FORENSIC SCIENCE REGULATOR

FORENSIC PATHOLOGY SPECIALIST GROUP

AUDIT OF THE WORK OF FORENSIC PATHOLOGISTS BASED IN THE UNITED KINGDOM

2013

REPORT OF THE FOURTH ANNUAL AUDIT

FORENSIC PATHOLOGY SPECIALIST GROUP
FOURTH AUDIT OF THE WORK OF FORENSIC PATHOLOGISTS – 2013

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INTRODUCTION

1 The Forensic Pathology Specialist Group (FPSG) advises the Forensic Science Regulator on matters involving forensic pathology. The Group is responsible for the oversight of standards; one of the initiatives taken to acquit this responsibility being a programme of audit of the casework carried out by forensic pathologists. The audit commenced in 2013 is the fourth annual exercise in this series and followed the format used for the previous exercises.

2 Practitioners operating in England and Wales are registered with the Home Office and are required to participate in audit. Forensic pathologists in Northern Ireland and Scotland were also invited to take part. The former participated fully; there was also limited participation from pathologists operating in Scotland

3 The 2013 exercise focussed on two different causes of death. These topics were proposed by the audit team and agreed by the FPSG.

4 Each participating pathologist was asked to submit two specific case reports for audit. One was to be the first case investigated after 1st August 2012 involving death resulting from a road traffic collision. For the sake of brevity the individual cases in this series are henceforth referred to as the 'RTC' cases. There is no nationally accepted standard for the investigation of such cases and forensic pathologists often, but by no means always, carry out the post mortem examinations required.

5 The second case, the examination of which was to have been carried out as close as possible to the above date, involved a body found at the scene of a fire. The fire may have been accidental in origin, or the result of some deliberate action. Cases in this series are referred to as the 'fire scene' cases.

6 The request to submit material was made in October 2013. Only the report as issued to the coroner and/or police was requested, although practitioners were invited to submit toxicology or other supplementary reports as appropriate.

Service provision

7 The primary purpose of audit is to monitor the standard of the post mortem examination, a service performed by the pathologist for the coroner and the investigating officer. The content of the pathologist's report can also offer some indication of the efficiency of the service being provided, for instance, issues such as timeliness of the report and whether it contains the prescribed statutory declarations.

Audit protocol

8 The protocol agreed by the FPSG ensures that the composition of the auditing team reflects the range of service provision, for instance the employment status of practitioners and their locations. Appointment to the team is designed to maintain balance between rotation of the membership and continuity of experience. Auditors are usually appointed for three or four audit exercises.

9 For this exercise five forensic pathologists formed the team which scrutinised the material for its technical quality. A coroner and two police senior investigating officers (SIO) provided a lay perspective on the material, each from their own particular viewpoint.

10 Although the audit scrutiny itself is anonymous, identifying information was not redacted from case reports prior to submission by pathologists. Responsibility for redaction lay with the audit co-ordinator who removed the names and locations of both the pathologist and the deceased, together with any other identifiers such as the names of witnesses or officials.

11 Each case was coded with a unique reference number by the co-ordinator, who maintained the sole key to the code. The current audit protocol provides that this key can be broken only if identification of the case is deemed essential to prevent a potential miscarriage of justice, and then only with the agreement of the Chair of the FPSG. This provision was not required in the current exercise.

12 The case reports (80 in total) were submitted electronically to the co-ordinator and then, after appropriate redaction, circulated to the auditors. Initially each case was given to at least two pathologist members of the team and to one of the SIOs. Forty cases, selected at random, were assigned to the coroner. Accordingly, in the first instance each auditor received 40 case reports for scrutiny.

13 The format of the audit resembled that used in earlier exercises, in that the pathologists assessed reports against the technical standards laid out in the 2004 *Code of Practice and Performance Standards for Forensic Pathologists*[1] issued jointly by the Home Office and the Royal College of Pathologists.

14 Auditors were invited to comment on the way in which the content of the report related to each aspect of the published standard, completing a *pro-forma* for each case assessed. The comments included on these *pro-formas* form the basis of both this audit report and the feedback provided to participants at the end of the exercise.

15 The non-medical auditors assessed the potential usefulness and comprehensibility of the report to the lay reader. This was considered particularly important in relation to issues surrounding the value of the report to the end user. These assessments were recorded on a simplified *pro-forma*. Completed forms from all the auditors were returned to the co-ordinator for collation and preparation of the final report.

