

Guidelines for handling medicolegal specimens and preserving the chain of evidence

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1 BACKGROUND

It is essential, in all medicolegal cases involving pathology specimens, that there should be an unbroken chain of evidence accounting for the 'safe-keeping' and treatment of each sample from the moment of its creation or appropriation, through all tests, to trial.

A laboratory statement should indicate the labelling on samples as received, which must be sufficiently detailed to identify the sample uniquely. The statement from the laboratory should then tie in with a corresponding statement from the person who packed, labelled and dispatched the sample.

Provided that there is admissible evidence to show the sample has been properly attended to, it is not necessary to bring the sample to court, although this may in some cases be useful (*Regina v Orrell* [1972] crim LR313). In Scotland, the Procurator Fiscal will decide, in Fatal Accident and Sudden Death Inquiries, whether the sample should be brought to court. One should take the specimen to court if it has been expressly requested. It would be prudent to check with the person who has asked you to make a statement.

A chain of evidence is important wherever there is a possibility that the result of analysis of a sample will be a requirement for a criminal prosecution. In Scotland, all persons handling the sample must sign and date the police production label attached to the sample.

This guideline deals with infrequent events, therefore laboratories are urged to seek expert advice (e.g. from forensic services or medicolegal centres) as soon as possible.

It is the case that laboratories may be faced with specimens for which there is already a broken chain of evidence. It is also known that courts have accepted laboratory data as evidence with a broken chain. The College advises that laboratories should seek to maintain a chain of evidence from receipt to post-analytical dispatch (when specimens are collected as part of a forensic investigation) or from becoming aware of the forensic importance of a specimen to dispatch. If a court then wishes to assess the admissibility of such evidence, then the role of the laboratory will not be under adversarial scrutiny. It is not for laboratory staff and pathologists to decide whether or not evidence is admissible; neither is it for laboratory staff to decide whether or not a crime has occurred. The primary function of our laboratories is a diagnostic one and our principle duty of care is to the patient.

2 SCOPE OF DOCUMENT

These guidelines are for the use of all College Members and Fellows and for healthcare scientists from all pathology specialties.

The College's *Guidelines on the release of specimens and data to the police and other law enforcements agencies* (October 2006) and *National guidelines on a standardised proforma for 'chain of evidence' specimen collection and on retention and storage of specimens relating to the management of suspected sexually transmitted infections in children and young people for medicolegal purposes* (May 2005) are published separately (see Appendix B).

These guidelines are written specifically for diagnostic laboratories rather than forensic laboratories and are not intended to supersede or conflict with Coronial, Procurator Fiscal or other forensic guidelines or requirements.

3 INTRODUCTION

It is important to treat specimens that may be used in a court of law in a way which complies with the rules of evidence. Failure to do so may mean that the conclusions drawn from examination of the specimen are not given in evidence. This could lead to an adverse result, and possible injustice.

The chain of evidence (sometimes called ‘chain or labelled production of custody’ or ‘continuity’) is a legal concept, which requires that the origin and history of any exhibit to be presented as evidence in a court of law must be clearly demonstrated to have followed an unbroken chain from its source to the court. All persons handling the sample and the places and conditions of storage must be documented, with a note of the time, date, place and signatures where appropriate. This must include all handovers and all stages of processing.

All movements of a potential exhibit must be verifiable. Continuity depends on being able to track **when** the sample was handled, **where** it was moved from and to, and by **whom**. Each movement must be evidenced by a signature. The time and date are equally critical.

Within the laboratory, a laboratory ‘chain of evidence’ form (LCOEF) is used. An example of a LCOEF is available in Appendix A.

4 SPECIMENS REQUIRING THIS PROCEDURE

- All specimens where the request form indicates that a criminal act may have taken place (e.g. ‘? assault’, ‘alleged sexual assault’, ‘? non-accidental injury’, ‘food poisoning outbreak’).
- Specimens that are accompanied by a ‘chain of evidence’ form instigated by the initiating doctor.
- Specimens that are brought to the laboratory by the police doctors who have taken them or police officers. These should be accompanied by a request form and a LCOEF. These samples are normally dealt with at forensic laboratories but are occasionally presented to clinical laboratories.

