

## Lessons Learnt

Issue 5/ 2019

### Manipulation of data

**Key Words:** *Raw data, manipulation, Forensic Science Regulator (FSR) Codes of Practice and Conduct, training.*

In a high-profile case, which has been reported, it was alleged that a small number of technical experts in an organisation were manipulating raw data generated by an instrument prior to those data being analysed. If this was true, because the manipulation happened prior to the analysis of raw data, it would be 'invisible' to those receiving the analysed data, including Reporting Officers. It is important to note that this organisation held ISO17025 accreditation and as a result their quality management system was subject to inspection by the United Kingdom Accreditation Service. The alleged manipulation of data pre-dated the introduction in that organisation of the *FSR Codes of Practice and Conduct*.

As the case is the subject of an ongoing police investigation it will be some time before the FSR can share the specific lessons learnt. However, this is not the only case that has been referred to the Regulator and staff in other organisations have also been alleged to have behaved in an unexpected manner. Therefore, this document includes similar quality issues and pulls together generic quality points

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that combine the lessons learnt in those cases, not simply in one organisation.

#### Further reading

- *FSR Codes of Practice and Conduct* (Issue 4)  
[www.gov.uk/government/publications/forensic-science-providers-codes-of-practice-and-conduct-2017](http://www.gov.uk/government/publications/forensic-science-providers-codes-of-practice-and-conduct-2017)
- *Guidance on Legal Obligations* (Issue 6)  
[www.gov.uk/government/collections/fsr-legal-guidance](http://www.gov.uk/government/collections/fsr-legal-guidance)
- *Expert Report Content* (Issue 1)  
[www.gov.uk/government/publications/expert-report-content](http://www.gov.uk/government/publications/expert-report-content)
- *Protocol: using casework material for validation purposes*  
[www.gov.uk/government/publications/protocol-using-casework-material-for-validation-purposes](http://www.gov.uk/government/publications/protocol-using-casework-material-for-validation-purposes)
- *FSR Newsletter* (Issue 30)  
[www.gov.uk/government/publications/forensic-science-regulator-newsletter-number-30](http://www.gov.uk/government/publications/forensic-science-regulator-newsletter-number-30)

You may also wish to visit The Chartered Society of Forensic Sciences website: [www.csofs.org/](http://www.csofs.org/)

## Things to consider

In addition to forensic units being expected by the international standard ISO17025 to include all the provisions necessary to protect the integrity of results and to safeguard information against tampering, the *FSR Codes of Practice and Conduct* require:

*“21.3.4 The forensic unit shall have procedures to protect ... electronic records, to prevent loss, corruption (actual or suspected) and unauthorised access to and/or amendment of the records, and for maintaining an audit trail.”*

Safeguards included to protect the integrity of data should be tested as part of method validation.

Where witnessing or second checks are part of the safeguards included to protect the integrity of data, management need to consider if it is appropriate for the same individuals to be routinely checking each other's work.

All procedures/methods should be subject to audit and the audit should include sampling data at any critical stages to ensure that the safeguards are effective.

The Codes require staff to be made familiar with the *Code of Conduct*, which requires them to act with honesty, integrity, objectivity and impartiality. Part of that familiarisation is how the *Code of Conduct* relates to the objectives of the management system, e.g. standard operating procedures.

Training should emphasise that departures from standard operating procedures can have serious implications. Standard operating procedures can be deviated from as long as the reasons for that deviation and the deviant process are fully documented and approved. Inappropriate deviations and/or not following the correct deviation procedure can result in the potential of legal sanctions against staff members personally.

Staff should be made familiar with the forensic unit's approved procedure for raising suggestions for changes to methods; they should know that this is the only prescribed route for modifying the method. They should also have an independent route to appeal any rejected suggestions or concerns. Trainers should escalate any 'I didn't think you could do that' moments, where trainees have introduced an error or impacted on the integrity of the result, to quality managers. Quality managers can then assess the likelihood of this occurring operationally.

Trainers should ensure that they do not inadvertently 'normalise' short cuts by being seen to depart from standard operating procedures in order to shorten the training session.