16 At the end of the exercise each participant received a summary of the auditors' findings in relation to the cases which they had submitted. This information was confidential to the individual practitioner concerned, and will not be released to the public domain. The present report, which will be a public document and retains anonymity, collates and summarises the findings, highlighting areas of particularly good practice as well as those which may require attention.

Re-assessment

17 In the event that any member of the audit team considered that a case raised issues which would benefit from wider discussion, it was agreed that the case in question should be recirculated so that all the pathologist auditors could assess the material. In this exercise eight such cases were identified for further consideration.

18 During the course of the exercise it was also discovered that redaction in two cases had been incomplete and that the authors of the reports could be identified. In order to be fair to their authors, it was agreed that both of these reports should also be reassessed after full anonymisation.

19 The case reports noted in (17) and (18) above – ten in total – were assigned new reference numbers and subsequently circulated to all five pathologist members of the audit team for scrutiny.

20 Following this re-assessment some concern remained about the reports on one 'RTC' and one 'fire scene' case. The authors of the reports involved were each asked

[1] A newer version of the *Code of Practice* is now in use. This, however, was not issued until October 2012 and thus the 2004 version was the appropriate standard for the current exercise.

to supply two further reports relating to the same type of incident as the case occasioning concern. These cases were also anonymised and circulated for scrutiny by the pathologist members of the audit team in the same manner as the original material. This scrutiny did not reveal concerns serious enough to warrant the taking of further action. However, appropriate comments were provided to the pathologists involved.

Comparison with previous audits

21 The 2013 audit will be the last to be assessed against the standards laid down in the 2004 Code of Practice. In future exercises the newer 2012 version of the Code will be the relevant standards guide. Accordingly it appeared useful to review previous audits and to consider to what extent similar findings have been identified in the four exercises (2010-13) in which the 2004 Code was used. These comparisons will form the basis of a separate paper.

22 Each audit panel operates independently, scrutinising fully anonymised material. Accordingly the 2013 audit panel was not aware of the identity of the authors of the submitted reports, nor would they have had knowledge of any of the previous audit results.

23 The co-ordinator is thus the only member of the audit team able to compare the comments made on an individual practitioner in the four audit exercises. Where similar assessments about the performance of a practitioner have been made in more than one audit – that is, where there appears to be a recurring theme – then it appeared logical that the co-ordinator should remind the practitioner of these comments. Accordingly, the confidential feedback letters supplied to individual pathologists at the conclusion of the 2013 exercise have reflected this approach.

AUDIT RESULTS

Introduction

24 The various aspects of case reports were assessed against the headings detailed in Section 7 of the 2004 Code of Practice *'The pathologist's autopsy report'*, and are recorded under these headings in this final audit report.

25 As in previous exercises of the current series, the overall standard of the reports submitted for audit was high. Those deviations from best practice as recommended in the Code of Practice were noted. These comments should not be seen as condemnatory; rather they are intended to stimulate discussion and to facilitate the raising of standards overall.

26 The general approach to the post mortem examination will be similar whatever the cause of the death. Accordingly, although this audit involved two different modes of death, much of this report applies to both types of case.

27 Following the format of previous audit reports comments on each section of the pathologist's report are prefaced by a summary of the requirements of that particular aspect of the examination.

28 General comment will be offered later in this report on the approach to the post mortem examinations and the way in which they have been recorded.

Code of Practice - 7.2.1 General comments

The report or statement must be clearly laid out, section by section, in an easily read format. There are a number of statutory declarations to be made regarding the pathologist's status as an expert witness.

29 The current Code of Practice does not specify a format for the declarations regarding the pathologist's status and practitioners develop their own style. The statutory declarations present appeared to meet relevant criteria.

Code of Practice - 7.2.2 Preamble

The preamble should set out details of the deceased and of the autopsy.

30 The essential information was included.

Code of Practice - 7.2.3 History

In this section the pathologist is expected to summarise information provided before the autopsy is performed. The Code requires this information to be recorded in full with an acknowledgement that where the information has been obtained from others, rather than being the pathologist's own observations or experience, the pathologist cannot vouch for its accuracy or veracity.

31 Case histories were generally satisfactory. In three cases it was considered rather brief, although adequate for the circumstances.

32 In two cases the history provided insufficient background information to permit an understanding of the events. One 'RTC' case did not record when the incident had occurred, nor whether treatment had been given prior to death. The other case involved a death due to scalding, accepted *in lieu* as the practitioner concerned had no appropriate 'fire scene' to submit. There was a lack of background information about the circumstances of the incident, such as the position in which the deceased had been found, the water level in the bath, etc.

