FORENSIC SCIENCE REGULATOR

FORENSIC PATHOLOGY SPECIALIST GROUP

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

REPORT OF THE FIFTH ANNUAL AUDIT

FORENSIC PATHOLOGY SPECIALIST GROUP

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INDEX

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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 annual audit of the casework carried out by forensic pathologists. The audit commenced in 2015 is the fifth exercise in this series and in essence followed the format used for previous exercises.

2 Although this exercise is referred to as the latest in a series of 'annual' audits, for a number of reasons some 24 months had elapsed since the previous audit had taken place.

3 Practitioners operating in England and Wales are registered with the Home Office and are required to participate in the audit scheme. As in previous years, forensic pathologists in Northern Ireland and Scotland were also invited to take part. There was full participation in the current exercise by pathologists operating in Northern Ireland but in the case of Scotland it was very limited.

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

5 Each participating pathologist was asked to submit two specific case reports for audit. One was to be the first case investigated after 1st August 2014 of a death in police custody or during contact with police, apparently as a consequence of unnatural causes. The precise scope of the topic was revisited immediately prior to the issue of invitations to participate and it was agreed that deaths occurring in certain other circumstances, such as while being detained in secure accommodation, would also be acceptable.

6 The second case, the examination of which was to have been carried out as close as possible to the above date, involved a death resulting from precipitate descent from height.

7 The request to submit material was made in November 2015. It had been anticipated that not every practitioner might have suitable cases to submit and that the response might therefore be limited. In the event this did not prove to be the situation, although some latitude had to be permitted in meeting the submission criteria. Only the report as issued to the coroner and/or police was requested, although practitioners were also invited to submit toxicology or other supplementary reports as appropriate.

Service provision

8 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. Audit can also offer some indication of the efficiency of the service being provided, for instance, on issues such as the timeliness of the pathologist's report and whether it contains the prescribed legal requirements.

Audit protocol

9 The protocol agreed by the FPSG[1] ensures that the composition of the auditing team reflects the range of service provision, for instance the employment status of the pathologists and their locations. Appointment to the team is designed to maintain balance between rotation of the membership and continuity of experience. Auditors are normally appointed for three or four audit exercises.

10 For this exercise five experienced forensic pathologists formed the team which examined the reports for their technical quality. A coroner, also very experienced in dealing with forensic pathology reports, scrutinised a sample of the material to assess its potential value from his perspective. In previous exercises two police senior investigating officers (SIOs) had scrutinised the material from their own particular viewpoint, but for this exercise four SIOs were involved in order to spread the workload.

11 The content and format of reports submitted for audit were exactly as supplied to the coroner and police service. However, the audit scrutiny itself is anonymous and all identifying information had thus to be redacted from case reports prior to circulation to members of the audit team. Responsibility for redaction lay with the audit co-ordinator who removed the names and locations of both the pathologist and the deceased.

12 During redaction other names, eg witnesses or officials, were usually replaced by initials. However, anonymisation was not always straightforward as some cases included reference to many different witnesses. Replacement of every name by a set of initials was found to lead to difficulty in reading the text, and thus to possible confusion. Accordingly in a very few instances it was considered prudent to retain the names of certain witnesses, although not where this could lead to direct identification of the deceased.

13 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 a 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.

14 Encrypted case reports (78 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. Accordingly, each pathologist auditor received between 34 and 38 case reports for scrutiny; each SIO assessed about 20 cases. The coroner was assigned one case from each of the participants.

15 The format of the audit was similar to that used in earlier exercises, in that the pathologist auditors assessed reports against the technical standards laid out in the latest version of the *Code of Practice and Performance Standards for Forensic Pathology*[2] issued jointly by the Forensic Science Regulator and the Royal College of Pathologists (in partnership with the Home Office and Department of Justice in Northern Ireland). An equivalent document, incorporating very similar technical standards, is used by practitioners operating in Scotland.

16 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 separate *pro-forma* for each case assessed. The comments included on these *pro-formas* formed the

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1 *Protocol: Forensic pathology audit* Forensic Science Regulator 2014

2 Issued in 2012. Previous exercises used as a standard the version of the *Code of Practice* issued in 2004. There are few significant differences in the basic pathology requirements between the two versions.

basis of both this audit report and the feedback provided to participants at the end of the exercise.

17 The non-medical auditors also took note of the Code of Practice but primarily assessed the potential usefulness and comprehensibility of the report to the lay 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.

18 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 is not to be released to the public domain. It is intended, however, to form one element of the evidence used in revalidation of the practitioner's General Medical Council licence to practise.

Re-assessment

19 In the event that any member of the audit team considers that a case raises issues which would benefit from wider discussion, the protocol requires the case in question to be circulated to all the pathologist auditors to enable a broader assessment. In this exercise five such cases were identified for further consideration. These were assigned new identifiers and subsequently scrutinised by all five pathologist auditors. No significant issues were identified during this process.

Structure of the report

20 This present report, which retains anonymity and will be a public document, collates and summarises the findings, highlighting areas of particularly good practice as well as those which may require attention.

21 The primary purpose of audit of forensic pathology reports is to monitor the technical standards of the post mortem examination. However, during the course of the assessment a number of other potentially significant issues were identified in which practices differ, such as compliance with the appropriate legal requirements. These issues are not necessarily central to the main thrust of the exercise, although they may influence the effectiveness of the service and its value to its users. Accordingly the opportunity has been taken to explore them in some detail in annexes attached to the report.

AUDIT RESULTS

Introduction

22 The various aspects of case reports were assessed against the headings detailed in Section 7 of the 2012 Code of Practice '*The pathologist's autopsy report*', and are recorded under these headings in this final audit report. The first part (7.1) of this section of the Code defines the content of the standard.

23 The overall standard of the reports submitted for audit was good and, subjectively, better than had been found in previous exercises of this series. Those deviations from best practice, as recommended in the Code of Practice, were noted. Many of these comments are of relatively minor importance; sometimes simply a matter of personal preference. They are, however, intended to stimulate discussion and to facilitate the raising of standards overall.

24 The general approach to a post mortem examination will be broadly similar whatever the cause of the death. Accordingly, although the audit involved two different modes of death, this report applies to both types of incident and there has been no need to consider the two series of cases separately.

25 As in 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.

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 and other legal requirements to be complied with regarding the pathologist's status as an expert witness.

