

Newsletter

Message from the Regulator

Since the last newsletter, I have been meeting and listening to as many people as possible across the forensic science landscape, to identify risks to quality and opportunities for improvement. I have now collated an overview of the risks to quality in forensic science, which I have sent to the Minister for Policing, Crime and Criminal Justice, the Rt. Hon. Mike Penning MP, ahead of a meeting to discuss these in more detail. I have used the risk overview to identify my priorities, the most immediate of which are outlined below.

- Digital Forensics: Supporting the digital community to improve standards and achieve accreditation by 2017.
- Firearms: Ensuring that the scope of accreditation is clear and is implemented.
- Casework Review Pilot: Evaluating the effectiveness of the crime scene to court end-to-end process, decision-making and handovers, initially in rape cases.
- Working with the Crown Prosecution Service (CPS) and the police to improve the appropriate use of the streamlined forensic reporting (SFR) process.
- Developing an evaluative interpretation standard.
- Developing standards for sexual assault referral centres (SARCs) and custody suites, considering interaction with the Care Quality Commission.
- Working with the National DNA Database Delivery Unit to close gaps between Central Elimination Database plans and the requirements of the standard.
- Addressing recommendations from the DNA mixture study.
- Conducting an annual pathology audit.

I will outline my progress against these priorities and provide further details of my longer term priorities in an *Annual Report*, which I intend to publish in November/December. Thank you to all of you who continue to support the work of regulation, through input to my advisory groups, through giving of your expertise and through bringing to my attention matters requiring investigation.



Codes of Practice and Conduct

The *Codes of Practice and Conduct* (the Codes) will be reviewed over the coming months. Any update to the core text is anticipated to consolidate changes¹ that have already taken effect since the last publication rather than add any new requirements. The Regulator will also take the opportunity to update the accreditation timetable.

All of the Codes' documents are available at:

<https://www.gov.uk/government/collections/forensic-science-providers-codes-of-practice-and-conduct>

Criminal Procedure Rules 2015

The Criminal Procedure Rules (CrimPR) have been restructured to meet the requirements of the Parliamentary Joint Committee on Statutory Instruments. The biggest difference that will be obvious to those acting as expert witnesses is that Part 33 is now Part 19.

The Criminal Procedure Rules 2015 are at this address:

<http://www.legislation.gov.uk/ukxi/2015/1490/contents/made>

Expert opinion evidence is admissible in criminal proceedings:

- (i) if it is relevant to a matter in issue;
- (ii) if it is needed to provide the court with information likely to be outside the court's own knowledge and experience; and
- (iii) if the witness is competent to give that opinion.

¹ For example, the Criminal Procedure Rules and guidance such as ILAC-G19 available at: <http://ilac.org/news/ilac-g19082014-published/>

The High Court ruling in *R. (on the application of Wright) v CPS [2015] EWHC 628 (Admin)* reiterates that:

- (i) the provisions of the CrimPR apply to all forms of expert evidence;
- (ii) no witness should give evidence outside their knowledge or expertise; and
- (iii) individuals acting as professional witnesses must not stray into giving expert opinion.

All individuals giving evidence need to be aware of their respective duties to the court and those expecting to be recognised by the court as experts, need to comply with Part 19 of the CrimPR.

The requirement introduced last year requiring each party to disclose any information that could significantly detract from the credibility of the expert witness is now 19.3(3) (c) and the requirement that the expert's report should include such information as the court may need to decide whether the expert's opinion is sufficiently reliable to be admissible as evidence is now rule 19.4h.

Rule 19.2 now also requires an expert witness, as part of their duty to the court, to help the court in some of the same ways as a party to the case. This includes complying with directions such as when a report must be served, and by warning the court of any significant failure to act as required by a direction (e.g. by warning of substantial delay in the preparation of a report).

The numbering in the Criminal Practice Directions has been altered to reflect the numbering changes in the CrimPR.