It is straightforward to recognise the need for a continuous chain of evidence when samples are collected as part of a criminal investigation. However, laboratory results of forensic importance sometimes arise unexpectedly. For example, the culture of sexually transmitted micro-organisms (e.g. *Neisseria gonorrhoeae*) from children below the age of consent or the presence of spermatozoa on urine microscopy from a female under the age of consent may be evidence of sexual abuse, which would require formal investigation. However, because the specimens may have been taken as part of a routine diagnostic process, there would be no formal chain of evidence and the result might be inadmissible in court. In such circumstances, for repeatable specimens, a fresh specimen may be taken and a chain of evidence established from that point.

Alternatively, it may be possible to establish a chain of evidence by the police obtaining consent for a DNA sample to be taken from the person and comparisons made with the specimen DNA.

5 RECEIPT OF SPECIMENS

5.1 During normal working hours

The specimens should be received by the most senior registered scientist available, who checks the correctness of provenance and labelling of the specimens. If the specimen is presented to reception staff or other pathology personnel, the person delivering the specimen must be asked to wait whilst the most senior registered scientist available, or if necessary a consultant or senior scientist, is called to receive it.

The most senior registered scientist available will confirm the receipt of samples and countersign the LCOEF. They should ensure they record the date, time of receipt and from whom they received it.

5.2 Specimens arriving at the laboratory with a routine request form suggesting criminal activity

Ideally, this should not happen because a chain of evidence should have already been established. However, if this does occur, the laboratory director shall nominate a senior member of laboratory staff – this would normally be most senior registered scientist with management responsibility for specimen reception – who will initiate a LCOEF and affix it to the request form. In their absence, the most senior registered scientist in the specialty processing the specimen should initiate the LOCEF. A separate LCOEF must be completed for each sample received. Where samples are split and aliquots are sent to different sections of the laboratory, a separate LCOEF should be completed for each aliquot. The sample splitting process should be fully documented and signed by the operator. Stickers, including pre-printed labels, may be used for the patient details as long as these are checked and signed.

5.3 Specimens which are accompanied by an LCOEF instigated by the requesting doctor

The LCOEF will have been partly completed by the requesting doctor. The most senior registered scientist available needs to take over responsibility for the LCOEF and ensure that it is stapled to the request form, and additional LCOEFs are filled out if the sample is split.

5.4 Specimens brought to the laboratory by police doctors or police officers

The most senior registered scientist available should sign the police ‘chain of evidence’ form, recording the date and time of receipt, then photocopy the form and give the photocopy back to the person who brought the specimen. The original should be attached to a LCOEF instigated by the laboratory and signed by the person who brought the sample to the laboratory.

5.5 Outside normal working hours

The on-call registered scientist must receive specimens and related documentation and, if possible, alert the most senior on-call person (usually the consultant).

Under no circumstances must the specimen be left in any reception area by the person delivering it without handing it over to the most senior registered scientist available. On the next working day, the LCOEF must be handed over to the most senior registered scientist available for checking.

6 SUPERVISION OF SPECIMEN PROCESSING

All work on the specimen must be carried out under the supervision of the most senior registered scientist available, who will check the setting up and reading of tests. They must ensure that all results have been recorded and check the LCOEF at completion, ensuring that all results have been finalised or completed on the laboratory computer system.

Sometimes, courts can summon the person who created the result to appear for cross examination. This is a daunting prospect for junior staff members, therefore the supervision of the senior person should extend to a depth that would enable them to attest to the results in court.

If responsibility for the specimen is transferred to another registered scientist, he or she should also sign the LCOEF, inserting the date and time of handover.

7 REPORTING PROCEDURES

A consultant, head of department or person of similar authority must check the LCOEF paperwork at completion, and sign and record the date and time of this check on the LCOEF. A copy of the completed LCOEF should be given to a police officer, if requested. Clinical reporting should be carried out as normal.

