

**A review of forensic pathology
in
England and Wales**

**Submitted
to the
Minister of State for Crime Prevention**

March 2015

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The Rt Hon Lynne Featherstone MP
Minister of State for Crime Prevention
The Home Office
2 Marsham Street
London SW1P 4DF

Dear Minister

I was appointed in early 2014 by your predecessor, Mr Norman Baker MP to review and report on the forensic pathology service in England and Wales. Details of the Terms of Reference are included within the report in Appendix 1.

I have pleasure in submitting my report and hope that it meets your needs in regard to information about the present position and to enable you to plan for the future.

The main conclusions and recommendations are set out in the Executive Summary. You will see that although the forensic pathology service is functioning satisfactorily at the moment, its future is very fragile and corrective action needs to be taken now.

Initially, this report was intended only to focus on forensic pathology, but it has not been possible to consider this without also looking at the coronial pathology service (when autopsies are principally done to establish the cause of what in the first instance is assumed to be a non-suspicious death). Unfortunately, the coronial pathology service is also showing severe signs of strain and its future is fragile too.

My report analyses why this situation has arisen and makes some proposals for the coming years. One of the problems, as the report highlights, is that forensic pathology, whilst having its primary duty to the courts and the CJS, has a number of masters: training from the GMC and postgraduate deans, standards from the Royal College of Pathologists and the Forensic Science Regulator, instructions from the coroner, mortuaries serviced by the NHS and local authorities, finance from the police and courts, additional responsibilities to the Ministry of Justice and operational oversight from the Home Office. The coronial pathology service has similar anomalies. To ensure that both services are fit for the public interest going into the future requires a rationalisation of these variables, and regionalisation of services. This will need leadership from various stakeholders.

England and Wales are unique in the way in which death investigation is managed. There is much to learn from models in Canada and Australia and I have described these in the report. In my judgement the most cost effective solution to the present problems is to change the way in which we investigate and certify death and to reduce the strict division between forensic and coronial work. There is an opportunity to do this through the Medical Examiner system which was part of the Coroners and Justice Bill 2009, but which has never been implemented.

The report presents the reasons why accuracy of the cause of death, (both suspicious and non-suspicious) is important for society. It is for the Government to take its own view on this issue after considering my report. If, as I hope they would, they decide that recording accurate death causation (with the proper certification) is indeed an important metric for the public interest, then action needs to be taken in the immediate future.

I have been greatly helped in this review with evidence from a large number of professional people, professional groups, private individuals and institutions here and in other countries. They are all recognised in Appendix 2.

During the last quarter of a century, the Government has twice commissioned reviews of forensic pathology, which reported in 1989 and 2003. There was only a limited response to these reports, but in addition, external factors such as changes in the structure and function of the NHS and universities, and the global financial crisis, have conspired to add additional difficulties. Both the coronial and forensic pathology services are showing the consequences of these varied influences. I, and those whom I have consulted, hope that the future will be different from the past.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Peter Hutton', with a stylized flourish at the end.

Peter Hutton

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Preface and Acknowledgements

Forensic pathology contributes fundamentally to the legal process. In doing so, it supplies a vital service to the public and to the relatives of the deceased. It is crucial that it is done well. It is also very important that there is good training and succession planning to ensure the continuing integrity of the service.

This review was established with an eye to the future so that any problems or possible shortfalls might be anticipated now, before they actually become detrimental. As presented, it first describes the evolution of forensic pathology to its current position and then enquires into its present operational model and quality of performance before looking forward to risk-assess the years to come.

In undertaking this task, many people and organisations have given freely of their time and expertise and, through this, created an invaluable evidence base from which to work. I would like to thank them all and they are listed within the report in Appendix 2. In addition, this task would not have been possible without the support of the team at the Home Office consisting of Rachel Webb, Colin Kettley, Martin Allix and Dean Jones, and I thank them all for their support. Dean Jones was generous in making available some of his own research into the history of forensic pathology and trends in homicide and autopsy rates.

I would also like to thank the Chief Executive and Medical Director of the University Hospital Birmingham (my place of employment), for allowing me to undertake the review and my clinical neuroanaesthesia colleagues for their willing flexibility in enabling me to take leave to attend meetings with individuals and focus groups. A key person who must not be forgotten is the departmental PA in Birmingham, Claire Price, who had the formidable task of arranging my diary to enable my clinical sessions to continue whilst I met my commitments to attend meetings around the UK.

In producing this report, I have been conscious that it will be read by a variety of people, some clinical, some non-clinical, some legal and others lay. In writing for this broad spectrum, the main report has been kept brief with a minimum of technical jargon. There is some slight repetition to make for ease of reading. To support this core text, there are a number of appendices. Some readers will be aware of these supporting documents whereas others will not. This structure is meant to provide a report that is easy to assimilate as a continuous thread with individual readers using the supporting materials in the appendices as they require them. The combination of the report and appendices is therefore intended to provide a one-stop document with little need for time-consuming additional fact-finding. Other less immediately important sources are given in footnotes for separate consultation. As such, the report replicates the approach of the forensic pathologist, whose own submissions are written to a standard such that they are capable of being understood without reference to other external material. For ease of electronic transmission the main report and appendices have been saved separately. Because of the relevance of Appendices 1 and 2, these have been reproduced at the back of the main report should the reader require immediate reference to them.

I am aware that not all readers of this report will welcome everything it says: some will feel that I have not emphasized their particular interests enough. My approach has been to present each facet of the whole subject to the extent that it impacts on the others. The intention is that the report should be interpreted in the round. It has been produced in good faith from what I believe is a sound evidence and opinion base. I am satisfied that the evidence alone indicates that in the public interest immediate attention needs to be given to the future delivery of both forensic and coronial pathology. I have made a number of recommendations as to what needs to change and made some proposals for a future model of delivery. I am aware that this is not the only possible way forward, but it is the one that I believe is most possible. It can be accommodated by the training system, it meets the future needs of both the forensic and coronial systems, it accommodates the main concerns of all the interested parties and, very importantly, it is the most cost-effective.

There is therefore no doubt in my mind that changes do need to be made, and that the time is ripe to do so. There is a window of opportunity opening up that presents great potential. Support will be needed from the Government and enlightened leadership will be necessary from several constituencies, but seizing this opportunity would be good for forensic pathology, good for coronial pathology, good for the legal system and good for the public interest.

I would again like to thank all those who have contributed to this exercise and I hope that they feel that their views have been reflected fairly. It goes without saying that without their help and openness, there would have been no report. I hope that there are no errors of fact in the text but if there are, I naturally take full responsibility for them and apologise in advance.

A handwritten signature in black ink, appearing to read 'Peter Hutton', with a stylized flourish at the end.