33 In another two cases the history section was located at the end of the report. This is contrary to the layout of the report given in the Code of Practice, which makes it clear that the history should precede description of the post mortem examination in order to outline the background to the investigation. The lay auditors commented that placing the history at the end of the report was not helpful to the reader.

34 Guidance on the history section has recently been issued by the FPSG.

Code of Practice - 7.2.4 Scene of the death

Under this heading pathologists are expected to note full details of the scene of discovery of the body. It is recognised, however, that in many cases the body may be removed for emergency medical treatment prior to death and the scene may therefore possess little of relevance to the pathologist.

35 No scene visits were made in relation to the road traffic collision cases, although relevant briefing material had been made available to the pathologist. In 16 cases (40%) the report made specific reference to the provision of comprehensive details of the incident, including still and video photographic evidence.

36 The scene of the fire death was visited in eight cases (20%); the visits were well described. It was clear that in the other cases adequate briefing, including photographs, had been provided to the pathologist.

37 There was no evidence in either series of cases that a pathologist had failed to attend a scene at which useful information might have been obtained in relation to the incident. There may, of course, be other reasons to visit the scene such as to gain experience; such considerations are outwith the scope of this audit.

Code of Practice - 7.2.5 The external appearance of the body

The pathologist should record in detail the external appearance of the body, including its state on arrival in the mortuary, and the presence and distribution of bloodstaining. An inventory should be made of clothing as it is removed from the body.

38 Descriptions of the external appearance of the body were good. Five case reports (all in the 'fire scene' series) were particularly detailed. In eight cases (all in the 'RTC' series) the descriptions were brief, although considered acceptable in the circumstances.

39 It was noted that tattoos were not always adequately described. While not usually an issue of great importance, clear descriptions can subsequently prove useful – for instance in confirming the identity of a body.

40 No body weight had been recorded in two cases, although in only one of these was the absence of mortuary weighing facilities noted.

Code of Practice - 7.2.6 Description of the injuries

Injuries, however slight, must be described in detail, using recognised terms and appropriate measurements. Their location should be noted in relation to anatomical landmarks. Where there are many injuries a clear numbering system should be employed in the report to aid identification. Lack of suitable numbering could render subsequent reference to the report more difficult, for instance when giving evidence in court.

41 The description of injuries was generally adequate in the 'RTC' series of cases. Careful recording of the position of injuries is likely to be of particular importance in deaths involving road traffic incidents, where injuries may need to be related to specific points on a vehicle. In eleven (28%) of the 'RTC' cases localisation of the injuries was considered to be relatively poor, although probably adequate in the circumstances.

42 Injuries in the 'fire scene' case series were generally well described.

43 The auditors consider it inappropriate for forensic pathologists to attempt to classify the depth of burns as 'first', 'second' or 'third' degree. These are largely clinical categories with clinical implications. Pathologists can describe how much depth of tissue is lost due to heat damage and should recognize that the extent and severity of burns is frequently the result of post mortem damage as the body remains in the fire.

Code of Practice - 7.2.7 The internal examination

The internal examination must follow the Royal College of Pathologists' Guidelines on Autopsy Practice. Particular note must be made of diseased or injured organs. Report sub-headings may be useful in organising the information. Organ weights should be recorded.

44 The internal examination in both series of cases was generally well described.

45 In one case fracture of the thyroid cartilage was noted, together with associated local bruising. However, this finding was not subsequently discussed. It is emphasized that if a significant pathology is documented in the technical body of the report, its significance should be explored in the conclusions section.

46 It is considered that more extensive use of sub-headings can render the report easier to read.

47 Some practitioners show the weights of individual organs immediately alongside the description of that organ. Others record the organ weights all together in a single list, usually towards the end of the report. While this is a matter of personal preference, in the opinion of the auditors the former scheme may aid comprehension.

48 In one 'RTC' case CT scanning had been undertaken instead of an internal examination. This approach had been agreed with the coroner, investigating officer and relatives, and appeared entirely satisfactory in the circumstances. However, the suitability of submitting such a case for this particular audit was questioned.

Code of Practice - 7.2.8 Supplementary examinations carried out

The involvement of other specialists should be included under this heading, and the results of their examinations noted. Most cases will involve toxicological examination, and specialisms such as paediatric pathology, radiology, etc will be included where appropriate.