If the consultant checking the paperwork thinks that correct procedures in handling the sample have not been observed, he or she should contact the most senior police officer in charge of the investigation and draw attention to the possible suspected problem as soon as possible.

The LCOEF should be kept permanently (not more than 30 years) in a specific file and kept secure by a designated senior member of laboratory staff.

8 ARCHIVING OF CHAIN-OF-EVIDENCE SPECIMENS AND RELATED DOCUMENTATION

Archiving of specimens, derived material (e.g. serum) and related documents should follow routine laboratory protocols. It is not the function of a primarily diagnostic laboratory to apply any special archiving arising from forensic needs. If conditions of storage or length of archiving need to be any different to the routine procedures of the laboratory, arrangements will need to be made for the transfer of the material to a more appropriate facility. This should normally be through the police. Any long periods in storage, unobserved and unhandled will not, of itself, break the chain of continuity.

9 THE LEGAL STATUS OF ELECTRONIC DATA AND AUDIT TRAILS

The admissibility of electronically produced documents depends on the manner of their generation. Evidence that is produced purely mechanically is real evidence and admissible. Case laws indicated that, for example, an analyser producing test results for specific substances are mechanically produced and, therefore, real evidence. This does not infringe the hearsay rules. However, if evidence is produced by a machine or computer which relays information that has been inputted by humans, the hearsay rule applies and admissibility is determined by a statutory regimen as set out within the Criminal Justice Act 2003. Put simply, there is no difference in evidential status between electronic and paper records.

However, the admissibility of electronic records in the context of evidencing continuity (e.g. an electronic LCOEF) is not verifiable. Paper records must contain the signature of all individuals who take custody of a sample. Unless an electronic audit trail allows for the unique and verifiable identification of each custodian, then its value as continuity evidence would be fatally weakened and its admissibility could be called into question by the courts.

10 AUTHORS

This guidance has been prepared by The Royal College of Pathologists in collaboration with the Institute of Biomedical Science.

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APPENDIX A LABORATORY ‘CHAIN OF EVIDENCE’ FORM (LCOEF)

Please complete a separate LCOEF for **each** sample.

Staple the LCOEF to the request from.

Date specimen taken	Time taken (24-hour clock)	Doctor's name
Patient's details (name, unique identifier, date of birth, sex)		Doctor's signature

Specimen type	
Test(s) requested	

ALL NAMES MUST BE ACCOMPANIED BY A SIGNATURE

Procedure	Name	Signature	Date	Time
Specimen taken by				
Specimen delivered to laboratory by				
Received by (on-call Y/N)				
Senior registered scientist check at receipt				
(Please state procedure) 1.				
2.				
3.				
5.				
6.				

ALL NAMES MUST BE ACCOMPANIED BY A SIGNATURE

Procedure	Name	Signature	Date	Time
7.				
8.				
9.				
10.				
11.				
12.				
Senior biomedical scientist check on completion				
Consultant check on completion				

APPENDIX B RELATED DOCUMENTS

The following College documents may also be cross-referenced.

1. *National guidelines on a standardised proforma for 'chain of evidence' specimen collection and on retention and storage of specimens relating to the management of suspect sexually transmitted infections in children for medicolegal purposes.* May 2005.
www.rcpath.org/resources/pdf/ChainOfEvidence-June06.pdf
2. *Guidelines on autopsy practice.* www.rcpath.org/index.asp?PageID=687
3. *Code of practice and performance standards for forensic pathologists.* November 2004.
www.rcpath.org/resources/pdf/CodeOfPracForensicPath1104.pdf
4. *Guidelines on the release of specimens and data to the police and other law enforcement agencies.* October 2006.
www.rcpath.org/resources/pdf/G040Guidelines_onrelease_specimensdatatopoliceOCT06v3.pdf

**All documents can be accessed from the College's online list of publications at
www.rcpath.org/publications**