Peter Hutton
March 2015

Executive Summary and Recommendations

- At present, the forensic pathology service provided by Home Office Registered Forensic Pathologists in England and Wales meets the needs for which it is intended: the standard of professional practice is high.
- Although the coronial autopsy service was originally outside the remit of this review, it became impossible not to consider the forensic and coronial systems together. Both systems are the product of their histories, and both need attention to meet the future public need.
- Forensic and coronial consultant and academic provision have suffered because, with few exceptions, neither universities nor NHS hospitals see themselves as being responsible for the work they do.
- The future of the forensic pathology service is fragile. Although trainee recruitment is good, going forward, the specialty and its falling workload are too small to comprise a robust stand-alone national resource. The provision of sub-specialty opinions is at crisis point.
- There are insufficient consultant opportunities for forensic pathology trainees when they qualify: the wastage rate on investment is over 50%. This needs to be corrected by the introduction of an employed status option allowing consultant practice within the public service.
- The coronial autopsy system is in considerable difficulty. The fee structure is problematic and there is predicted to be a severe shortfall in consultants available to undertake this work in the near future. NHS consultant job plans need to make provision for undertaking coronial autopsies within the approved sessional commitment.
- The Group Practice model for forensic pathology has many good attributes. Since it was initiated, changes have occurred to produce a national imbalance in activity. There is scope to re-assess its operation whilst taking into account the proposed changes to regional police crime services.
- Group Practices currently interface with the police through 'Memoranda of Understanding'. The police have now drawn up a 'Police User Requirements for Forensic Pathology'. This could form the basis for more formal contractual arrangements.
- There are too many mortuaries in use in England and Wales. There needs to be regionalisation of both forensic and coronial autopsy practice. Moving bodies from one jurisdiction to another is now possible within the law.

- The arrangements for carrying out second post mortem examinations need attention. Delays inherent in the present system are not in the humanitarian interests of the deceased's relatives and are not necessary for justice. It is recommended that second post mortems are only authorised following a formal application to a coroner or judge.
- International comparisons suggest that with a change to the way deaths are managed, the coronial autopsy rate in England and Wales could be substantially reduced.
- This report proposes that the solution for the future is to operate the forensic and coronial pathology services in conjunction with each other in a national death investigation service. This could be introduced through the dormant legislation in the Coroners and Justice Act 2009 relating to the Medical Examiner system.
- The independence of pathologists from vested interests when providing evidence to the courts is important both in fact and in perception. It is recommended that all the funding for forensic and coronial autopsies currently distributed across various organisations is brought together in a single independent location. There are several models that would achieve this, including the establishment of a Special Health Authority.

Glossary of abbreviations

Although the explanations of the abbreviations are given in the text they are listed here for ease of reference if needed.

ACPO	Association of Chief Police Officers
BAFM	British Association in Forensic Medicine
CCG	Chief Coroner's Guide
CJS	Criminal Justice System
COPMeD	Conference of Postgraduate Medical Deans (UK)
CPS	Crown Prosecution Service
CRFP	Council for the Registration of Forensic Practitioners (now disestablished)
FPSG	Forensic Pathology Specialist Group
FSR	Forensic Science Regulator
FSS	Forensic Science Service (now disestablished)
GMC	General Medical Council of the UK
GRO	General Register Office of England and Wales
HOFPU	Home Office Forensic Pathology Unit
HORFP	Home Office Registered Forensic Pathologist
IPS	Identity and Passport Service
HTA	Human Tissue Authority
JCIO	Judicial Conduct and Investigations Office
NCA	National Crime Agency
NCEPOD	National Confidential Enquiry into Patient Outcome and Death
NHS	National Health Service
NPIA	National Policing Improvement Agency (now disestablished)
ONS	Office for National Statistics
PABFP	Policy Advisory Board for Forensic Pathology (the forerunner of the PDB)
PDB	Pathology Delivery Board
RCPath	Royal College of Pathologists

Part 1

Introduction, methodology and scope

1.1: Reasons for the review

1.2: Terms of Reference

1.3: Methodology

1.4: The scope of forensic and non-forensic pathology

1.1: Reasons for the review

Accurate determination of the cause and manner of death is a central component of the judicial and coronial systems. On occasions the findings are the crucial factor in determining the guilt or innocence of an accused person. When serious criminal charges are brought¹ the evidence may result in a custodial sentence: where foul play is eliminated the findings provide closure for the relatives of the deceased. Outwith the forensic arena, it is also recognized that the recording of an accurate cause of death is important for both mortality statistics and public health planning.

To meet the public interest, forensic and coronial pathologists have to be knowledgeable and highly skilled, the system has to be robust, and the system's immediate and long-term integrity has to be assured. This review was established because there was not total confidence in the future. Such concerns as there were concerning forensic pathology had been raised informally within the Home Office: with respect to coronial pathology the 2006 NCEPOD Report² had identified a number of disquieting issues. In addition, it had been 12 years since the last significant review of forensic pathology³ and, during the intervening period, considerable changes had taken place. These included the necessary removal of some practitioners from the Home Office Register, new postgraduate training programmes in histo- and forensic pathology, the establishment of the Human Tissue Authority⁴ following the Human Tissue Act 2004, and the creation of the Office of the National Medical Examiner for England subsequent to the Coroners and Justice Act 2009⁵.

It is within this background that a new review of forensic pathology and the landscape within which it operates was thought to be timely.

1.2: Terms of Reference

Home Office Ministers and the Home Office Forensic Policy Group (with the support of the Pathology Delivery Board) commissioned this review of forensic pathology services in England and Wales. As outlined above, the major driver was not so much the current quality of the product of the forensic pathology service but the inherent risks within the current model of its future delivery.

The full Terms of Reference are set out in Appendix 1.

¹ For the purposes of this report these are defined as murder, manslaughter, infanticide, serious assault, and serious road traffic offences (in line with the definition used by the Forensic Science Regulator)

² NCEPOD (2006): The Coroner's autopsy: Do we deserve better? A report of the National Confidential Enquiry into Patient Outcome and Death

³ Home Office (2003): Review of Forensic Pathology Services in England and Wales; often referred to as 'The Leishman Report'.

⁴ Details of the Human Tissue Authority can be found at <https://www.hta.gov.uk>

⁵ The act can be found at <http://www.legislation.gov.uk/ukpga/2009/25/contents>: details of the National Medical Examiner are in Ch 2; sec 21. Because primary care trusts have been disestablished, the The Health and Social Care Act 2012 includes provision for responsibility for the new medical examiner service to sit with local authorities.

The main objectives were to examine:

- The functional operation of the service
- The organisation of the service and
- The governance of the service

To achieve these objectives a historical and documentary review was to be undertaken combined with the taking of evidence from a wide range of service users and stakeholders. This included overseas models of delivery for comparison.

Of particular interest was the appropriateness of the current service model to meet future trends in forensic demand and practice.

The product of the review was to be a report including a proposal for the future delivery of the service, with costed, risk assessed options, reporting in the spring of 2015.

