THE COLLEGE OF RADIOGRAPHERS

GUIDANCE FOR THE PROVISION OF FORENSIC RADIOGRAPHY SERVICES

Produced by The College of Radiographers
on behalf of The Society of Radiographers

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1 INTRODUCTION

1.1 This document is issued by The Society of Radiographers to give guidance to radiographers working in the field of forensic radiography. It should be read in conjunction with the *Code of Professional Conduct* (1994, revised 1996) issued by The College of Radiographers and the *Statement on Infamous Conduct* (1995) issued by the Radiographers Board of The Council for Professions Supplementary to Medicine, and any subsequent revisions to these documents.

1.2 The contents of this document are intended to provide guidance only. Local protocols and policies must be produced with which all members of staff should be familiar. Legal advice may be appropriate in unusual or difficult circumstances.

1.3 Radiographers undertaking forensic radiography must have a working knowledge of relevant primary and secondary legislation and all relevant guidelines (see References and Bibliography). Additionally, professional legal advice or guidance should always be considered in unusual, novel or difficult circumstances or where ethical issues are controversial or in a state of flux.

1.4 This document replaces all previous guidance documents for forensic radiography issued by The College of Radiographers and The Society of Radiographers.

2 FORENSIC MEDICINE

Forensic medicine refers to the application of medical knowledge in the collection of **evidence to be used in a court of law**. Such evidence may be collected from either living or deceased subjects with the latter presented as either whole cadavers or as pathological specimens.

3 FORENSIC RADIOGRAPHY

3.1 Radiography is one of the most commonly used methodologies in the collection of forensic evidence. Plain radiographs using antero-posterior (AP) and lateral views are the mainstays of forensic radiography; however, cross-sectional imaging using computerised tomography (CT) and / or magnetic resonance imaging (MRI) may also be employed. In exceptional circumstances, angiography, venography and ultrasound may be employed.

3.2 Radiography is particularly useful for:

- confirming the identity of both living and deceased subjects;
- identifying pre-existing skeletal trauma, e.g. in cases of suspected non-accidental injuries;
- assisting in the determination and / or confirmation of cause of death;
- locating hidden foreign bodies, such as fragments of explosives and packages of illegal substances.

4 FORENSIC EXAMINATIONS OF LIVE SUBJECTS

4.1 In dealing with requests for forensic radiography examinations of live subjects, including requests emanating from Customs and Excise and / or the Prisons Service, radiographers must ensure that they comply with the provisions as set out in the *Code of Professional Conduct* (1994, revised 1996) and all other relevant regulations for the safe and efficient use of ionising radiation.

4.2 Authenticity and continuity of evidence (see Section 10) must be ensured.

4.3 The principles of justification and optimisation of radiation dose should apply at all times (Council Directive 97 / 43 ÉURATOM, 1997).

4.4 National and local regulations in regard to infection control, gaining informed consent and the maintenance of client and / or relative confidentiality should be followed at all times.

4.5 In the case of suspected non-accidental injury in a child, regard should be paid to the relevant sections of *The Childrens Act* (1989 c.41) and any other guidelines that have current acceptance or force at national or local level.

5 FORENSIC EXAMINATION OF CADAVERS AND/OR PATHOLOGICAL SPECIMENS

5.1 It is a requirement of *The Coroner's Act* (1988 c.13) that only *specially qualified persons* be employed to perform a special examination of the body on behalf of the Coroner.

5.2 As specially qualified persons in the field of medical imaging, radiographers are the appropriate professionals to undertake forensic radiography examinations of cadavers or pathological specimens where such examinations are deemed necessary to establish the facts of a case.

5.3 In performing such examinations, radiographers must ensure they comply with all relevant regulations, particularly those relating to the safe and efficient use of ionising radiation, the gaining of appropriate consent in writing and control of infection. Radiographers should also pay due regard to the cultural and religious sensitivity of the deceased and their relatives. .

5.4 Authenticity and continuity of evidence (see Section 10) must be ensured.

5.5 It should be recognised that in certain circumstances such as homicide, cot death, and for religious and legal reasons, there may be persuasive reasons for obtaining imaging as soon as possible. Therefore local written protocols should address the provision of an out-of-hours service.

5.6 Consideration should also be paid to the need to image quickly if deterioration of any part of the body is relevant to the quality of the imaging and its interpretation.

6 REQUESTS FOR FORENSIC RADIOGRAPHY EXAMINATIONS

6.1 A signed request should be received from an appropriate referring source prior to the commencement of the procedure.

6.2 Instructions for forensic radiography examination of live subjects would normally emanate from NHS medical staff or a medical officer representing the Home Office whether acting directly or under instructions from legal advisers.

6.3 Instructions for forensic radiography examination of cadavers and / or pathological specimens would normally emanate from the coroner whether acting directly or through his / her appointed officer, such as a pathologist or coroner's officer.