26 The reports submitted for audit were not consistent in the legal requirements which they incorporated; similar findings had been recorded in previous audits. This issue is reviewed in Annex A.

27 One Home Office practice includes an outline of the standards employed during the post mortem examination and also an explanation of the various 'comparative' terms used in the report. Although the provision of such information is sometimes used in reports issued by other forensic specialists it has not thus far been discussed by the FPSG in relation to forensic pathology. These issues are considered in Annexes B and C.

Code of Practice - 7.2.2 Rapid interim account

The pathologist may agree with the coroner, the police or the CPS that a rapid briefing be provided within 14 days of the post-mortem examination.

28 Only limited information about the provision of such reports was available from the audit. This information is explored in Annex D, in parallel with a detailed analysis of the time taken for the issue of all reports.

Code of Practice - 7.2.3 Report preamble

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

29 The essential information was included.

30 In one case the ethnic origin of the deceased had been recorded using an 'IC' code. This is a coding system used by the police and should, perhaps, have no place in a medical setting.

Code of Practice - 7.2.4 History[3]

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 This section of the report summarises the information available to the practitioner before the post mortem examination is undertaken and the auditors, especially the investigating officers, stressed the importance of recording this information at the start of the report in order to set the scene. The history should explain why the post mortem examination was approached in a particular manner; it also enables the scientific findings subsequently described to be more readily interpreted in the circumstances of the death.

32 It is helpful for the pathologist to have read the deceased's medical history before the post mortem examination is started. Where the death had occurred in hospital the treatment notes had usually been made available. In a number of cases, however, it

3 This section of the Code has been supplemented with guidance issued by the Forensic Science Regulator: *Information to be included in The 'History' Section of a Forensic Pathologist's Report* FSR-G-210 2013

was noted that GP notes might have been of more use, had they been available.

33 Case histories were satisfactory, many being detailed and very informative. In four cases (5% of the total) the history was considered rather brief, although adequate for the circumstances.

Code of Practice - 7.2.5 The scene of discovery of the body

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.

34 In only five cases (6% of the total) had visits been made to the scene of the incident. The description of one visit to the scene of a death due to a fall was somewhat confused. The deceased had been found at the foot of an abutment; there was, however, no indication of the height from which the fall had presumably occurred.

35 In about one case report in every five specific reference was made to the provision of comprehensive details of the scene of the incident, including still and video photographic evidence. Other practitioners may well have had access to such material but not found it necessary to refer to it in their reports.

36 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 or to advise others; such considerations are outwith the scope of this audit.

Code of Practice - 7.2.6 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.

37 Descriptions of the external appearance of the body were good, many being very detailed. Six case reports (8% of the total) contained rather brief descriptions of the external appearance although all were considered adequate in the circumstances.

38 In one case no mention was made of the presence or absence of any clothing.

39 In three cases (4% of the total) the presence of injuries judged to have been caused around the time of the death had not been adequately distinguished from injuries which had been inflicted on some previous occasion.

40 Specific descriptions of the genitalia or anus were not present in a number of case reports; however, the circumstances of the death had given no suggestion that these areas of the body might be particularly significant.

Code of Practice - 7.2.7 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 Injuries were almost always well recorded, with very detailed descriptions in a number of case reports. Ligature marks, where present, were well described although in two cases their precise locations had not been recorded with respect to fixed anatomical landmarks.

42 In seven cases descriptions of the injuries were presented as a simple list. Auditors noted that the report might have been more 'user friendly', for instance at inquest or during a trial, if the injuries had been numbered and/or grouped under sub-headings.

Code of Practice - 7.2.8 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.

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

44 The presence of urine in the bladder was noted in many cases although its volume was not always recorded.

45 In one case the facial bones were described as being 'intact to palpation' even though the jaw itself was fractured; whether upper or lower jaw was not recorded.

46 In one case the presence of a 'small' aortic aneurysm 'up to 35cm' in diameter was noted; this was assumed to be a typographic error.

47 Several practitioners record organ weights in a list separate from the descriptions of the organs to which they refer. The consensus view of the auditors is that recording weights alongside the descriptions of the organs themselves leads to easier comprehension. It is recognised, however, that this is a matter of personal preference.

Code of Practice - 7.2.9 Supplementary examinations

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.

48 Appropriate supplementary examinations had been carried out; in several instances the extent of these further examinations was particularly wide ranging. No histology had been carried out in three cases (4% of the total) due to a ruling by the coroner.

49 In two cases histology was considered unnecessary following discussions with police investigating officers. Police officers should be informed of such decisions and of the underlying reasoning; however, they should play no part in the decision making which should be a matter of professional opinion.

50 It was suggested in one case that more, potentially useful, information might have been obtained from the brain if the examination had been carried out by a specialist neuropathologist rather than by the forensic pathologist. It was not, however, suggested that the basic conclusions were incorrect. Similar comments have been made in previous audit exercises, and the shortage of appropriate specialists is well recognised.

Code of Practice - 7.2.10 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.

51 Commentaries in general were entirely satisfactory, many involving a thorough, well argued and detailed discussion of the various issues. These were well set out and, in the words of one auditor, 'an enjoyable read'.

52 Seven case reports (9% of the total) included a commentary which was considered brief, although just about adequate in the circumstances.

53 Where interpretation of the findings has necessitated reference to the work of others details of the relevant literature or other information should be included in the report. Such references were noted in two reports; it may be that other reports should have included this information.

54 This section of the report deals with interpretation rather than straightforward recording of the findings themselves. Accordingly, it may be inevitable that individual auditors highlight issues which they personally consider relevant, although other team members do not mention these issues. This demonstrates the importance of having cases scrutinised by more than one auditor, in order that the overall assessment of the material shall be fair and objective.

Code of Practice - 7.2.11 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.

55 The cause of death had been recorded in the prescribed manner in the majority of cases. A discursive explanation was given in a small number of cases; this is usually acceptable where the cause is not clearly defined.

56 In two cases no certifiable cause of death was offered. Auditors considered that recording the death as 'unascertained' would have been satisfactory in the circumstances. Not offering a cause of death should be considered an unacceptable conclusion, unless the report is clearly a preliminary account of the investigation. Death certification is provided 'to the best of my knowledge and belief' and it is the responsibility of the expert to provide this information.

57 While in no way incorrect, the term 'ligature strangulation' may suggest homicide, and pathologists should be clear what precisely is intended by the words they use.