As the review progressed, two aspects became apparent that required some change to the original objectives. These were:

- At meetings with key stakeholders, it became clear that it was not possible to examine the provision of forensic pathology in isolation, without also considering the provision of coronial pathology. Where relevant, observations on this, and its overlap with forensic pathology, are included in this report.
- At the present time the funding of the forensic pathology service and its practitioners comes from many budgets e.g. the police, local authorities, the Home Office, the CJS⁶, the NHS and the Universities. Accurately estimating each of these components and deciding if the costs are identifiable and recoverable should a new model be proposed, is a complex and significant exercise. Therefore, other than referring to costings in general terms, the details of any proposals were not costed out in detail. If on the basis of this report changes to the present arrangements are thought to be necessary, then the financial model will need to be a separate piece of work.

1.3: Methodology

Identifying key historical events and important literature sources progressed along the traditional lines of documentary research. Apart from the collection of factual information, this exercise also provided the basis from which to explore some of the problems inherent within the current system.

Working with members of the Home Office Forensic Pathology Unit [HOFPU], (prior to meeting with stakeholders), a standard set of headings and questions was developed to guide discussions with both individuals and organisations. There were a number of stems set out for guidance to try to ensure that key areas were not missed and to establish triangulation of opinion whenever possible. This did not however inhibit discussions covering over other areas which emerged *inter alia*.

⁶ The Criminal Justice System

Immediately after each meeting, draft notes of the discussion were written up and sent to the attendee(s). They were invited to add, subtract, edit or in any other way modify these notes until they were comfortable with the content. This final version was then kept as a confidential record of the evidence presented and opinion(s) given. It is the content of these meeting notes that has been used (without attribution) to provide much of the evidence base for this report⁷.

In all there were over 50 individuals, the forensic Group Practices, the police and other organisations consulted. The full list of these appears in Appendix 2. It can be seen that it covers all the interested individuals and groups listed in the Terms of Reference (Appendix 1).

1.4: The Scope of forensic and non-forensic pathology

A useful definition of forensic pathology is that provided by the British Association in Forensic Medicine (BAFM) which is⁸:

'Forensic pathology is that branch of medicine which provides the investigation and interpretation of disease and injury for courts of law — the use of primarily pathological knowledge in criminal investigations and other enquiries, particularly in establishing the cause of injuries or death.'

A more expanded definition of forensic pathology (which will be used for the purposes of this report) can be found in the *Code of practice and performance standards for forensic pathology in England, Wales and Northern Ireland*⁹. The Code states:

'In this code "forensic pathology" shall be interpreted as covering any case where:
(a) there is, or is likely to be, an investigation by any authority leading to serious criminal charges and
(b) information derived from the post-mortem examination may be used in the investigation or at trial (whether by the prosecution or defence).

The term serious criminal charge refers to the following offences (or their equivalents in the relevant jurisdiction):

- *murder*
- *manslaughter*
- *infanticide*
- *serious assault (e.g. grievous bodily harm – with, or without, intention) and*
- *serious offences related to a road traffic incident involving death (e.g. causing death by dangerous driving, causing death by careless or inconsiderate driving or*

⁷ These meeting notes have been archived at the Home Office

⁸ Available at <http://www.bafm.org/#!about/c240r>

⁹ October 2012: Home Office, The Forensic Science Regulator, Department of Justice and The Royal College of Pathologists; Available at http://www.rcpath.org/Resources/RCPATH/Migrated%20Resources/Documents/G/G131_CoPForensicPathology_Oct12.pdf. This Code is referred to in more detail later and is included in full as Appendix 8.

causing death by driving while uninsured or unlicensed).'

In England and Wales, forensic and non-forensic (or 'coronial'¹⁰), autopsies are traditionally undertaken by different groups of pathology consultants with overlapping skills as follows:

- Forensic autopsies are carried out by forensic pathologists listed on the Home Office Register and known as 'Home Office Registered Forensic Pathologists (HORFP's). This work and the associated court attendances represent their main activity and source of income. A number of HORFPs also undertake some non-forensic coronial work.
- Non-forensic 'coronial' autopsies are normally carried out by consultant histopathologists who usually do no forensic work. These autopsies and the accompanying court attendances are usually done as private practice outside the consultant's National Health Service (NHS) contract.
- Some sub-specialty histopathology practitioners give specialist advice at the request of a forensic pathologist.
- Forensic paediatric autopsies are usually done by two pathologists, one paediatrically qualified and the other a HORFP.
- Occasionally routine autopsies of what were thought to be 'natural' deaths turn out to have a forensic component.

The Code⁹ also covers the issue of overlap between forensic and histopathologists. It says:

'The Code shall only apply, directly, to cases where the likelihood of serious criminal charges being brought was clear at the point at which the post-mortem examination was started or, when the pathologist performing the examination stops the examination to allow a different pathologist to perform the examination, re-started.'

'This Code of Practice is directed not just to those doctors whose profession is 'forensic pathology' but also to other pathologists who may only occasionally undertake forensic pathological investigations. All such practitioners, whatever the extent of their engagement in forensic work, share the same duty to the criminal justice system and the courts and should accordingly understand and abide by the standards set out in this Code of Practice.'

Histopathologists undertaking coronial autopsies have recently received updated professional guidance from the Royal College of Pathologists in the publication *'Standards for Coroners' pathologists in post-mortem examinations of deaths that appear not to be suspicious'*¹¹. Both these guidance documents will be examined in more detail later in this report.

It should perhaps be noted at the outset that Britain is unique in making such a clear separation between the work and professional position of consultant forensic and

¹⁰ These are autopsies carried out on the authority of the coroner to establish the cause of death when no suspicious circumstances are present. The term 'coronial' autopsies has been used in this report because it is a term in common parlance and widely understood. It should however not be forgotten that strictly speaking, all autopsies are commissioned by the coroner, whether 'forensic' or 'coronial'.

¹¹ February 2014: Royal College of Pathologists; available at http://www.rcpath.org/Resources/RCPATH/Migrated%20Resources/Documents/G/G136_CoronersPMsPerfStandards_Feb14.pdf. This is referred to in more detail later and is included in full as Appendix 9.

histopathologists. In most of the developed world, forensic pathologists undertake a greater proportion of non-forensic work and histopathologists work more closely with them in an integrated service.

Part 2

A brief history of forensic pathology and previous reviews

- 2.1: Early developments
- 2.2: The Brodrick Report (1971)
- 2.3: The Wasserman Report (1989)
- 2.4: The BAFM Working Party (2000)
- 2.5: The Home Office Review (known as the Leishman Report) (2003)

“Those who cannot remember the past are condemned to repeat it.”