6.4 A clear distinction must be made between the various referring sources in order that appropriate management arrangements can be agreed locally. It may be necessary to agree a different protocol with each source and to specify separate management arrangements that distinguish between live subjects and cadavers and / or pathological specimens.

6.5 Requests for forensic radiography examinations may also arise as a result of a major incident or mass fatality. The Society of Radiographers recommends that the hospital's Major Incident Protocol details appropriate arrangements for the provision of forensic radiography services arising from such incidents.

7 CONSENT

7.1 The procedure for obtaining consent from subjects and / or their relatives should be detailed within the local written protocol.

7.2 Consent (preferably in writing) must always be obtained prior to the commencement of any examination.

8 CONFIDENTIALITY

8.1 Normal principles of client or relative confidentiality must be maintained.

8.2 In regard to cadavers and / or pathological specimens, the case will be *sub judice* and should therefore not be discussed outside of the court until the inquest has been completed.

8.3 Further, where the coroner has referred a case for consideration by a court of law the principles of client confidentiality will continue to apply throughout the proceedings.

9 HEALTH AND SAFETY

9.1 To minimise any risks of cross-infection, all relevant health and safety guidelines should be strictly adhered to during forensic radiography examinations.

9.2 All cadavers must be treated as potentially infected and a risk to the health of the staff (The Royal Institute of Public Health & Hygiene, 1994). Therefore, The Society of Radiographers recommends that any forensic radiography examination of cadavers and / or pathological specimens should ideally be conducted in the mortuary or a room specifically set up for that purpose.

9.3 Should it be necessary to carry out the examination within the Radiography Department, appropriate care should be taken to

minimise the risk of cross-infection and to ensure that the conduct of the examination causes minimum distress to patients and staff.

10 MEDICO-LEGAL ASPECTS

10.1 Evidence

10.1.1 Before information can be accepted for use in a court of law it must be judged to be admissible as evidence.

10.1.2 To be admissible, the evidence must be properly authenticated and continuity of evidence must be demonstrated.

10.2 Authentication

All subjects must be properly identified prior to the examination and all images and records must be labelled using permanent markers where appropriate. For example, date and time of examination, name / initials of radiographer and witness, together with appropriate anatomical markers, must be recorded on the image at the time of the examination.

10.3 Continuity of Evidence

10.3.1 The entire examination must be properly witnessed.

10.3.2 In the case of live subjects the witness can be a police officer, another health care professional or social worker. This person is normally termed the 'appropriate witness'.

1**0.3.3** In the case of cadavers and or pathological specimens the 'appropriate witness' is normally the coroner's officer. He / she is sometimes called the 'responsible officer'.

10.3.4 The appropriate witness must be present throughout the

examination and must not leave the subject unattended at any time, including during the development of the radiograph(s).

10.4 Original Images

10.4.1 Only primary evidence is admissible in court. In the case of radiographs this will normally be the original hard copy image.

10.4.2 The radiographer and the appropriate witness must sign all original hard copy images as being an authentic record. For coroner's cases, all original hard copy images must then be handed over to the responsible officer who must sign that it has been received.

10.4.3 To maintain continuity of evidence, the appropriate witness must also be present at the time of reporting. If it is not possible to obtain a report of the images immediately on production, the appropriate witness must keep possession of the images and return with them at the earliest opportunity so that the report can be generated.

10.5 Digitally Stored Images

10.5.1 For continuity of evidence, courts normally require that properly authenticated originals be submitted as evidence. This causes particular problems in the case of digitally stored images.

10.5.2 Following legal advice, The Society of Radiographers recommends that a hard copy image be created at the time of creating the digitally stored image. Our view is that the valid copy is the hard copy image. The digitally stored image can be used as additional supportive evidence, if necessary. The valid hard copy image should be authenticated in the normal way.

10.5.3 If a hard copy is taken it should be signed and dated as a copy made on the date stated by the person signing. If an electronic

copy is made then the paperwork that relates to the electronic copy should be similarly signed and dated.

10.6 Copy Images

10.6.1 Copies are secondary evidence and are only admissible where originals can be proven as having been lost or destroyed.

10.6.2 However, because it is impossible to produce a hard copy image in the absence of an original image, The Society of Radiographers recommends that a duplicate hard copy image be made at the time of all forensic examinations. This will require special permission from the coroner since copies of images of coroner's cases must not normally be made unless by prior arrangement with the coroner.

10.6.3 The procedure for dealing with and storing such duplicate images whilst the case is *sub judice* should be detailed in the written protocol.

10.6.4 Any requests for additional copies must be referred to the coroner (for coroner's cases) or the appropriate medical officer in regard to other cases.

10.6.5 All copies must be signed and witnessed as copies of the originals by the radiographer who has produced the original images and must be appropriately authenticated by both the radiographer and the witness.