<https://www.judiciary.gov.uk/publications/criminal-practice-directions-2015/>

Digital Forensics: Scope

Accreditation to BS EN ISO/IEC 17025 and the Codes	
Digital forensics ¹	
Imaging of hard drives and removable media ²	October 2017
Screening or recovery of data from a device using an off the shelf tool for factual reporting ³	October 2017
Extraction and analysis of data from digital media including remote storage	October 2017
Capture and analysis of social media and open source data	TBA
Corporate network capture and analysis	TBA
Cell site analysis and communications data	TBA
<p>¹ Digital forensics is the process by which information is extracted from data storage media (e.g. devices, remote storage and systems associated with computing, imaging, image comparison, video processing and enhancement [including CCTV], audio analysis, satellite navigation, communications), rendered into a useable form, processed and interpreted for the purpose of obtaining intelligence for use in investigations, or evidence for use in criminal proceedings. The definition is intentionally wide and any exclusions will be explicit. Automatic number plate recognition, manual classification of indecent images of children, crime scene photography, eFit, recovery from a working CCTV system, CCTV replay for viewing with no further analysis (acknowledging that there may be quality limitations to the material viewed) all should be conducted by competent staff using methods approved by the organisation, but are excluded from the ISO/IEC 17025 requirement.</p> <p>² The Regulator expects any method used for imaging 'conventional' hard drives to be validated as required in the Codes by October 2015.</p> <p>³ The use of tools and methods by frontline non-practitioners is permitted but the organisation must hold accreditation for at least one deployment. Further deployments of the method under central control may be permitted outside the scope of accreditation provided that the method chosen can be demonstrated to have adequate configuration control (e.g. locked down data recovery methods and control) and that staff are competent.</p>	

In the last 12 months there has been significant progress towards demonstrating validation as well as a number of applications for accreditation from both the police and commercial forensic science providers.

The target is for all digital forensics to be within the standards framework, although some areas will take slightly longer to achieve formal accreditation than others. Sub-disciplines have been separated to show the explicit requirements for accreditation by 2017, and the areas that require further consideration.

A requirement to pilot accreditation for cell site analysis has been identified, which means that the 2017 target needs to be adjusted. The pilot will be announced in the coming months on the UKAS website. If you want to be notified of developments in this area please send your details to:

FSRConsultation2@homeoffice.gsi.gov.uk

Simple tool-based methods used by frontline non-specialists can be useful for screening exhibits, but the implementation of such methods must be informed by realistic information on their capabilities and risks. The methods should be validated and are subject to external scrutiny through accreditation. However, the Regulator has agreed that accreditation for every single deployment would be disproportionate. Therefore the organisation must hold accreditation for at least one deployment of the method using staff typical for the overall deployment. The further roll out should be designed with proper reference to:

- competence requirements of staff;
- limitations and safeguards;
- appropriate scenarios for use;
- controls on the configuration of the tool.

All users of CCTV should understand the limitations of their part in the process through training and competence assessment and recognise when not to proceed, but to call in further technical assistance. Even CCTV recovery to a USB mass storage device can fool a novice user into believing that files have been successfully captured when they have not.

With the proviso that investigators understand the typical quality limitations of viewing software such as dropped frames, incorrect aspect ratios and sometimes even timestamp issues, viewing can continue without requiring accreditation. However, if further processing, analysis and/or enhancement is required this must be accredited in accordance with the Codes as it is a specialist activity.

Accreditation Timetable

A team supporting police forces with accreditation (the process of achieving formal third party recognition of competence to perform specific tasks) compiled a table including the activities that new applicants would normally need to complete. Some are events or decision points, some are forms being submitted and some have more involved activity such as producing technical procedures. The timeline is punctuated with periods of activity by different individuals, as well as planned lead-in times or close off periods. For instance, from the application to the pre-assessment visit there is typically a lead-in of three months and a similar period for closing off improvement actions. Organisations with existing accreditation for other forensic science methods can apply for extensions to scope, which is simpler and usually a little quicker.