George Santayana: *The Life of Reason* (1905)

2.1: Early developments¹²

The original use of medical knowledge and findings to support the judicial system is lost in the mists of time. In the UK, Scotland led the way towards the end of the 18th century by establishing professorships in forensic pathology at Edinburgh and Glasgow Universities. By 1837, there were 37 UK medical schools providing courses in forensic medicine and it became an obligatory subject for medical students in 1933.

With time, via famous names such as Sir Bernard Spilsbury, Francis Camps and Keith Simpson and the formation in 1950 of the Association of Forensic Medicine (later to become the British Association in Forensic Medicine [BAFM]), forensic pathology became defined as a specialty in its own right with a recognizable body of specialist knowledge. The term 'Home Office List' (of approved forensic pathologists), was introduced in 1944.

In the 1950's forensic pathology services were delivered by 10 specialists in London, with approximately 30 others covering the rest of England and Wales. They collectively examined an annual average caseload of 1400 dead bodies thought to have died in suspicious circumstances. Roughly half the specialists were drawn from university departments in medical schools and half from the NHS and independent practice. Some cases were part of the departmental workload and others attracted a separate fee. During the 1950's the profession faced turmoil because of the lack of any formal delivery mechanism. In addition, the mean age of those practicing was rising and in 1953, forensic medicine was no longer a compulsory part of the undergraduate curriculum in medicine¹³.

Gradually, undergraduate curriculum allocations reduced and simultaneously with the creation of the Royal College of Pathologists (1962), forensic pathology essentially became a postgraduate activity. Following a number of reports (set out below) and changes to the organisational structure of universities and the NHS, the subject has come to attain its present operational arrangements. In chronological order, the relevant reports which reviewed its circumstances at the time are:

1971: The Brodrick Report

1989: The Wasserman Report

2001: The BAFM Working Party

2003: The Home Office Review (known as the Leishman Report)

These are considered separately below to demonstrate the evolution of the present position.

¹² Some of the factual content of this section was provided by D Jones, a Member of the Pathology Delivery Board and the Home Office Forensic Pathology Unit.

¹³ Knight B: 1985; Forensic Pathology: the chronic crisis. British Med J: 291, 1145

2.2: The Brodrick Report (1971)

The Brodrick report¹⁴ on the coronial system (which reported in 1971) also commented on the state of forensic pathology, recommending that there should be financial support for university departments of forensic medicine to ensure their survival and that all police forces should have access to forensic pathologists to help in the investigation of suspicious deaths. It said (Sec 22.18):

'This person should be a pathologist with sound training in morbid anatomy who has added to his general knowledge some additional skills, most notable the ability to detect and give authoritative testimony about unusual features of the dead body and the surrounding circumstances which may be of evidential value. He should be able to command the facilities of a well equipped pathological laboratory, be readily available on call to police and courts and be prepared to travel at short notice anywhere in the area which he serves'

The report endorsed the Home Office practice of maintaining a 'Home Office List'. At the time the Brodrick report was written, there were 25 pathologists on the list outside of London and about 15 within the London area. The small number of just 40 pathologists serving England and Wales was recognised as being

'...particularly vulnerable to death, illness, retirement or withdrawal of any one of the men on the current Home Office list'¹⁵.

The report went on to acknowledge that the profession was declining and considered the arguments at the time as to whether forensic pathology should be its own specialty or whether it should be a sub-specialty of histopathology. The report recommended that the service should be part of the National Health Service, based in major hospitals and that forensic pathology should be made a sub-specialty to the 'main division of pathology' (histopathology). The additional cost of the forensic pathology service borne by the National Health Service was intended to be sourced from the Home Office. It recommended that 40 pathologists were required to serve the needs of England and Wales. At section 24.11, the report states;

'We also expect that cases would occasionally occur where evidence of a suspicious nature was found during a routine pathological investigation of what appeared to be an innocent death. In such circumstances, the right course would be for the pathologist to inform the nearest forensic pathologist and give him the opportunity to take part in the examination...'

¹⁴ Committee on Death Certification and Coroners, 1965-1971: available at <http://discovery.nationalarchives.gov.uk/details/r/C9239>

¹⁵ The current Home Office 'List', now 'Register' comprises 35 such persons. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/354645/Current_Home_Office_Register.pdf

2.3: The Wasserman Report (1989)

The service continued as a mixed economy until July 1984, when the then Home Secretary Leon Brittan informed Parliament that there would be a review of forensic pathology services headed by a senior Civil Servant Mr Gordon Wasserman (now Lord Wasserman) who held Home Office responsibility for police science and technology. The committee reported in 1989. The view of the Home Secretary at that time was that he was *'concerned that the supply of expert advice on forensic pathology required by the police service of England and Wales in the investigation of suspicious deaths was drying up. In particular, he had been told that both the universities and the NHS, the twin sources of this advice, were no longer prepared to provide it as a 'by-product' of their principal activities'*¹⁶.

The terms of reference were to *'review the arrangements for providing a forensic pathology service in England and Wales'* and the Committee included representation from all key stakeholders including the police, coroners and the British Association in Forensic Medicine (BAFM). The committee was to consider the whole gamut of provision including organisation, funding, and the appointment of practitioners and their training. Importantly, the group was also to consider standards. The output from this was the publication by the Home Office of the *'Report on the Working Party on Forensic Pathology'*¹⁷, commonly referred to as the Wasserman Report. In spite of the problems identified with forensic pathology as a service, the Wasserman Report acknowledged that in the UK *'it was amongst the best in the world'*. Their recommendations can be found in full in Appendix 3.

Only some of the recommendations were acted upon and implemented. These were:

- The metropolitan area and the rest of England and Wales should be managed in the same way.
- A Policy Advisory Board for Forensic Pathology¹⁸ (PABFP) should be set up.
- A proper Home Office List should be established with properly accredited persons supported by a recommendation from the PABFP.
- The Home Office should fund a number of senior lectureships and meet the full costs of training 2-3 new forensic pathology specialists each year.
- The PABFP should take responsibility for quality assurance and the investigation of complaints.

The Policy Advisory Board for Forensic Pathology (PABFP) first met in 1991, its composition being similar to that of the Working Party. Initially Gordon Wasserman was the chair of the PABFP. The formation of a Scientific Standards Committee produced the first code of practice for the performance of post mortem examinations. This group also introduced regular audit of pathologists' reports.

The Wasserman Report did not address the issues around the employment status of Home Office Pathologists and a growing number of practitioners moved from employed status into self-employment due to the fact that employers were reluctant to allow the practice of

¹⁶ pg(ii), para 5 of footnote 17

¹⁷ Home Office: April 1989, Chaired by GJ Wasserman. Available from Stationery Office Books (July 1989); ISBN-10: 0113409621

¹⁸ The forerunner of the Pathology Delivery Board

assisting in police cases to continue, and also because there were financial attractions to working as a private company or contractor. At the time the Wasserman Report was published in 1989, there were about 45 Home office pathologists. There is no certainty in that figure as there was no actual 'list' as such. The 'Register' as it exists today was only produced as a result of the Wasserman recommendations.

