiency Testing Oversight Group.

4.6 The FCN representative acknowledged the concerns around independence. It had been decided that the FCN Core team (with no members of policing) would have oversight of the scheme and principles around independence would be developed. Regarding managing issues, the FCN representative would expect the police force respond quickly and address the issue. The FCN would be encouraging police forces and forensic science providers to report these issues to them.

4.7 The Defence Science and Technology Laboratory (Dstl) representative queried if the results of PT and ILCs would be made anonymous and published. The

FCN representative responded that PT results would be shared in line with the ISO 17043 accredited scheme. The ILC results that were undertaken in policing were shared anonymously and this would continue.

- 4.8 The UKAS representative reminded members that the European Database of Proficiency Testing Schemes (EPTIS) was a useful database to check for availability of PT's.
- 4.9 The UKAS representative also suggested including European Accreditation EA421 document. The document examined the guidelines for the assessment of appropriateness of small ILC schemes. The document also provided guidelines on how to evaluate and use data from ILC.
- 4.10 The UKAS representative agreed having a central review of the PT issues would be beneficial, and this would ensure the industry was aware of potential issues, for example digital tools that were not performing as they should. It was also important that the individual organisations still retained responsibility for their PT work, methodology, and competence.

5. Evaluative Opinion

- 5.1 The Regulator provided the QSSG with an overview on the Evaluative Opinion appendix to the Codes document. The document would fill a significant gap in the forensic science standards framework. Standards had been developed for most forensic science disciplines, however there was currently no standard for interpretation of evidence. Some requirements for opinions and interpretations were covered within the ISO 17025 standard, however there were some elements that could not be covered under this scope.
- 5.2 The standard would aim to deliver the following.
- Generation of more data to support interpretation of evidence.
 - Promote greater transparency on how forensic scientists were reaching their opinions, the limitations on those opinions and how to demonstrate this to the courts.
 - Improved PT to ensure the performance of experts in reaching opinions was evaluated effectively.

- Increased understanding within the courts of opinion evidence.

5.3 The standard was drafted on the basis of an Association of Forensic Science Providers (AFSP) paper on “Standards for the formulation of Evaluative forensic science experts’ opinions”, published in 2009. Evidence was gathered from a workshop hosted by the FSR and the Royal Statistical Society (RSS) and relevant court judgements.

5.4 Feedback had been sought on the draft standard from the Regulator’s Quality Standards Specialist Group, experts in interpretation of forensic evidence, the RSS, members of the judiciary, legal academics, academic scientists, the AFSP, and police forensic leaders. The main comments were:

- Judiciary and other stakeholders raised concerns about the use numerical likelihood ratios (LR) where data was limited. After discussions with the Judiciary it was proposed this would be amended to on an “order of magnitude” assignment reported with the verbal equivalent.
- More clarification was requested on previous court cases, specifically the *R v T* court of appeal judgement and the associated Crown Prosecution Service (CPS) advice.
- There were philosophical objections and the lack of references to alternatives to the ‘subjective’ Bayesian approach. Additional references to alternative approaches would be added, including a reference to the special issue of Science and Justice (September, 2016).
- Concerns were raised over the requirements for blind proficiency trials, and calibration of expertise. It was proposed a separate guidance document would be produced to assist with this.
- The terminology used was queried in terms of information or required actions, and as a result should/shall were removed from the guidance section of the revised draft.

- Conflicting views were received concerning cognitive bias, some felt it was not mentioned enough, and others felt there was too much information and it was confusing. The revised document had references to the published guidance on bias and clarified the requirements on what information should be provided, to whom and when.

5.5 From the discussions from the workshop it was suggested expert medical opinion, and forensic pathology should be included in the standard. The Regulator did not wish to include these disciplines at this time. Forensic pathology was jointly regulated by the Regulator the Home Office, Department of Justice and The Royal College of Pathologists, and therefore the Regulator could not impose any requirements within forensic pathology without consulting the other stakeholders.

5.6 The implementation date of October 2026 was discussed. The QSSG was in agreement with the proposed time scale, although whether funding would be required to meet this was raised as an issue. It was agreed by the Regulator that a review would be conducted to decide an appropriate sequence of implementation across the different forensic disciplines.

5.7 The Regulator sought comments on the revised draft from the QSSG by the 22nd of January 2021 after which it would be provided to the Forensic Science Advisory Council (FSAC) for views.

Action 5:

5.8 QSSG to provide final specific comments on the Evaluative Opinion document to the Regulator by the 22nd January.

6. The Analysis and Reporting of Forensic Specimens in Relation to s5A Road Traffic Act 1988

6.1 A draft of the Analysis and Reporting of Forensic Specimens in Relation to s5A Road Traffic Act 1988 document (FSR-C-133) had been circulated to members. A FSRU representative provided members with an overview of the document, the main points were.

- FSR-C-133 was produced to establish the requirements for, and a common approach to, the analysis and reporting of the concentrations of 17 named drugs in relation to offences under s5A Road Traffic Act 1988.
- Section 56 of the Crime and Courts Act 2013 inserted a new section 5A into the Road Traffic Act 1988. Section 5A makes it an offence for a person to drive, attempt to drive, or be in charge of a motor vehicle while the concentration of certain drugs in the person's blood or urine was above a specified limit.
- Prior to the introduction of the new s5A offence, the Home Office, in conjunction with the Department for Transport, had developed a specification for the analysis of blood and how the results should be reported in relation to s5A. The CPS had stated that laboratories performing the analysis would require accreditation before any results could be relied on in court. The CPS also raised a concern about possible differences in results between different laboratories.
- The Regulator had developed a simple agreement document between the laboratories for a common reporting process. This meant all the uncertainty of measurement results would be compared to identify the common reporting threshold (CRT). The CRT was defined as the lowest measured concentration at which the result could be reported as being above the legal limit.