49 Appropriate supplementary examinations had been carried out. No histology had been carried out in three cases (4% of the total) due to a ruling by the coroner.

50 The lack of a carboxyhaemoglobin estimation was noted in two of the 'fire scene' cases. Auditors consider that toxicology in a fatal fire case should include a carboxyhaemoglobin level as a minimum, and possibly cyanide levels, along with alcohol and drugs (both therapeutic and illicit).

Code of Practice - 7.2.9 Commentary and Conclusions

In the Commentary and Conclusions section the pathologist should explain the cause and mechanism of the death, using language which is precise and accurate in medical terms but also readily comprehensible to the lay reader. It is primarily from the commentary and conclusions that the police and prosecuting authorities will have to assess the relevance of the medical evidence to their consideration of the case.

'RTC' cases

51 Commentaries were variable in nature and extent, although all were considered adequate in the circumstances.

52 Some reports were very full and detailed. One, for instance, involved a cyclist apparently knocked off his cycle by a glancing blow from one car and then run over by one or more other vehicles.

53 Seven commentaries (18%) were brief, although considered adequate in the circumstances. One further commentary was considered too brief in that it made no reference to the orientation of the deceased or whether the severity of collision might have been considered 'high' or 'low' energy.

54 In some instances auditors offered the comment that they would have included more and/or different information. For example, 'it might have been appropriate to consider whether a seat belt had been employed' and 'could have been more discussion on the pattern of the injuries'. In four cases the presence of underlying disease was noted and some auditors suggested they would have commented on the effect this may have had on survival. Such comments should not be regarded as criticism but as suggestions for practitioners to consider when completing their reports.

55 Deaths due to an RTC are not always subjected to examination by a forensic pathologist. It may be acceptable, therefore, that the amount and type of information provided is more a matter of personal preference than would be the situation in, for example, a homicide investigation. There is, nevertheless, an important over-riding criterion; the status afforded by Home Office registration carries the responsibility to work to the highest possible standard on every occasion. Additionally, the instruction of a forensic pathologist involves a considerable investment of public funds and the practitioner has a duty to provide proper value for money by undertaking as full an examination as possible.

'Fire scene' cases

56 Overall the commentaries on these cases were good, with five noted as being particularly full and detailed. Two reports were brief but adequate; two other reports lacked important detail. One of these latter provided no information about the rib fractures (presumably resulting from resuscitation). The other case, which involved scalding, offered little information about the immersion in hot water or the possibility of drowning.

Code of Practice - 7.2.10 Cause of death

The cause of death is normally expressed in the manner approved by the Registrar General, although it is often important to elaborate on the information for those who may be unfamiliar with the format.

57 The cause of death appeared to have been recorded satisfactorily in every case. However, there was some discussion as to whether too many of the 'RTC' cases had

been simply certified as 'multiple injuries'. It was agreed that if a specific organ group or region (i.e. head, neck, etc.) could be clearly identified as being the manifestly fatal injury, that should be stated, but it was accepted that some victims have so many individually fatal injuries that 'multiple injuries' would remain an accurate description.

58 It was considered important that the cause of death should be seen to have been reflected upon thoroughly, so that the use of a term such as 'multiple Injuries' should not appear simply to represent casual or lazy lack of thought.

59 In both series of cases, statement of the cause of death was not always limited to strictly anatomical causes. Thus the phrase '*injuries sustained in an RTC*' may usurp the role of the coroner in determining the cause of the injuries, as does '*house fire'* when offered as a direct cause of death. The '*inhalation of fire fumes and burning'* may be more appropriate in this latter situation.

Code of Practice - 7.2.11 Retention of relevant samples during the examination

Every report should record what materials or samples have been retained after the examination and where they are located. These samples may have been generated during the examination. There may also be 'unused material' – samples provided to but not subsequently examined by the pathologist.

60 There was nothing of significance to report under this heading.

Code of Practice - 7.2.12 The layout and format of the report

The forensic pathologist's report is intended for use by more than one audience. It must be technically sound and acceptable to other medical professionals, while remaining accessible for the lay reader who will need to understand its substance and implications.