A number of recommendations were never implemented. One was that a new appointment to the Register should be for an initial period of one year allowing the PABFP to assess performance (a six month assessment period has since been implemented in 2012). It also recommended that registration should be for five years at a time and that it should cease at 65. This again was never implemented and members of the Register are appointed until they resign, retire or are removed for some other reason.

Recommendation 12 of the Wasserman Report states that *'The Home Office should issue a circular strongly advising coroners to use only accredited pathologists (i.e. those that are on the Home Office List) in cases of suspicious death. In due course the Coroners Rules should be amended to that effect'*. The Coroners Rules were never so amended and the Coroners and Justice Act 2009 similarly did not include this provision although there is a requirement on coroners to *'consult'*¹⁹ with the chief officer of police.

2.4: The BAFM Working Party (2000)

10 years after the Wasserman Report and following 9 years of operation of the PABFP, a working party of the BAFM²⁰ was established to review the situation at that time. The report comments:

'The sense of optimism that accompanied the Wasserman recommendations and their acceptance by the then Government led us to believe that the profession and its clients would gain by the establishment of a uniform, well funded service with proper career opportunities and training.'

In reality, the opposite has occurred. The number of university departments has diminished and those departments that remain are finding it difficult to survive. The attitude of most Universities to forensic medicine has changed.

The number of forensic pathologists has decreased partly due to early retirement and to resignation. There is a dearth of trainees and fewer trainers than there were 10 years ago.

The rising demand for forensic pathology services is already creating difficulties of supply and there are signs that the efficiency of police investigations may be affected. The workload has doubled from 1990 to 2000.

¹⁹ Part 3; Regulation 12 of the Coroners Investigations Regulations 2013

²⁰ West, I. Lawler, W. Anscombe, A. and Whitwell, H. (2000) Towards a Unified Forensic Pathology Service for England and Wales. Unpublished report of the British Association in Forensic Medicine

The standard of forensic pathology service is fragmented and there is considerable variation in organisation and in standards'.

The recommendations of the BAFM report were that forensic pathology should be an employed service, regionally based on either University or NHS sites but independent from University or NHS management. The report suggested a 'hub and spoke' model where pathologists could work remotely from the regional centre but be closely associated with it.

2.5: The Home Office Review (known as the Leishman Report²¹); (2003)

In explaining the need for a further review at this time, the executive summary of the Leishman report reads:

'Over a decade on²², unforeseen changes in the structure are becoming clear. Changes have taken place in both the universities and the NHS, resulting in forensic pathology coming to be seen as peripheral. The decline in university departments of forensic medicine²³ has limited the availability of training places. There has been significant growth of self employed practice. Concerns have arisen over recent years within the criminal justice system regarding consistency of practice between both different areas of the country and individual forensic pathologists, adherence to existing standards and good practice guidelines, and availability of forensic pathologists.'

With this in mind, the review concentrated its attentions in 4 areas:

- service requirements
- personnel
- performance standards and
- management controls

The report's Executive Summary and Recommendations are given in Appendix 4. The report, which contains a large amount of performance and categorical data, summarized its main recommendations as follows:

- *Address the decline in the number of forensic pathologists through increased support for existing training programmes and the development of a new programme;*
- *Institute a programme of building works to create high quality mortuary and related facilities for the regional centres;*
- *Create a national body with executive responsibility for the provision of forensic pathology services within England and Wales, delivered through regional centres incorporating a framework for negotiating and monitoring of service levels²⁴; and*

²¹ 2003: Home Office; Review of Forensic Pathology Services in England and Wales. Commonly known as the Leishman Report: Leishman was an external chair from 4-Consulting, of which he was a director: The Home Office Report is available at http://webarchive.nationalarchives.gov.uk/20080726153703/http://police.homeoffice.gov.uk/publications/operational-policing/forensic_pathology_report.pdf?view=Binary

²² i.e. a decade on from the Wasserman Report

²³ There are currently 4 University Departments remaining: Leicester, Newcastle, Liverpool and Cardiff.

²⁴ Within the report this is clearly intended to mean that there would be an employed national service

- *Explore the integration of forensic pathology services within the FSS in an expanded and revised agency²⁵.*

There were also supplementary recommendations:

- *Involve all interested parties, not only forensic pathologists, under the lead of the new national body in debating, clarifying and agreeing the identified professional issues requiring the application of informed judgement;*
- *Continue to explore an individual's compliance to quality standards and continuing professional development through accreditation by the Council for the Registration of Forensic Practitioners (CRFP);*
- *Consider encompassing paediatric and other specialist pathologists within the ambit of the forensic pathology agency;*
- *Engage with the police, other forensic professionals and others in the criminal justice system considering a holistic approach to crime investigation to ensure that there is a better definition of the forensic pathologist's role.*

At the time of the writing of the draft Leishman Report and before its official publication in March 2003, a steering group was set up by the PABFP which essentially put forward alternative recommendations. Some of the proposals of the Leishman Report were unpopular amongst the profession. In particular:

- The steering group rejected one of the main Leishman recommendations that forensic pathology should be subsumed into an arm's length body within the FSS, even though this could have provided management and administration, and created a proper career structure. This was possibly because pathologists felt more affinity to the medical profession than to forensic science or because it could actually, and by perception, reduce the independence of the specialty.
- The Leishman review proposed that accreditation be achieved through the Council for the Registration of Forensic Practitioners (CRFP), which was at the time being developed to register and regulate forensic scientists and others providing a service to the Criminal Justice System (CJS). This was unpopular possibly because accreditation by the CRFP would obviate the need for a Home Office Register. In the event the CRFP itself failed and no longer exists.

In rejecting the concept of an independent agency as a managerial structure, the steering group proposed a strengthening of the PABFP into an Advisory Board with executive powers across England and Wales. The recommendations were put to a meeting of the BAFM on 30th June 2002 and the proposed functions of the new national body were to be:

- Maintaining the Home Office Register of Forensic Pathologists and establish procedures for regular monitoring and revalidation
- Establishing regional service delivery centres

²⁵ Within the report various possibilities were discussed for the formulation of an 'arm's length body', and it was concluded that the FSS was the best option.

- Promoting relationships with users of forensic pathology services to ensure that their requirements are addressed and that practitioners play an appropriate part in the investigative process
- Negotiating fee structures and contractual arrangements
- Establishing and maintaining national standards of practice and performance including the promotion of national and local quality management initiatives
- Developing career structures including a recruitment and retention strategy
- Developing, in conjunction with the Royal College of Pathologists, a comprehensive national training strategy and programme, including continual professional development for practicing forensic pathologists
- Endorsing the planning of a national body, based upon the Board being reconstituted and given executive powers.
- Working up detailed proposals for the policy, functions and procedures of the new executive body.