58 One auditor commented that use of the term 'hanging' has been associated in the public mind with judicial execution, and perhaps 'ligature suspension' might be a preferable term. It was recognised, however, that this was a personal preference.

Code of Practice - 7.2.12 Retention of samples

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.

59 During the course of the post mortem examination the pathologist will usually generate samples, for example, blood, to be retained for further examination by the pathologist or others. Such samples will be assigned alphanumeric references recording their origin at the post mortem examination. Every report submitted for audit contained lists indicating this information.

60 In ten of the cases in which the collection of blood for further examination was mentioned, the site of sampling had not been recorded.

61 The recording of 'unused material' is considered in section 7.2.15.

Code of Practice - 7.2.13 Final check

Before the report is signed and issued the pathologist should have checked it for factual errors as well as typographical or grammatical mistakes.

62 During scrutiny of the reports a number of typographic and other errors were noted; this problem has been commented on during every exercise in the current series of audits. Examples noted this year ranged from the trivial:

- *'leach' instead of 'leech'*
- *'physchosis' instead of 'psychosis'*
- *'cervedilol' instead of 'carvedilol'*
- *'… deceased male was found in a car park that had died as a result of multiple blunt force injuries ... '*
- The body was found dead *'… at the scene, below Floor Flat…'*

and the incomprehensible:

- *'… the male struck the dog over the head rendering it unconscious. The dog ran from the room.'*

to the potentially more significant:

- The same sample was identified by two completely different exhibit reference numbers at different points in the report, with no explanation of the discrepancy. Two reports in this exercise included such an error.
- Incorrect dates included the date of death and of the post mortem examination being recorded as December 2015 (later, in fact, than the date of submission of the report for audit). According to the text the incident occurred in 2014.

63 While at least some of these errors may not in themselves be of any great note they reflect a lack of care in proof-reading. It is unfortunate that reports of audit exercises have to continue to comment in this way. Such errors also call into question the validity and usefulness of the Critical Conclusions Check.

Critical Conclusions Check

64 Reports issued by a Home Office registered pathologist must have been subjected to a Critical Conclusions Check by a colleague, who should indicate that such a check has been carried out. There was reference to this check in nearly two-thirds of the reports (62% of the total). One practice includes a signed declaration by a named checking pathologist. Other practices simply record that the report had been subject to such checking.

65 It seems clear from the foregoing paragraphs that these checks sometimes fail to identify errors. However, one may question how far the actions of the checker are prescribed. Are errors pointed out to the author of the report? If they are is the author bound to correct them? And, more importantly, what are the respective responsibilities of the author and the checker should the latter disagree with the conclusions drawn from the scientific findings?

66 The criteria for the Critical Conclusions Check are set out in the Code of Practice standards (sec 7.1). The pathologist must:

> *c) have in place, for **all** cases involving violent or suspicious death, a critical conclusions check procedure, whereby another suitably qualified forensic pathologist (on the Home Office Register where the initial pathologist is registered) scrutinises the report to ensure that (i) the report is internally consistent, (ii) the conclusions drawn are justifiable from the information set out in the report and (iii) the report is capable of being understood without reference to other material*
>
> *d) ensure the report states a critical conclusions check has been performed but not make any suggestion of support from the person performing the check*

67 It is suggested that these terms may not be entirely clearly defined and therefore the FPSG and/or the Pathology Delivery Board (PDB) may wish to review once again the nature of the Critical Conclusions Check, together with the responsibilities and duties of the checker. Any such discussion would presumably need to distinguish the nature of this checking from the 'double doctor' reporting procedure used in other jurisdictions.

68 The Critical Conclusions Check procedure is not a requirement outwith England and Wales, but similar provisions may apply.

Code of Practice - 7.2.14 Time of submission of the report

Pathologists must submit their completed reports to the coroner and to the investigating officer as soon as practically possible.

69 Data on the time elapsed prior to issue of the report was available on 54 cases submitted for this audit, all from Home Office registered practitioners and a relatively small sample for statistical purposes. The mean time taken from the date of the examination until issue of the report by the pathologist was 126 days. The median time was 108 days, with a range of 10 to 327 days. The considerable difference between the median and mean reflects the presence of a small proportion of cases which took extremely long times to report.

70 Some comment on the time taken for pathologists to issue their reports has been made in every audit of the current series. This was, however, the first occasion in which adverse comment on timeliness has been made by both pathologist and lay auditors and accordingly the decision was taken to explore the subject once again.

71 The Code of Practice specifically requests the pathologist to:

> *'produce the report as quickly as is possible, after production of necessary analytical reports, with regard to the complexity of the case and within an agreed timescale, depending on the investigations and expertise required'* [4]

72 Reasons often cited for the delay in issuing the report have included the time taken for specialist examinations, for example neuropathology, to be carried out. While specialist examinations can undoubtedly provide some explanation for long delays, examination of the relevant dates demonstrated that this was seldom the complete answer. This analysis also identified considerable differences between individual Home Office practices. Accordingly such timeliness data as was available has been analysed in some detail (Annex D).

Code of Practice - 7.2.15 Disclosure of information to the defence

The pathologist acting for the Crown must notify the police and the CPS of the existence of any unused material

73 The Crown Prosecution Service (CPS) guidance for expert witnesses[5] requires the pathologist to provide a **disclosure schedule** – a list of materials in the possession of the pathologist whether used or unused during the examination, any of which may be relevant to other interested parties. Such an index was present, or referred to, in just 38% of the reports submitted.

74 These requirements are quite specific and it is recommended that practitioners revisit the appropriate guidance, as discussed in Annex A.

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4 *Code of Practice 2012* Sec 7.1 (g)

5 *Guidance Booklet for Experts Disclosure: Experts' Evidence, Case Management and Unused Material* CPS 2010

Code of Practice - 7.2.16 Change of opinion

Where a pathologist wishes to change a view already expressed in a report this should be achieved by issuing a new report setting out the new position taken by the pathologist and the reason for the change of position. Pathologists must not issue a re-worded document without making clear why that has been done.

75 One case was identified in which the author had issued a new and separate report drawing attention to an error in the original document, in compliance with the Code of Practice.

Code of Practice - 7.2.17 Views of others

Where, during an examination, another expert agrees with a finding of fact it is acceptable to state in the report that there was such agreement. However, the significance of findings can be subjective and accordingly it is not acceptable to state that the other expert is in agreement with their opinion.