It is important to have an accreditation plan and to book the UKAS activities at the earliest opportunity. For instance, one

Preparation	Draft QMS	Refine QMS	Corrective Actions
←12–18 months→			
Obtain copies of the standard and guidance material	Draft quality management system (QMS)	Verify working standard operating procedures (SOPs)	Address improvement actions by the agreed date
Appoint quality manager	Prepare supporting quality records and documentation	Set up and initiate training and competency records	Submit improvement actions
Expression of interest to UKAS	Draw up validation / verification plan for test methods	Plan and implement effective audit schedule	
Free informal UKAS meeting for <u>new</u> applicants	Pre-assessment	Finalise and fully implement QMS	
Define level of top management	Arrange initial assessment	Carry out initial assessment	
Appoint technical management team		Verify working SOPs	
Define scope of accreditation			
Define quality policy statement			
Draft quality manual			
Draft quality procedures			
Draft technical procedures			
Complete UKAS application			
Contact from UKAS assessment manager to arrange first visit			

Summary of stages for new applicants for accreditation with the United Kingdom Accreditation Service (UKAS)
(From: National Policing Improvement Agency)

organisation that has shared its plan for achieving accreditation in digital forensics has booked its pre-assessment visit for March 2016, having already completed validation of one part of the process. It will document, test and validate other parts in the intervening period and plans to further extend its scope in 2017.

Scenes of Crime Event

The Regulator wants to assist quality managers to get an early understanding of the ISO 17020 requirements for crime scene examination. A single awareness event was planned but the workshop format for some of the exercises as meant that it will now be two smaller events. The first event will be in November and the second in December.

Policing organisations and forensic science providers have been approached, space is limited and attendance will be by invitation, future events may be considered.

Alcohol Back Calculation

A referral to the Regulator questioned when it is appropriate to perform alcohol back calculation. The Regulator is not, at present, in a position to specify when such calculations are reliable but believes it appropriate to issue preliminary guidance to ensure that the criminal justice system is properly advised as to the issues with such calculations.

<https://www.gov.uk/government/publications/alcohol-back-calculation-for-road-traffic-investigations>

The Regulator is working with the UK and Ireland Association of Forensic Toxicologists (UKIAFT) in relation to the standards for forensic toxicology. The UKIAFT, which acts as a professional association for forensic toxicologists, has produced guidance on this matter that makes it clear that back calculations should not normally be performed if the time between the last drink and the incident is less than one hour. The guidance is available at:

<http://www.ukiaft.co.uk/publications>

The newly numbered Criminal Procedure Rules require in rule 19.3(3) that an expert's report must, where there is a range of opinion on matters dealt with in the report:

- (i) summarise the range of opinion; and
- (ii) give reasons for the expert's own opinion.

All cases are different and of course experts are free to exercise professional judgement. However, if they feel it appropriate to deviate from general guidance the Regulator believes that rule 19.3(3) requires this to be clearly explained and the reasons given in the expert's report.

Section 5A Road Traffic Act 1988

Section 5A created a new offence of driving a motor vehicle while the concentration of certain drugs in the blood is above a specified limit. The Regulator worked with the Home Office, Department for Transport, Crown Prosecution Service and forensic science providers (FSPs) to develop a consistent approach to the analysis of samples and the reporting of results in such cases. The approach, set out in document FSR-C-133, has been supplied to stakeholders and FSPs providing the service, but has not yet been published. Last month there was a review of the approach and a new version of this document will be prepared for publication.

Following the introduction of the limits, FSPs reported that they were being asked to provide reports that employed the legal limits for drugs in ways that were inappropriate. The Regulator therefore issued guidance as to the use of the limits. These are available at:

<https://www.gov.uk/government/publications/drug-driving-use-of-legal-limits>.



Home Office

Re: Forensic Science Strategy

In collaboration with key stakeholders, the Home Office is developing a forensic science strategy. Chief Constable Chris Sims, National Policing Lead for the Forensic Science Portfolio, directly supports this work.

This strategy aims to set out a comprehensive vision for forensic science over the next five years. It seeks to achieve a balance between promoting a decentralised, market-driven approach and maintaining the breadth and quality of forensic provision across the whole law enforcement landscape.