The programme team was to report to the PABFP within 3 months of its appointment and to Home Office Ministers as soon as possible thereafter. A full report was to be produced within 6 months, whereupon the Board should reconstitute itself and embark upon an implementation programme.

This proposal from the PABFP for a new advisory body with executive powers was launched as the Home Office Pathology Delivery Board (PDB) on 1st October 2005²⁶. One of several important things the PDB did was to develop criteria for the appointment to the Home Office Register: these can be found at Appendix 5.

However, the central recommendation i.e. that of an employed service with regional centres under an independent public body appears to have been too controversial amongst Home Office pathologists, and at the time too politically difficult to achieve so the specialty was left to develop as best it could. In the event, the Leishman recommendations to:

- Increase support for training programmes and
- Institute a building programme to create high quality mortuaries

were implemented, but the others found in Appendix 4 were not.

The limited implementation of the Leishman Report and the proposal from the PABFP for a national executive body accordingly determined the *modus operandi* of forensic pathology in England and Wales at entry to the last decade.

²⁶ The constitution of the PDB is available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/115697/constitution-pdb.pdf. The details are discussed in more detail later and the constitution is given in full in Appendix 10.

Part 3

The findings of the review

- 3.1: Developments over the last decade
- 3.2: The operational framework of forensic pathology services
- 3.3: The professional work of forensic pathologists
- 3.4: Second autopsies
- 3.5: Mass casualties
- 3.6: The training of forensic pathologists and histopathologists
- 3.7: Society and the investigation of the cause of death
- 3.8: The coronial autopsy service
- 3.9: The police and the forensic and coronial services

3.1: Developments over the last decade

3.1.1: Creation of Group Practices

The establishment of regional operational centres of excellence never crystallized into a reality, but England and Wales was divided into 8 administrative regions as follows:

- North West
- North East
- Humberside and Yorkshire (South and West)
- West Midlands
- East Midlands
- Mid and South Wales and Gloucestershire
- Greater London and the South East
- West and South West

These are shown on the figure overleaf and the areas they covered are listed.

On the establishment of the Pathology Delivery Board (PDB) in 2005, each of these administrative regions was designated to be serviced by a Group Practice of consultant forensic pathologists who would be responsible for delivery within that geographical area. The accompanying, and very important concept was that there would be enough consultants in each of these groups to form a critical mass sufficient to provide a healthy working environment that would maintain high practice standards and prevent individual professional isolation. With the establishment of Group Practices, a formal definition of their role and modus operandi was formulated by the PDB and this can be found as Appendix 6.

Over time, there have been two major changes to the Group Practice system:

- The FSS employed 3 forensic pathologists in the Sheffield area. With the proposed demise of the FSS (it continued till March 2012), these three people emigrated from England and the practice deficit was filled by forensic pathologists from the North West, a situation that continues at present. Humberside and Yorkshire (South and West) is therefore part of the area now covered by the North West Group Practice.
- In 2010 there were considerable difficulties in the provision of services in the West Midlands. This deficit was filled by forensic pathologists from the Greater London Group Practice: this arrangement remains in place today.

The current situation of the now 6 Group Practices (two of which have resulted from the mergers described) and their activities and characteristics are described in later sections.

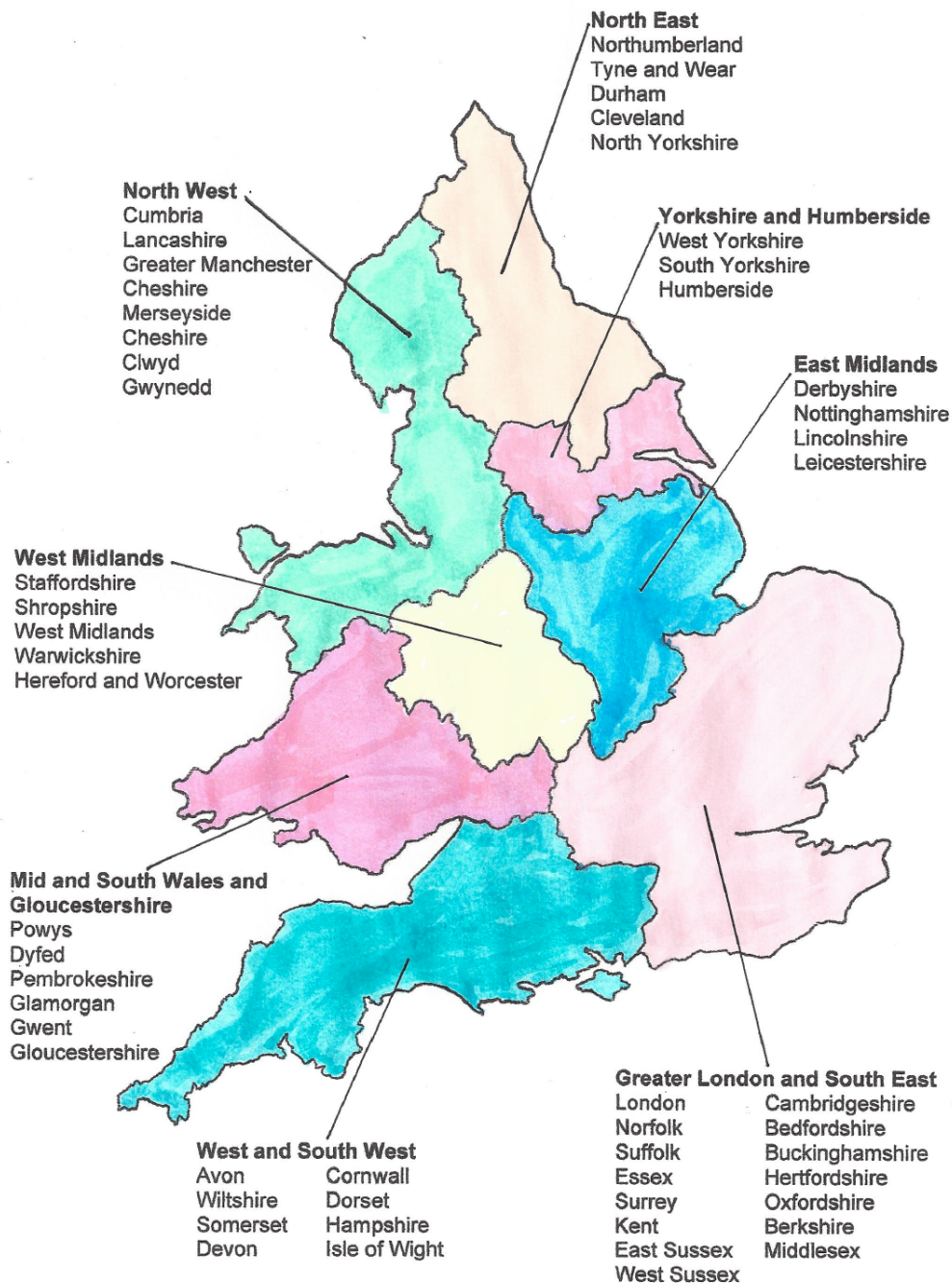


Fig 3.1: The original division of England and Wales into Group Practices (2005)

3.1.2: The Mortuary Refurbishment Programme

The objective of the refurbishment programme recommended by the Leishman Report (section 2.5 above) was to provide nuclei around which regional centres of excellence could develop. A total of £16M was allocated to this programme and major works were

undertaken in several mortuaries across England and Wales to bring them up to a standard suitable for forensic work.