Please note that in Scotland the role of the Coroner is undertaken by the Procurator Fiscal.

10.7 Records

10.7.1 Appropriate records, which must be defined in the written

local protocol, must be kept in regards to all forensic radiography examinations.

10.7.2 These records must comply with all national and local guidelines in regard to maintenance and storage of confidential health records. Attention is drawn to the health service circular entitled *For the Record: Managing Records in NHS Trusts and Health Authorities* (1999) and the *Data Protection Act* (1998 c.29).

11 EDUCATION AND TRAINING

11.1 Radiographers who undertake forensic radiography examinations must be educated and trained in aspects of forensic practice and should receive regular updating as part of continuing professional development.

11.2 Such radiographers must have relevant and up-to-date knowledge and experience, to include:

- appropriate imaging techniques to meet the requirements of forensic radiography work;
- medico-legal issues relating to the admissibility of evidence;
- national and local health and safety regulations, particularly in regard to the handling of deceased subjects;
- different cultural and religious ethics associated with the deceased and their relatives;
- appropriate communication skills for dealing with subjects who have undergone a traumatic experience;
- primary and secondary legislation, government and local guidelines related to forensic radiography.

11.3 Employers should pay particular regard to the potentially distressing nature of some aspects of forensic practice which could

lead to post traumatic stress disorder (PTSD) in the individual undertaking the examination (Baker & Hughes, 1997). Employers have a responsibility to provide appropriate debriefing, continual monitoring and where necessary counselling for these individuals. Particular attention is drawn to the need to provide adequate resources for critical incident debriefing (HSE, 1998).

11.4 Due to the potentially distressing nature of the work, The Society of Radiographers recommends that each department which undertakes forensic radiography identifies sufficient radiographers who are willing to undertake such examinations and should ensure that they are appropriately educated and trained for that purpose.

11.5 Individual radiographers should not be coerced into participating in the provision of the forensic radiography service. It is the policy of The Society of Radiographers that inclusion on the list of radiographers available to undertake forensic radiography examinations should be voluntary and individual radiographers have the right to refuse to participate in such duties.

12 PROTOCOL

12.1 Forensic radiography examinations should only be carried out in accordance with a written protocol, which has been developed during consultation with all those involved.

12.2 The protocol should include the following:

- statement of intent;
- implementation and review;
- scope of service;
- roles, responsibilities and relationships;
- training;

- medico-legal issues.

Refer to the policy statement entitled Role Development in Radiography (1996) published by The College of Radiographers for more detailed information under each of the above headings.

12.3 In developing a protocol for forensic radiography practice The Society of Radiographers recommends that the following points be included:

- situation in which the protocol applies (referring source live and / or deceased subject);
- agreed characteristics of staff authorised to take responsibility for forensic examinations (appropriate education and training);
- where appropriate, agreed arrangements for the transportation of subjects to the Radiography Department (mode of transportation and arrangements for ensuring continuity of evidence);
- agreed arrangements for the appropriate witnessing of the entire forensic procedure and for the authentication of original images;
- agreed arrangements for making and dealing with copies of original images;
- record keeping;
- details of relevant local health and safety guidelines including timing and location of where forensic examinations should ideally be conducted;
- agreed arrangements for the appropriate remuneration of staff;
- arrangements for the management and monitoring of forensic practice, including staff support and audit;

- out-of-hours services;
- major incidents and disasters.

13 PAYMENT

13.1 The Trust and the separate referring source should negotiate and agree appropriate mechanisms for payment with respect to the use of imaging facilities for forensic work.

13.2 It is the view of The Society of Radiographers that the individual radiographer is providing an expert service on an extra-contractual basis for all forensic radiographic work **regardless of referral source.** However, the radiographer's fee should be included in the arrangements made between the Trust and the referring sources for payment for forensic work and should be passed on to the radiographer by the Trust through payroll.

13.3 If the radiographer is being paid individually, e.g. in the case of a non-employee, then the radiographer should raise a separate invoice.

13.4 A copy of the latest recommended fees for forensic work is inserted.

13.5 SEPARATE ARRANGEMENTS SHOULD BE MADE BETWEEN THE TRUST AND THE REFERRING SOURCE FOR THE EXAMINATION OF CADAVERS AND / OR PATHOLOGICAL SPECIMENS FOR THE PURPOSE OF RESEARCH.

14 REFERENCES AND BIBLIOGRAPHY

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11. The College of Radiographers (1996); *Role Development in Radiography*, CoR

12. The Royal Institute of Public Health and Hygiene (1994); *A Handbook of Mortuary Practice & Safety*, The Royal Institute of Public Health and Hygiene

13. The Society of Radiographers (1998); *Control of Infection Protocol*, SoR

Copies of all documents listed above are available for viewing at the offices of The Society of Radiographers.

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