- It was decided by the Regulator a document would be developed that would detail the standards required including, the analytical process, how the measurement of uncertainty was performed, and how the reporting was handled.
- A draft standard had been produced and had been circulated to all the organisations that had performed drug analysis. Comments had been sought from the United Kingdom and Ireland Association of Forensic Toxicologists, and suppliers.

6.2 The QSSG was asked if they had any comments on the draft document. The Cellmark representative raised an issue concerning uncertainty of measurement. The draft did not define how uncertainty of measurement should be calculated, and whether bias should be included as part of the calculation.

6.3 It was queried what the definition of what the percentage of the Forensic Science Regulator's Expanded Uncertainty (FSREU), and what definition should be used if using standard error rather than standard deviation in uncertainty of measurement. It was explained the document recommended using a sound method to determine the uncertainty of measurement for example the UKAS M3003.

6.4 There was concern raised over the introduction of correcting for sporadic contamination events, and using data obtained in the last 24 months. It was explained by the FSRU representative that as levels of drugs within samples being tested were low sporadic contamination could have a significant effect. Therefore, the document recommended that the highest level of sporadic contamination detected for a specific drug in a forensic unit over the previous two years, should be deducted from the results.

6.5 Clarification was also sought on the requirement to compare new Certified Reference Material (CRMs) to previous CRMs on whether this would be calculated mathematically or experimentally. The FSRU representative explained that due to a recent incident an issue was identified with a CRM. It was decided this should be included in the standard. The document recommended the labs compare each new batch of CRM against a previous CRM, to identify any potential issues with the CRM.

6.6 Implications for section 5A law where some of the 17 specified drugs were tested at some laboratories and not all laboratories were queried. It was explained by the FSRU representative when the offence had been introduced most of the laboratories conducting the tests would test for the three main drugs which were THC, Cocaine, and Benzoylecgonine. The number of drugs tested by laboratories had increased over the years with some labs testing for the full 17.

Action 6:

6.7 QSSG to provide final comments on the Analysis and Reporting of Forensic Specimens in Relation to s5A Road Traffic Act 1988 draft document.

7. Guidance documents on Rapid DNA devices, Y-STR profiling and DNA relationship testing

7.1 The DNA Specialist Group (DNASG) had produced three guidance documents: Y-STR profiling, DNA relationship testing, and Rapid DNA devices. The QSSG were asked to comment on the content of the documents, identify any issues or gaps, and agree with the proposed implementation dates. The members were asked to send comments to the FSRU representative by 26 January 2021.

Action 7:

7.2 QSSG to provide final comments on the Y-STR profiling document.

Action 8:

7.3 QSSG to provide final comments on the DNA Relationship Testing using Autosomal STR's document.

Action 9:

7.4 QSSG to provide final comments on the Methods Employing Rapid DNA Devices.

8. Regulator's valedictory

- 8.1 This meeting was the last QSSG meeting for the current Forensic Science Regulator.
- 8.2 The Regulator's final annual report would be published in January 2021 and would be available on the Regulator's website. The report would reflect on the existing position in forensic science, and the progress made over the last six years.
- 8.3 The Regulator noted that the forensic science community had achieved a great deal, however there was still more work to do. The Regulator noted some forensic science disciplines, particularly digital forensics, and toxicology were still considered precarious.
- 8.4 The Regulator expressed her thanks to the forensic scientists, and quality managers for their hard work.
- 8.5 The Regulator would highlight in the annual report that more effective governance of forensic science was required.
- 8.6 Going forwards the Regulator highlighted two areas that were being considered for standards by specialist groups; Network forensics, and Internet intelligence and investigation.
- 8.7 For the future the Regulator would like to see:
- more innovative adoption of the standards,
 - more streamlined processes,
 - more commitment to on-going change and improvement particularly around transparency,
 - more research and data to support interpretation,
 - better proficiency testing, and
 - better understanding of the risks that long-term pressure has on specific forensic science disciplines in particular forensic toxicology.

8.8 The Regulator expressed her thanks to the QSSG for reviewing, and providing comments on documents, and had enjoyed working with the QSSG during her time as Regulator.

9. AOB

9.1 A member requested an update on the provision of statutory powers for the Regulator. The Regulator responded that the private members bill had been through the first and second readings in the House of Commons, and had passed the committee stage. A third reading and review in the House of Commons was expected to be held in March 2021.

9.2 The Chartered Society of Forensic Sciences representative advised the QSSG they had been working on establishing the UK Cyber Security Council. The Council would be a professional body with a code of ethics around work in the digital and cyber sector. A community challenge on the UK Cyber Security Council would be available shortly, and members were asked if they would like to be involved or comment to email The Chartered Society of Forensic Sciences representative.

Action 9:

9.3 QSSG to email the Chartered Society of Forensic Sciences representative if they are interested in participating in the community challenge.

Annex A

Organisation Representatives Present:

Forensic Science Regulator – Chair

The Chartered Society of Forensic Sciences

Cambridgeshire Constabulary

Key Forensic Services

United Kingdom Accreditation Service

Transforming Forensics

Cellmark

British Standards Online (BSI)

Defence Science and Technology Laboratory (Dstl)

Scottish Police Authority Forensic Services

Criminal Bar Association

Metropolitan Police Service

Forensic Capability Network (FCN)

Crown Prosecution Service

Eurofins

Apologies:

National Fire Chief's Council

Forensic Science Northern Ireland (FSNI)

Expert Witness Institute