However, for a variety of reasons, e.g. lack of infrastructure support from the NHS and Universities, limited opening hours, inconvenience of location, continued use of local authority mortuaries within coronial districts, difficulties of transferring bodies etc., these improved facilities did not meet expectations in relation to service delivery. Consequently, autopsy work did not become re-allocated to the refurbished centres and there has been no effective geographical rationalisation.

3.1.3: Consultant appointments and fee structures

Changes over time

Forensic pathology is a low volume, highly specialised activity which in the UK has, over the recent past, earned little research income (compared with other mainstream medical research specialties). As such, it has not attracted infrastructure or personnel investment either from the NHS or the university sectors. There has therefore been a steady shift of funding away from employed status towards independent status, appointments being made when a particular Group Practice felt the need to advertise for an additional or replacement member. The numerical shift is shown in the table below.

Year	Number on list	NHS employed	University employed	Self-employed	Police employed
1989 ²⁷	45	22 (48%)	22 (48%)	1 (2%)	
2003 ²⁸	36	9 (25%)	9 (25%)	17 (47%)	1 (3%)
2014 ²⁹	35	3 (9%)	7 (20%)	25 (71%)	0

Table 3.1: The changes in employment status of forensic pathologists over the past 25 years

It can be seen that there has been a very significant growth in independent practitioners and a steady decline in employed consultants. There have been no employed posts advertised since 2009 when the FSS recruited two pathologists from abroad. When the FSS folded in 2012, both returned to their home countries.

Employed posts

The arrangements for employed university and NHS consultants are very similar. University clinical academic staff have a mix of clinical and academic duties: NHS staff have a mixture of clinical and non-clinical time. For both, a full working week is nominally 10 sessions (each of 4 hours duration) and there is equality between NHS and clinical academic remuneration.

²⁷ From the Wasserman Report; footnote pg 7

²⁸ From the Leishman Report; pg 3, para 15

²⁹ Current Home Office data

Up to a further 2 additional sessions can be paid by the employer for additional work if agreed in the job plan. Outside this, depending on the contractual arrangement between the individual and the employer, supplementary work can be done as independent practice, either in the normal place of employment or elsewhere. Both the NHS posts and the clinical academic posts (which carry honorary NHS clinical contracts), have a final salary pension scheme and enjoy professional indemnity for their NHS clinical work under the Clinical Negligence Scheme for Trusts. In remuneration negotiations, the consultants are represented by the British Medical Association and the University and College Union (UCU) and the employers are represented by the NHS and the Universities and Colleges Employers Association (UCEA).

Independent practice

It became clear after the formation of the PDB that there was a need for the regularization of the independent fees for undertaking a forensic autopsy. This was formalised at a meeting of the PDB on 22nd May 2006 and the working paper that agreed them can be found at Appendix 7. It can be seen that the fee per case is a complex formulaic derivation assuming a target number of 60 cases per pathologist per year: it tries to take into account:

- The number of working days in the year
- The proportion of working days spent on direct autopsy activity
- The number of complex and simple cases
- Travel time
- A benchmark cost per case to produce equivalence with employed NHS status
- Allowances for secretarial, office, indemnity and pension costs
- Allowances for quality assurance and continuing professional development.

The basis of the calculation has never been changed, but the original fee has been lifted for inflation. In addition to this, the pathologist would have a coroner's case fee and would get additional payment from toxicology reports, court appearances and second autopsies.

3.1.4: Audit and Quality Assurance

The definition of the two terms in the title of this section varies from publication to publication, but in this report, audit is meant primarily to represent the recording of the number of cases undertaken and quality assurance (QA) the standard to which the work is done.

Audit

In 2005 a considerable effort (with the associated expenditure), was made to log and describe every forensic autopsy undertaken in England and Wales and record it on a laptop computer programmed for that specific purpose. Each HORFP was issued with a configured computer which had with it an instruction manual of 99 pages³⁰. Unfortunately the

³⁰ Home Office National Forensic Pathology Unit Training Guide: copyright Cable and Wireless; issued 22nd July 2005.

machines took a considerable time to boot up, gaining facility with the software was difficult, and data entry problematical. Consequently, through user dissatisfaction, activity audit and cross-referencing by this means fell into disuse. This was a laudable aspiration which unfortunately failed to achieve its objectives.

The collection of numerical data is now done by quarterly return of data from each Group Practice Coordinator. The Home Office Forensic Pathology Unit (HOFPU) analyse this data with a view to monitoring the numbers of forensic cases undertaken by each HORFP and also the ratio of cases to identified homicides. The national average is that 25% to 35% of all forensic post mortem examinations transpire to be a homicide. If a particular pathologist or police force figure lies outside of this ratio, the reasons for this are investigated.

The cases undertaken by Groups and individuals are important numerics because they describe the regularity of cases per consultant and allow trends and planning data to be obtained. Recent audit data demonstrating a current wide variation in forensic autopsy activity per consultant are described in later sections of the report (section 3.2.3).

Quality Assurance

In line with other medical specialties, pathology has, over the past decade, increased the standardization and performance specification of its professional activities. The Royal College of Pathologists produced its own interpretation of the GMC's '*Good Medical Practice*' in 2002³¹, and published Guidelines on Autopsy Practice in 2002 and 2005 (with a number of supplementary updates), including taking into account the consideration of relatives and the wider social context of death investigation³². In addition, newer modalities such as scanning have been explored³³.

In the past two years there have been two important quality assurance documents published. The first is a collaboration between the Home Office, the Forensic Science Regulator, The Department of Justice, and the Royal College of Pathologists (2012), entitled '*Code of practice and performance standards for forensic pathology in England, Wales and Northern Ireland*'. The second is from the Royal College of Pathologists (2014) entitled '*Standards for Coroners' pathologists in post-mortem examinations of deaths that appear not to be suspicious*'.