76 There were four cases in which the post mortem examination had been carried out in conjunction with another practitioner – a 'double doctor' autopsy. The criminal justice system in Scotland routinely requires certain examinations to be carried out in this manner.

77 Such a procedure may also be undertaken where it is considered that specialist assistance during the examination may help in the investigation of the death. For instance, where the deceased is a baby or infant a paediatric pathologist will usually carry out an examination in conjunction with the forensic pathologist.

78 There were also two case reports in which the author noted that a further, eg defence, examination undertaken by another practitioner had taken place after the initial autopsy.

Comments made by the coroner

79 A clear statement of the cause of death is a primary requirement for the coroner, and this was usually set out as formally prescribed. There was also a number of cases in which the cause of death was described in a narrative manner. The situations were well explained, and accordingly considered acceptable.

80 There were, however, a few cases in which the cause of death was not expressed in an entirely clear manner and two cases in which no cause was offered. Where the scientific findings are vague or confusing it is entirely acceptable to record the cause of death as 'unascertained'; not providing any cause is usually an unacceptable conclusion on the part of the pathologist. This is the point already noted by the pathologist auditors under 7.2.11.

81 There were some less common medical terms used, the meaning of which should perhaps have been explained, for instance, serotonin syndrome and rhabdomyolysis.

82 It was considered important that a clear distinction be made between deaths due to 'ligature strangling' and 'ligature suspension'.

83 The value of vague descriptions was questioned in a number of case reports, for instance 'consistent with drowning' and 'most likely due to'. It is noted that the use of 'consistent with' has been criticised by the Court of Appeal[6]. Accordingly the inclusion of some form of explanatory note referring to the strength of the evidence offered is explored further in Annex C.

84 In one report the pathologist had noted that the victim was 'unlikely to have suffered'. While such a comment may perhaps be comforting to relatives its inclusion in a pathologist's report was not considered appropriate.

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6 Criticism of evidence given by forensic pathologist in R-v-Puaca [2005] EWCA Crim 3001

Comments made by the police senior investigating officers (SIOs)

85 Comments made by the police auditors are always helpful in that they can offer a different perspective on the material through assessing its potential value to the investigator. The SIOs who took part in this latest exercise provided a number of useful comments, the overwhelming majority of which were positive, for instance:

'a clear, unambiguous statement, easily understood'

'I would find this statement most useful to a police investigation'

'The conclusions are clear and understandable'

86 There was, however, a small number of case reports in which the cause of death was not considered to be explained clearly enough for the non-medical reader, although it was conceded that the clinical detail was probably adequate.

87 Several reports contained information obtained from the statements of other witnesses. It was considered that, while this information might be of value in fleshing out the circumstances of the death, it could lead to potential difficulty at court should a witness statement not come up to proof. Where statements were summarised for inclusion in a pathologist's report the importance of their accuracy was also stressed.

88 These auditors proposed that in this respect potential problems could be obviated if pathologists always included a statement to the effect that the briefing information incorporated in their report had been given to them, and that accordingly they were unable to confirm its veracity. However, as already observed in 7.2.4, guidance to this effect is already included in the Code of Practice and the subsequent Forensic Science Regulator's note.

89 The length of a report was not necessarily any guide to its usefulness, some long reports being considered to be somewhat confusing. It was, however, recognised that where the circumstances are unclear or there are complex technical issues to describe a lengthy report may be inevitable. In these instances the SIOs emphasised the importance of clarity of thought and expression.

90 The question of timeliness was raised in many assessments. Auditors often made specific note of the length of time between the post mortem examination and issue of the report. Not providing a report within a reasonable timescale appears to be of considerable concern to investigators; one officer referred to often having to wait eight months for a report. The problems of timeliness are explored in Annex D.

The layout and format of the report

91 Neither the layout nor the format of the pathologist's report are prescribed in the Code of Practice, and all practices develop their own 'house' style. Nevertheless, it is essential that the report be laid out in such a way as to be readily accessible, not only to clinical colleagues, but also to readers who may have no medical knowledge.

92 That being the situation, each member of the audit team was invited to comment on the way in which the report was laid out. In this respect the views of the coroner and the investigating officers were particularly significant. There was overall agreement that the reports submitted for this exercise were well presented and easy to read. Those few instances where this was not entirely true have been noted in the foregoing paragraphs.

Consistency

93 While the technical standards of the post mortem examination are carried out and reported to a high and consistent standard the same does not apply to the format of the report, especially with reference to the various legal requirements. Practices are autonomous bodies; nevertheless it could perhaps be argued that every report

issued by a Home Office registered pathologist should have a consistent format, including the appropriate statutory declarations.

94 The need for a pathologist's report to contain a summary of the 'Examination Standards' (as adopted by one Home Office practice and illustrated in Annex B) should perhaps be reviewed by the FPSG. Is it necessary, or appropriate, to document the various standards documents used for reference?

95 It may also be instructive to discuss whether offering an explanation of the descriptive words can offer significant assistance to the reader of the report. The difficulty of appreciating the strength of evidence was commented on by lay members of the audit team and the topic is explored in Annex C.

96 It may be important to reiterate that although broadly similar rules apply to those pathologists who operate outwith England and Wales, the different jurisdictions may impose their own requirements on the content and format of the pathologist's report.

RECOMMENDATIONS

97 It is suggested that the following recommendations flow from this audit exercise:

The inclusion of legal requirements in pathologists' reports should be revisited in the light of CPS guidance	*26 and Annex A*
The potential value of attempting to explain the strength of the evidence adduced should be reviewed	*27, 83, and Annex C*
The value of Rapid Interim Accounts	*28 and Annex D*
The shortage of specialist pathologists, eg neuropathologists	*50*
The need to revisit the nature and conduct of the Critical Conclusions Check	*64*
The need to review delays in issuing reports	*69, 90 and Annex D*
The need to revisit CPS requirements for disclosure	*73 and Annex A*

CONCLUSIONS

98 This was the fifth 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 and by forensic practitioners operating within Scotland and Northern Ireland. The reports submitted for this exercise were generally of a high and consistent standard. However, a number of areas of relatively minor, albeit important, concern have been identified.

Annex A

Statutory declarations and other legal requirements

A.1 The following notes apply solely to evidence prepared for use in the Criminal Justice System as it applies within England and Wales, although no doubt similar requirements exist outwith this jurisdiction.