61 The importance of ensuring that every post mortem examination undertaken by a Home Office registered forensic pathologist is carried out to the best possible standard has already been noted. This exercise – especially the road traffic incident series – dealt with cases which might perhaps have been regarded as 'less important' than homicides. The overall impression gained from the audit suggested that some practitioners may have applied somewhat lower standards to these investigations. The reports overall were satisfactory and, with minor exception, entirely adequate for the situation. There was no suggestion that the causes of death were incorrect. Many reports were full, detailed and comprehensive. Nevertheless, some of the reports were shorter than might have been expected from a Home Office registered forensic pathologist.

62 Of particular concern was the number of errors in the reports. For instance:

- a C6 vertebra was later described as C8
- a fractured hyoid bone and thyroid cartilage were, later in the report, said to be 'intact'
- where are the 'upper three central incisors'?
- injuries to the neck, shoulder and abdomen were described under the heading of 'head'
- a lung tumour was said to be '80cm in longest dimension'
- a contraceptive device was described as 'interuterine' instead of 'intrauterine'
- the 'right ilium' was mis-identified as the 'right ileus'
- pelvic fractures were described under the genito-urinary system
- 'metatarsal' included instead of 'metacarpal'
- the date of birth of one deceased was recorded as '28/07/1392'

63 There were other instances of inadequate or insufficient information being given to permit proper identification of the object being discussed. For instance, an injury to the elbow was described, but whether it was on the right or left elbow was not stated.

64 These could all be described as relatively trivial errors. There can be little doubt, however, that they reflect badly on the author of the report. They also call into question the value of the Critical Conclusions Check. The purpose of this check is to ensure that the reporting pathologist has produced a report which is accurate and reflects the high quality of the post mortem examination itself.

Comments made by the coroner

65 The quality of reports overall was satisfactory, and appropriate for the requirements of the coroner.

66 There was a small number of cases in which the cause of death had not been clearly expressed. 'House fire' or 'effects of smoke and fire' are vague and do not spell out the precise cause. However, the cause may sometimes be reported in this manner where it is not clear whether death was due to the smoke or the burns.

67 Similarly 'road traffic collision' simply describes the method of death. This issue has already been noted under the 'Cause of death' section of this report.

Comments made by the police senior investigating officers (SIOs)

68 The SIOs performed a different, but equally valuable role, from that of the medical audit team. They assessed, from their own particular viewpoints, how useful the report might have been to them in furthering their understanding of the cause and circumstances of the death. In this regard the 'Commentary and Conclusions' section was usually found to be the most relevant section of the report.

69 In one case it was noted that samples taken by the pathologist during the post mortem examination were described in one way in one list, but then by using different forms of words in a subsequent list. This was considered potentially confusing.

70 The auditors commented that while extensive discussion of clinical records may be useful and relevant to other medical professionals, such discussion may prove confusing to the lay reader.

Critical Conclusions Check

71 The auditors considered whether Critical Conclusions Checks were adequately conducted in all appropriate cases, and if they were, whether sufficient attention was being paid to them by the original authors of the cases. It was often not clear that these checks had been performed; it was recognized that they could have been but, for one reason or another, recommendations made by the checker had not been included in the final report. It was suggested that the role and expectations of Critical Conclusions Checks be revisited.

Timeliness

72 Data on the time elapsed prior to issue of the report was available on just over half (44) of all the reports submitted for audit. Based on this small sample the mean time taken from the date of the examination until issue of the report by the pathologist was 106 days. The median time was 91 days, and the range 8 to 276 days. These results are similar to those recorded in previous exercises in the current series of audits.

RECOMMENDATIONS

73 It may be appropriate to remind practitioners that:

- instruction of a Home Office registered forensic pathologist involves the investment of considerable public funds, and such practitioners carry the responsibility to undertake post mortem examinations to the highest possible standard (para 55)
- remind practitioners that the cause of death should be stated in strict anatomical terms, and should not usurp the role of the coroner in determining the circumstances occasioning the death (para 59)
- editing and proof reading of the report should be carried out with proper care. In this respect it may also be appropriate to review the purpose and extent of the Critical Conclusions Check, together with the remit of the checker (paras 64 and 70)

CONCLUSIONS

74 This was the fourth in the series of audits of the work of forensic pathologists carried out on behalf of the Home Office Forensic Pathology Specialist Group. Case reports were submitted by Home Office registered pathologists plus forensic practitioners operating within Scotland and Northern Ireland. The reports submitted for this exercise were generally of a high standard. However, a number of areas of relatively minor, albeit important, concern have been highlighted. These all represent a step in the evolution of a quality of service which exceeds the requirements of the Codes of Practice.

28 May 2015