The strategy presents an opportunity to reshape the landscape towards a modern forensic science provision, whilst addressing a range of current and emerging challenges. The work on developing the strategy started earlier this year, and has made substantial progress throughout the summer.

In the spring an online survey was launched to gather information on key aspects of forensic services to build an understanding of the whole forensic supply chain and evidence and to suggest the way forward. The survey was targeted at the Scientific Support Managers in all 43 police forces (that deliver police forensic services) and private forensic service providers (FSPs).

Subsequently, five working groups (consisting of a range of stakeholders from across the Government, policing and other agencies) were set up to consider specific issues such as knowledge and skills, legitimacy, supply chain, operating models, digital forensics and forensics futures.

Key contributors to the working groups include representatives from the Forensic Science Regulator, the Chartered Society of Forensic Sciences, the College of Policing, the Centre for Applied Science and Technology, the Association of Forensic Science Providers, the Metropolitan Police Service, the East Midlands Special Operations Unit (EMSOU) and the Crown Prosecution Service.

The strategy, scheduled to be published in December 2015, is only the start and is by no means the panacea to solve everything. Instead it will ensure that all key players across the forensic landscape work together to deliver the vision it sets out.

Police Science and Technology Unit
Home Office

www.gov.uk/home-office

Use of Casework Material in Validation

Some time ago the Crown Prosecution Service (CPS) raised concerns about the use of casework material in validation and pilot studies. The Regulator has worked with the CPS, the Association of Chief Police Officers (ACPO) and, more recently, the National Police Chiefs' Council (NPCC) to develop a protocol that provides a framework that ensures casework material can be used in validation studies but that there are sufficient safeguards in place to protect the criminal justice system (CJS).

The protocol has been agreed by the NPCC and the Director of Public Prosecutions and has been provided to large FSPs for information. A final version is planned for publication on the GOV.UK site in autumn 2015.

Streamlined Forensic Reporting (SFR)

The Regulator has received a number of complaints about aspects of the practical operation of the SFR process, and therefore met with representatives from CPS Policy and the NPCC SFR Network to address the issues. New guidance was issued in August 2015 to both the police and prosecutors, which should improve the way case management (including the SFR process) is operated. The Rt. Hon. Lord Justice Gross, Senior Presiding Judge for England and Wales, said in his note of 18 December 2014 that: *"SFR can deliver significant benefits to the courts, prosecution and defence ... The defence is better able to focus on the real issues and appropriately advise their clients. I urge the judiciary and all parties to ensure that it is used appropriately and in accordance with the Rules"*. To date the majority of the issues reported to the Regulator are as a result of individuals within the CJS (often in a local area) not

applying the procedures *"appropriately and in accordance with the Rules"*, rather than being issues that would require amendment of policy.

A few key points:

- The updated SFR toolkit (advice issued to all Police Forces) includes the requirement that: *"The SFR should use clear, succinct language that enables the parties to understand the significance of the findings."*
- When the defence is asked to identify the issues based on an SFR1, there is no expectation that a scientific issue will be identified. By way of example, after a road traffic accident, the presence of heroin metabolites in the driver's blood is reported via an SFR1. The SFR1 should be clear what the finding of these metabolites implies (i.e. that the driver has, at some point, taken heroin). If the driver denies having ever taken heroin, this would be the issue raised by the defence. There would be no requirement to identify why the metabolites may have been found, and the issue raised by the defence would initiate the process of preparing a more detailed scientific report. Scientific issues should be examined on the basis of a more detailed report, not on the basis of an SFR1.
- The use of the SFR1 form for reporting mixed DNA profiles has been subject to review, and illustrative figures should now only be used on the SFR1 if there is a clear complete major profile. For any more complex mixtures, the presence of the mixture must be reported on any SFR1, but statistics should not be applied. If a suspect raises an issue that would imply that their DNA is not present, or that it came to be there by innocent means, a more detailed report should then follow, which will enable defence scientists to evaluate the mixture in detail.