A.2 Throughout this paper the document issued by the pathologist to the coroner and investigating officer, and submitted for audit, has been referred to as a 'report' – a convenient term which will continue to be used. In legal terms, however, evidence may be adduced as a report or as a statement, with requirements which may apply to one format or the other. Most of the material submitted for audit was actually in statement form and would be expected to comply with the appropriate requirements.

A.3 The Criminal Procedure Rules (CrimPR)[7] govern the conduct of criminal trials and provide guidance for the involvement of experts, including the format and content of reports and statements which are offered in evidence. Certain legal requirements, including declarations relating to the status of the pathologist as an expert, must be complied with whenever evidence is prepared for use within the criminal justice system.

> *'1.2.2 In presenting expert evidence the witness's "duty is to furnish the Judge or jury with the necessary scientific criteria for testing the accuracy of their conclusions, so as to enable the Judge or jury to form their own independent judgment by the application of these criteria to the facts proved in evidence. …..*
>
> *1.2.3 This places the expert witness in a privileged position. The nature of the role requires that the witness comply with certain obligations' [8]*

The Code of Practice also prescribes compliance with the relevant legislation; the practitioner must:

> *'ensure the report meets the requirements set out in Part 33 of the Criminal Procedure Rules' [9]*

A.4 The current Code of Practice for Home Office registered forensic pathologists does not specify a format for the post mortem examination report. In consequence practices develop their own 'house' style, leading to considerable variation in the formats employed.

A.5 Relevant information for experts instructed by the prosecution is available from the Crown Prosecution Service[10]. More generic information on the responsibilities of the expert witness, with particular reference to disclosure, is available in a further CPS document[11]. An equivalent document has been produced by the Crown Office in Scotland[12]. The basic requirements for a forensic pathologist's witness statement were set out in a note circulated to all Home Office practices in 2007[13].

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7 Consolidated Criminal Procedure Rules 2010; Part 33 (amended in 2015; Part 33 became Part 19, but without significant change to the elements relating to expert witness evidence apart from indexing of the material)

8 *Legal Obligations* Forensic Science Regulator – Information FSR-I-400 (Issue 3) 2015 *(pp 1.2.2-3)*

9 *Code of Practice 2012* Sec. 7.1 (b)

10 *Guidance Booklet for Experts* CPS *ibid*

11 *Crown Prosecution Service: Guidance on Expert Evidence'* CPS, 2014

12 *Guidance booklet for expert witnesses The role of the expert witness and disclosure* Crown Office and Procurator Fiscal Service, Edinburgh 2014

13 Home Office Forensic Pathology Council; Witness Statements – Basic Requirements Note distributed to HO practices on 9 Feb 2007

A.6 More recently the Forensic Science Regulator has issued comprehensive information on the various requirements (Legal Obligations[14]) from which the advice stated above has been quoted. The Regulator has also issued draft guidance based on these requirements (Draft Statement Guidance[15]).

A.7 These last documents from the Regulator set out clearly the requirements which should be complied with by any practitioner offering evidence within the Criminal Justice System in England and Wales. In summary, the information which must accompany every forensic pathologist's report includes:

> *A **declaration** that the pathologist understands and accepts the requirements that apply to expert witnesses.*
>
> *A summary of the **qualifications** which permit the practitioner to act as an expert in forensic pathology – effectively a 'mini-CV'.*
>
> *Confirmation that the practitioner understands and has complied with the obligations for **disclosure**.*
>
> *A **self-certification** document which indicates that the expert is not debarred from offering evidence.*

A.8 The nature and content of these requirements is specified in the documents quoted. It is important to note that the CPS guidance booklet warns that failure to comply with these instructions may result in professional embarrassment or even adversely affect the trial itself.

A.9 All reports submitted for the current audit were submitted unredacted. Accordingly it might have been expected that when received by the co-ordinator they would have complied with all the legal requirements. That was not so; the inclusion of the various elements was actually extremely variable. Very similar findings have been found in all the audits of the current series and the inclusion of statutory declarations was considered in some detail in the 2012 audit[16]. Analysis carried out during the current exercise showed a similar variability to that observed in the previous audit.

A.10 It should be noted that the Forensic Science Regulator's guidance is just that; it is neither mandatory nor non-mandatory. Accordingly the degree of variability observed in reports submitted for audit may not be entirely surprising. It seems probable that local CPS offices do not pursue strict adherence to the rules, and anecdotal evidence from individual pathologists appears to confirm this.

Declaration

A.11 The report must incorporate a declaration that the author believes the content of the report to be true 'to the best of his knowledge and belief' and that the witness understands and will comply with their duty to the court. Such a declaration was present in 74% of the reports submitted for audit (66% in the 2012 audit). The guidance advises that this declaration may be in a report attached to the pathologist's statement; it does not have to be integral within the text.

Qualifications

A.12 One element in these declarations refers to the employment and experience of the report's author. Relevant information was included in the majority (89%) of reports (91% in 2012), although the content of the summaries was extremely variable. One in every five of these summaries was extremely brief and consisted of two or three sentences only; others occupied more than a page.

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14 *Legal Obligations* FSR-I-400 *ibid*

15 *Draft Statement Guidance* Forensic Science Regulator – Guidance FSR-G-200 (Draft 0.20) 2016

16 *Audit of the work of forensic pathologists based in the United Kingdom* Report of the 2012 audit FPSG

A.13 It is essential that the pathologist provides adequate relevant information to reassure the user of the report that the expert possesses sufficient skill and experience to investigate the death. The extent of the information provided may need to be varied dependent on the destination of the report. Nevertheless, the volume of information sometimes seemed excessive, with apparently superfluous detail of every post held and job done. Findings in the latest audit appeared to be similar to those in all the previous exercises of this series.

Disclosure

A.14 The Criminal Procedure Rules specify that an expert witness should include with their report a list of all 'unused material' which may consist of documents or physical samples. Such material may be relevant to experts instructed by other parties and it is essential that its presence is recorded.

A.15 The CPS Disclosure Manual[17] specifies the wording which should be employed. It confirms that the pathologist has complied with their duty to record, retain and reveal such material; that they have compiled a relevant index; and that they will ensure this is updated as and where necessary. The form of words prescribed by the CPS had been used in every case in which a disclosure statement appeared (38% of the total); similar information had been recorded in about a third of the cases submitted for the 2012 audit.

Self-certification

A.16 The Criminal Procedure Rules require an expert witness to produce a self-certificate giving basic information about his or her status; the CPS Manual provides a template. This certificate should be completed 'in every case that you are instructed as an expert witness for the prosecution', and sent to the 'disclosure officer or investigating officer'. However, such self-certification may be submitted as a separate document; there appears no requirement for it to be incorporated in the pathologist's report itself. A self-certificate formed part of the report in about a third (32%) of the reports submitted by Home Office registered practitioners.

Importance of compliance

A.17 The CPS guidance indicates that the various declarations are necessary in order to comply with the requirements of the Criminal Procedures Rules and accordingly it is difficult to understand why they are not consistently included in reports. Every report submitted for audit had previously been submitted to a coroner; some had already been used in a criminal trial.

A.18 One must assume, therefore, that practitioners are in compliance with the requirements of those who routinely instruct them. Perhaps local CPS offices do not closely check the content of pathologists' reports. Nevertheless, it should be noted that scientific evidence – although not from a forensic pathologist – has already been disallowed in a criminal trial on the basis that the report did not adhere to the prescribed format.

A.19 It could be argued that all registered practitioners should adhere to a common format in this respect. The FPSG or the Pathology Delivery Board (PDB) may wish to review the situation, perhaps in conjunction with the CPS, in order to assess the practical importance and relevance of the legal requirements.

[17] *Guidance Booklet for Experts* CPS *ibid*

Annex B

Examination standards

B.1 It was noted during this audit exercise that one Home Office practice prefaces its reports with a reference to the standards to which the examination had been carried out. Thus the introductory paragraphs of reports emanating from this practice routinely include the following information:

> *Autopsy examinations are undertaken in line with the following standards (application of which in whole or part is case dependent):*
>
> *Council of Europe Group of Ministers. Recommendation R (99) 3 of the Group of Ministers to Member States on the Harmonisation of Medico-Legal Autopsy Rules, 1999.*
>
> *Codes of Practice and Performance Standards for Forensic Pathologists in England, Wales and Northern Ireland. Royal College of Pathologists, 2012.*
>
> *Standards for Coroner's pathologists in post-mortem examinations of deaths that appear not to be suspicious. Royal College of Pathologists, 2014.*
>
> *Information to be included in the 'history' section of a forensic pathologist's report. Forensic Science Regulator, 2014.*
>
> *The use of time of death estimates based on heat loss from the body. Forensic Science Regulator, 2014.*
>
> *Legal issues in Forensic Pathology and tissue retention: issue 3 guidance. Forensic Science Regulator, 2014.*

B.2 No doubt these represent the relevant standards which govern the work of Home Office registered forensic pathologists, and there may be value in informing coroners and other users of the report of their existence. It should perhaps be made clear that this list is not exhaustive; it would be difficult, if not impossible, to set out every standard which might apply.

B.3 If standards are to be included in this manner then they should be accurately recorded; for instance, the publication group for the Code of Practice is considerably wider than stated in the above extract from a pathologist's report.

B.4 That there will be adherence to the standards is a clear implication to be drawn from setting them out in this way, and presumably future audits would need to assess material against these standards alongside the Code of Practice.

B.5 To date there has never been any requirement imposed on practitioners to list standards such as these in their case reports. Nor do the practitioners operating outwith the ambit of the Home Office, ie in Scotland and Northern Ireland, include such information.

B.6 It may be appropriate to discuss whether recommending the incorporation of this information would be a positive and useful step in assisting those who will need to use the pathologist's report.

Annex C

Reporting standards

C.1 One Home Office regional forensic pathology practice offers definitions for the 'standard terminology' used throughout its reports, including the following information:

> *Where the following terminology is used within this report, it should be interpreted as per the Istanbul Protocol [Chapter V, Section D, Para 187 (a) - (e)], United Nations: New York & Geneva, 2004, which has been modified to include non-trauma pathology:*
>
> *'Not consistent' The lesion could not have been caused by the mechanism / pathology described.*
>
> *'Consistent' The lesion could have been caused by the mechanism / pathology described, but it is non-specific and there are many other possible causes.*
>
> *'Highly consistent' The lesion could have been caused by the mechanism / pathology described, and there are a few other possible causes.*
>
> *'Typical of' There is an appearance that is usually found with this type of mechanism / pathology, but there are other possible causes.*
>
> *'Diagnostic of' This appearance could not have been caused in any way other than that described.*

C.2 This explanation of the terms used in the pathologist's report is based on a document relating to the investigation of torture[18], originally produced through the auspices of the United Nations. It is argued, probably with some justification, that terms such as 'consistent' have a meaning which is well understood by others in the profession, but which may be less clear to the man in the street – for instance the members of a jury.

C.3 The thought processes involved in science and the legal system are essentially different. The former relies on conclusions which may not be clear-cut; decisions in the legal system are usually black and white. Scientific findings, the significance of which may not be entirely clear, may be important in explaining the death and must, therefore, be presented in evidence to a court.

C.4 It is essential that scientific findings are presented in a balanced manner, not favouring either prosecution or defence; the pathologist's duty when giving evidence is to the court itself. This is reiterated in the introduction to the CPS guidance for expert witnesses[19]:

> *As an expert witness you have an overriding duty to assist the court and, in this respect, your duty is to the court and not to the Prosecution Team instructing you.*

It will be for the jury to decide which side has put forward the more convincing case. Accordingly it is important that the words used are both neutral and readily understood without ambiguity.

C.5 In recent years there has been a number of instances in which the presentation of scientific evidence has resulted in a miscarriage of justice. As a result, considerable attention has been paid not just to the science itself but also to the manner in which the evidence is presented.

C.6 Scientific findings such as the amount of alcohol detected in a sample of blood may be expressed quantitatively as a number. This may be interpreted relatively readily to

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18 *Istanbul Protocol: Manual on the Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment* Professional Training Series No 8 United Nations Office of the High Commissioner for Human Rights, Geneva, 1999

19 *Guidance Booklet for Experts* CPS *ibid*

indicate the level of intoxication of a subject, for instance, through comparison with the 'drink-driving' legislation. Other findings, including many of those found during a post mortem examination, may be less susceptible to description in such objective terms. Qualitative evidence of this nature is certainly no less valuable, but may be potentially less easy to explain to a jury in a manner which is both comprehensible and fair.

C.7 In the past decade the most effective and unbiased way to present and interpret scientific findings in court has been extensively studied, involving lawyers and even parliamentarians as well as the forensic science community itself.