- There have been numerous instances of those who have prepared SFR1 forms being warned for court, even if they are not scientists. This is an administrative process issue, and new guidance has been issued by the CPS with the aim of reducing this problem. The revised toolkit states: *"As it is not a statement, the 'maker' of the SFR1 should never be warned to attend court as a witness, unless they are also the author of a SFR2 or MG11 in the case ... "*
- A number of instances have been raised to the Regulator wherein a forensic expert has been questioned in court on the basis of an SFR1, when no evaluative statement has been produced. This should not happen, and guidance to this effect has been issued. It should be noted that the new Criminal Procedure Rules include a duty on experts to actively assist the court in fulfilling its duty of case management in particular by at once informing the court of any significant failure (by the expert or another) to take any step required. Therefore, the expert can and should inform the court if they are being inappropriately asked to evaluate evidence without having prepared an evaluative statement.

DNA Mixture Interpretation

The Regulator facilitated a collaborative exercise on DNA mixture interpretation last year which included the major UK and Ireland Forensic Service Providers (FSPs), together with two software providers. Its main objectives were to establish the 'lay of the land' with respect to mixture interpretation and to evaluate how proficiency tests could be conducted in the future. Different providers have implemented different methods over the years and made different innovations, therefore collaborative exercises are the best way of assessing capability, assisting all to continuously improve.

The methodology tested the limits of current provision using mixtures and mock casework scenarios. The study showed that whilst a high degree of consistency was observed in the designation of DNA profiles, there were differences in some interpretations, particularly in the strength of conclusions with some appearing overly cautious or conservative. All participants have been working on recommendations arising from the findings to enhance their methods.

The Regulator is commissioning further work to improve consistency of reporting and validation of software, and is liaising with the DNA Commission of the International Society for Forensic Genetics (ISFG) to ensure that in developing guidance for the UK, as much international consensus as possible is retained.

Publications

Since the last newsletter, the following have been published:

- [Forensic Image Comparison and Interpretation Evidence: Guidance for Prosecutors and Investigators](#)
- [Codes of Practice and Conduct: Fingerprint Comparison](#)
- [Fingerprint Examination – Terminology, Definitions and Acronyms](#)
- [Alcohol Back Calculation for Road Traffic Investigations](#)
- [Section 5A Road Traffic Act 1988 Use of Limits](#)

Cognitive bias guidance will be published in October at: <https://www.gov.uk/government/collections/forensic-science-providers-codes-of-practice-and-conduct>

Forensic Science Regulator's Conference

Date: 3 March 2016

Venue: Holiday Inn, Birmingham City Centre, Smallbrook Queensway, Birmingham B5 4EW

This event will be by invitation only.

Other Conferences of Interest

Chartered Society of Forensic Sciences

Annual Autumn Conference, AGM & Annual Awards Dinner - 5–6 November

The conference will examine the current state and future of research and development within forensic science, and how it is needed to support the investigative process.

Postgraduate Research Symposium - 5 November

The conference is aimed at MSc/PhD students to provide a supportive forum for the exchange of knowledge and ideas for students to present their research.

Venue: Both at Renaissance Manchester City Centre Hotel

Annual Student Conference - 5 December

Venue: University of Worcester

To find out more about any of these events contact Keshia McGuire at conference@csfs.org or visit the Chartered Society of Forensic Sciences website

Genetics in Forensics Congress - 14–15 March 2016

Venue: Radisson Blu Portman Hotel in London

This senior level congress will bring together over 150 delegates representing internationally renowned academic institutions and forensic laboratories to discuss over 30 case studies and presentations focused on novel DNA profiling platforms and technologies, the applications of next generation sequencing (NGS) in forensic science and key developments in human identification research. For more information visit:

www.forensicgenetics-congress.com

Editorial Notes

To assist with future communications could you please ensure that the Regulator has the latest key person contact details for your organisation.

Comments are welcomed and should be sent to:

FSREnquiries@homeoffice.gsi.gov.uk

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