C.8 The importance of ensuring that scientific evidence is presented fairly to a court was highlighted in a report issued some ten years ago by the House of Commons Select Committee on Science and Technology[20]. The problems were also identified in research published by the US National Institute of Justice[21]. The Lord Chief Justice of England and Wales referred to the presentation of scientific evidence in a lecture given to the Criminal Bar Association[22]. Sophisticated statistical analysis has been employed in an attempt to render qualitative scientific findings more comprehensible and easier to interpret, as described in the paper by Evett[23].

C.9 The difficulties in ensuring that a fair and accurate perspective is placed on scientific findings offered to a court is now well recognised. Although the majority of studies have focussed on forensic science evidence, similar considerations will apply to forensic pathology and medicine.

C.10 One small step in this direction involves offering definitions for the terms used in scientific reports. The approach has been employed by a number of forensic science providers and one Home Office regional practice has adopted the procedure in an effort to offer some evaluation of its findings.

C.11 It must be said, however, that the explanations offered by this Home Office practice are not entirely unambiguous; for instance, the definition of 'consistent' depends on the possibly equally vague words 'could have been'.

C.12 Proof, if such was needed, of the difficulties stemming from use of the phrase 'consistent with' may be found in an appeal in 2005 involving a registered forensic pathologist[24].

> *'… an expert is entitled to say what he has found is consistent with something and that has probative value. Whereas "inconsistency" is often probative, the fact of consistency is quite often of no probative value at all. …. We consider that there is a very real danger in adducing before a jury dealing with a case such as the present evidence of matters which are "consistent" with a conclusion, at least unless it is to be made very clear to them that such matters do not help them to reach the conclusion. If it is introduced in evidence, and particularly if it is given some emphasis, a jury may well think that it assists them in reaching a conclusion: for why otherwise are they being told about it?'*

C.13 As with the listing of examination standards dealt with in the previous Annex, there has never been any requirement imposed on registered practitioners – nor on those operating in Scotland or Northern Ireland – to include any such information in their

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[20] *Use of Forensic Evidence in Court* H of C Select Committee on Science and Technology 7th Report Sec 7: 140-142 2005

[21] *Focus Group on Scientific and Forensic Evidence in the Courtroom* McClure D. National Institute of Justice, Washington DC 220692 2007

[22] *Expert evidence The future of forensic science in criminal trials* Criminal Bar Association Kalisher Lecture 14 Oct 2014

[23] *The logical foundations of forensic science: towards reliable knowledge*. Evett I. Phil. Trans. R. Soc. B **370**: 20140263 2015

[24] *R-v-Puaca* Court of Appeal 2005 EWCA Crim 3001 pp 39-40

reports. Nor, indeed, has there been any serious study of the possible advantages of attempting to define the terms in use. Nevertheless, it could be argued that any attempt to define the terms employed by forensic pathologists can only assist those who have to read and use their post mortem examination reports.

C.14 It may be that the FPSG or the PDB would wish to discuss whether the incorporation of additional pieces of information, such as examination standards and terminology, would assist those who have to use forensic pathologists' reports. Should the incorporation of additional information be deemed appropriate probably the nature and relevance of the specific phrases used should be reviewed. Whatever the outcome of such discussions, there would appear to be logic in all registered practitioners adopting the same procedures.

Annex D

Timeliness

D.1 The post mortem examination is the first stage of the pathological investigation. Following this further studies may be required; for instance, toxicological examination of samples of blood or more specialised examination of the heart or brain. It may also be necessary to wait for the receipt of reports or statements from others, particularly police officers, before the pathologist can complete his or her report.

D.2 Any or all of these factors can introduce considerable delays, and these reasons are cited by practitioners for the time taken to issue their reports. Nevertheless, investigating officers commonly complain about the length of time they have to wait for a report from the pathologist. In every report of the current series of audits comment has been made on the length of time taken for individual pathologists to issue case reports, and no apology is offered for returning to this subject. A thorough analysis of the data has been carried out in this latest exercise; the opportunity has also been taken to revisit data obtained in earlier exercises.

D.3 Material submitted for audit consisted of the main, or final, report. In a few instances a preliminary report was also included, and in a small number of cases a brief supplementary report dealt with additional examinations. In most instances it proved possible to extract the data on the chronology of the investigation.

D.4 All relevant dates were extracted from the case material – that of the post mortem examination itself; the dates of issue of any reports completed by other specialists; the dates of statements from police officers or other witnesses – all of which had to be considered by the pathologist before completion of their own report. As far as practical, similar information was extracted from case material submitted for previous audits in order to enable year upon year comparisons.

D.5 The first, and simplest, parameter to consider is the time elapsed before the pathologist's report is issued. Clearly this will vary considerably, depending on a number of factors such as the complexity of the case.

Table 1: Average time (days) to issue case reports

	Mean	**Median**	**Range**
Audit N^{o} 5 (2015)	126	108	10 - 327
2013	100	90	10 - 278
2012	98	101	11 - 234
2010	101	95	7 - 194

D.6 The mean delay before the report was issued was broadly constant during 2010-13, but increased by some 25% in the current exercise. The median being lower than the mean reflects the presence of a small number of cases taking an extremely long time to report. This is shown in the spread of time before the report was issued; at least one case submitted for the current audit was not reported until some eleven months after the date of the post mortem examination.

D.7 In previous audit reports comparisons have been made with earlier years, and this is shown again in the second table. This displays the data in a slightly different way, showing the proportion of reports issued within specific time scales.

Table 2: Proportion of case reports issued within:

	Less than 20 days	21 – 50 days	51 – 100 days	More than 101 days
Audit N^{o} 5 (2015)	7%	8%	34%	51%
2013	4	14	41	41
2012	4	16	31	48
2011	6	13	28	53
2010	3	13	30	53
1996 – 2002 (mean)	53	29	12	5

D.8 Only about one report in twenty is now reported in less than 20 days, whereas in the earlier audit series around half of all reports were produced within this time. In the latest exercise half of all cases took more than 100 days to report, and eight cases (15%) were not reported for more than 200 days. The reason for the enormous disparity is not obvious, although it is possible that post mortem examinations these days involve more complex procedures. The raw data from the earlier exercises are no longer available and more detailed comparison of the differences is accordingly not possible. Speculation is thus not particularly useful.

D.9 Before leaving the topic, however, it may be worth touching on one issue, that of preliminary reports. These are intended to assist the investigator by providing the basic conclusions of the post mortem examination as quickly as possible, although the pathologist will always make it clear that subsequent work may alter the initial conclusions.

Preliminary reports – the 'Rapid interim account'

D.10 Public pressure on coroners in the 90s to release bodies within as short a timescale as possible is well-documented. Accordingly practitioners were encouraged to produce their reports as rapidly as possible, even if these recorded just the preliminary findings. Because at that time fewer specialised studies were commissioned, it may be that the preliminary report became in most instances the final report, and as such was submitted for audit. These days while a preliminary report may well be issued, it is the final report which is submitted for audit.

D.11 Section 7.2.2 of the Code of Practice indicates that a pathologist may agree to produce a 'rapid interim account' on a case, recording the preliminary findings. Such an interim account should be provided within 14 days of the post mortem examination.

D.12 Although it is known that pathologists issue preliminary reports or rapid interim accounts of the post mortem examination, only one practice routinely submits these for audit alongside their final reports. These were, on average, issued well within the 14 day limit. The data (for the last two audits combined) are presented in Table 3:

Table 3: Average time (days) to issue preliminary report (one practice only):

	Mean	Median	Range
Audit N^{o} 5 + 2013	11	11	3 - 20

Individual practices

D.13 It may be useful to consider the performance of the six individual Home Office practices, although again it must be stressed that the data which follow are based on relatively small sample sizes. In the following table results from the two latest audits have been combined in order to include more data (105 cases).

Table 4: Time taken to issue report (days) – comparison of individual practices

Practice	Audits N^{o} 5 + 2013 Mean time from PM to issue of report
1	45
2	87
3	103
4	110
5	131
6	159

D.14 This table demonstrates the very considerable difference between the performance of the 'best' and 'worst' practices, with the latter taking some 3.5 times as long to issue their reports. It should be noted that the raw figures show that the performance of every practice deteriorated between the 2013 audit and the current exercise.

The issue of specialist reports

D.15 One of the primary reasons cited for the delay in producing reports is the need for the pathologist to wait for the toxicology results. Accordingly this has been examined further, with an analysis of the time taken for all the various specialists to issue their reports. For each case the date of issue of the last of the specialist reports was noted as this was assumed to be the limiting factor in determining how soon the pathologist could complete their own report.

Table 5: The issue of specialist reports in Audit N^{o} 5 (days)

Specialist report	Mean time after PM for issue of report	Range of times for issue of report	Cases in which this was the last specialist report received by pathologist
Toxicology	68	8 – 248	70%
Cardiac pathology	65	34 – 100	2%
Neuropathology	79	12 – 157	11%
Forensic science	70	53 – 91	2%
Other reports	105	7 – 218	15%

D.16 Specialist reports were often not produced for some considerable time after the post mortem examination – that was not an unexpected finding. As predicted, toxicology results were usually responsible for the delay, being the last of the specialist reports to be received by the reporting pathologist in some 70% of the cases examined.

D.17 Although some forensic pathologists carry out their own neuropathology, where the material has to be sent off to a specialist department this can also create delay. In the current exercise, waiting for the neuropathology report generated delay in about one case in ten.

D.18 Waiting for other witness statements was the cause of the delay in some 15% of cases, perhaps a slightly unexpected finding. Such material usually involved statements from police officers, providing information on the circumstances of the incident which had led to the death.

D.19 The data from the 2013 audit showed a broadly similar picture although toxicology was overwhelmingly the limiting factor – in nearly nine cases out of ten.

D.20 Between 2012 and the current exercise the mean time taken to carry out toxicology increased by 50% (2012 – 45 days: 2013 – 60 days: 2015 – 68 days). Many different laboratories are employed to analyse toxicology samples, with a consequent range of efficiencies in reporting results. In the current audit an extremely wide range of response times (8 – 248 days) was recorded.

D.21 There was also a number of instances in which the pathologist was not provided with a copy of the toxicology report at the time it was issued. Thus the forensic pathologist's report would note that the report had been issued on date X, but not received until date Y, sometimes several weeks later. Such situations, although not common, were noted in all the exercises of the current audit series.

D.22 In the foregoing discussion it has been assumed that the receipt of information from other specialists was the factor which triggered the forensic practitioner to complete their work. Accordingly *Table 4* has been expanded to show how long it took for the pathologist to issue their own report after receipt by them of the final piece of additional information.

Table 6: Delay to issue of reports (days)

Practice	**Audits N^{o} 5 + 2013** **Mean time from PM to report**	**Audits N^{o} 5 + 2013** **Mean delay after last document received**
1	45	9
2	87	11
3	103	38
4	110	31
5	131	18
6	159	79
Mean (all)	**113 days** (10 – 327)	**38 days** (1 – 225)
Median (all)	**99 days**	**54 days**

D.23 This table demonstrates that there are considerable differences between the practices in the speed with which this is carried out. Even bearing in mind the limited sample size, the difference between the various practices is remarkable. The 'worst' practice took some nine times as long as the 'best' to issue their reports after the final additional document – be it toxicology result or other witness statement – was received. In the most extreme case, the pathologist's report was not issued until more than seven months after the last specialist report had been received.

D.24 Waiting for reports to be provided by other specialists can create significant delays to the issue of the pathologist's report – that is absolutely clear from the data. However, it is not obvious why further, sometimes very significant, delays are incurred after all the additional information has been received and perhaps this should receive some attention. For instance, where a practice is situated within a major hospital perhaps easy interchange with clinical colleagues may permit quick resolution of outstanding issues; working completely independently may not foster such exchanges.

D.25 It should also be noted that in respect of timeliness the 'performance' of individual practitioners appears to vary widely depending, among other factors, on the number and complexity of the cases being handled. Attempting a realistic comparison of the time taken by individuals to report their work would require the collection of a great deal of data outwith the scope of these audit exercises, and in any event might be of questionable value. However, it is hoped that the limited comparison of practices as presented here may stimulate discussion on practice management.

D.26 This analysis has considered only those instances in which the receipt of new or further information about the case has been documented in the pathologist's report. Obviously other unrecorded factors may have delayed the production of the report. Nevertheless, in view of the relatively enormous disparities between practices and the ongoing complaints about pathologists' response times, it may well be that the Forensic Pathology Specialist Group or the Pathology Delivery Board would wish to discuss the issue.