Because of their importance these documents are included as Appendices 8 and 9 respectively. Jointly they represent the description of the high standards, which the public

³¹ RCPATH: July 2002; *Good Medical Practice for Pathologists*

³² RCPATH: May 2006; *Modernising Pathology: Developing a mortuary service responsive to individual needs*. See: <http://www.rcpath.org/Resources/RCPATH/Migrated%20Resources/Documents/R/Response-MortuaryService-Jun06.pdf>

³³ Report from the NHS Implementation Sub-Group of the Department of Health Post Mortem, Forensic and Disaster Imaging Group (PMFDI). October 2012. *Can Cross-Sectional Imaging as an Adjunct and/or Alternative to the Invasive Autopsy be Implemented within the NHS?* Available at <http://www2.le.ac.uk/departments/emfpu/Can%20Cross-Sectional%20Imaging%20as%20an%20Adjunct%20and-or%20Alternative%20to%20the%20Invasive%20Autopsy%20be%20Implemented%20within%20the%20NHS%20-%20FINAL.pdf>

and justice system can expect when a dead body is examined, and it is against these documents that quality assurance now needs to be measured.

The importance of peer review and regular interchange with other consultants prior to the issue of the forensic autopsy report to the coroner and police is a constant thread running through these standards³⁴. In addition to everyday informal and regular formal professional meetings, two important processes have been established. These are:

- Critical conclusion checks: Each forensic report must be reviewed and signed off by another HORFP before it is released. This is to try to ensure that the conclusions drawn by the report are supported by the autopsy findings.
- The annual Forensic Science Regulator's (FSR) 'audit'. The FSR is responsible for quality standards relating to all aspects of forensic science and conducts an annual audit of the quality of HORFP reports. The audit process is conducted by the Forensic Pathology Specialist Group (FPSG); which is a working party that advises the Regulator on the setting of standards for forensic pathology in England, Wales and Northern Ireland.

The process of the audit is that a 'theme' is identified and HORFP's are asked to submit anonymised post mortem (PM) reports on the relevant subject area. These are then assessed by a panel made up of forensic pathologists, a coroner and police senior investigating officers (SIOs). The panel submit their feedback to a nominee of the FPSG who in turn produces a report outlining the general quality of the material submitted and any issues identified.

3.1.5: The training of forensic pathologists

The training of forensic pathologists is essentially all undertaken as a postgraduate trainee after qualifying in medicine.

The UK system of postgraduate training was assimilated into the European model with the passing of the European Specialist Medical Qualifications Order (1995), and the establishment of a Specialist Register (held by the GMC) for persons who had satisfactorily completed a course of postgraduate training and were eligible for appointment to a consultant post in the NHS. Originally, postgraduate training was under the auspices of the Specialist Training Authority, then the Postgraduate Medical Education and Training Board (PMETB), and on 1st April 2010 the PMETB merged with the GMC. Consequently, it is the GMC that is now responsible for approving programmes of specialty training for UK trainees which lead to admission to the Specialist Register. The actual programmes of approved training are developed in College Specialist Advisory Committees and administered through the Regional Postgraduate Deans. The Home Office funds these posts and the current situation will be described in detail later.

For most of the previous decade, to become a consultant forensic pathologist eligible for entry onto the Home Office Register, an individual first had to successfully complete a postgraduate training programme leading to a Certificate of Completion of Training (CCT) in

³⁴ See para on pg 7 of Appendix 8.

histopathology and have undertaken additional specialist training to meet the criteria of the Pathology Delivery Board (see Appendix 5). This process was however specific to the UK and to become aligned with other European training programmes, a specific postgraduate training programme in forensic histopathology was established. This is tailored to the needs of the professional duties of a forensic pathologist. The syllabus can be found on the GMC website³⁵, and the CCT in Forensic Histopathology has been awarded since 2012.

Training in forensic histopathology is consequently now under the same regulatory framework as all other postgraduate medical specialties and the same principles apply to admission to the Specialist Register. This results in 2 routes to enter the Specialist Register in forensic histopathology:

- Completion of the CCT in forensic histopathology through UK training
- Using the process of 'equivalence' to present evidence of equivalent training from outside the UK to obtain a 'Certificate of Eligibility for Specialist Registration'.

Admission to the Specialist Register does not however allow automatic entry to the Home Office Register: this further step is under the auspices of the Pathology Delivery Board (as described in Appendix 5), which also retains the right to admit applicants without the new CCT in forensic pathology provided that they have the necessary training and qualifications.

3.1.6: The regulatory framework for qualified doctors and specialists

The Shipman Inquiry led to the need for annual appraisal and 5 yearly revalidation for all doctors in the UK if they were to have a license to practice. Without such a license, although they could remain on the Medical Register, they could not function clinically as a doctor. The necessary legal changes were introduced by the GMC in 2010 with The Medical Profession (Responsible Officers) Regulations 2010³⁶. This required all doctors to provide the evidence for their revalidation to a named Responsible Officer (RO). For those in NHS and University clinical practice the RO for the organisation was identified by the local management and was usually the Medical Director. Doctors in independent practice were responsible for identifying their own RO, although most independent hospitals and agencies did in fact appoint such a person.

Forensic pathology was however in a unique position with its national Group Practice system and a majority of consultants in self-employed status. Accordingly, under the Medical Profession (Responsible Officers) (Amendment) Regulations 2013³⁷, the PDB was made the designated organisation to be responsible for the system of revalidation of forensic pathologists within England and Wales who were on the Home Office Register. As part of its legal obligation under the regulations, the PDB has appointed its own Responsible Officer to oversee the administration of the system of annual appraisals that form part of the 5-year revalidation process.

³⁵ Available at http://www.gmc-uk.org/Curriculum_Forensic_Histopathology.pdf_51122578.pdf

³⁶ Available at <http://www.legislation.gov.uk/ukdsi/2010/9780111500286/contents>

³⁷ <http://www.legislation.gov.uk/uksi/2013/391/regulation/5/made>

3.1.7: Academic and research endeavour

Although there has been considerable progress (as described above in section 3.1.4), on the quality assurance of the practice of forensic pathology, there has been a contraction of its academic and research activity. This contraction has been noted by the international forensic community. In the UK this can partly be explained by the changed criteria that universities with medical schools have for the support and promotion of specific subjects. Not least is the need to perform well in the research assessment exercise and to obtain significant external grant funding. Another factor is that outside the UK, forensic pathology covers a wider operational base across the investigations of all deaths, not just those related to suspected homicide and other serious crimes. Integration of forensic practitioners into a larger departmental base with supporting infrastructure is then the norm.

There are now only 4 university departments of forensic pathology in Cardiff, Newcastle, Liverpool and Leicester. With a small number of exceptions (which will be described later), at national level, whatever metrics are used, the subject has slipped from its previously strong 'R & D' position. This is regretted by both the specialty and the Royal College of Pathologists.

3.1.8: Concluding comments

It can be seen from sections 3.1.1 to 3.1.7 above that over the preceding decade the practice and regulatory landscape within which forensic pathology operates has undergone many changes. Most of these changes have not been created by the specialty itself but have been imposed by external influences and the specialty has had to respond as appropriate. It is of particular note that the subject has attracted little interest or support from either the university or NHS axes, and as such, its practitioners have had neither the encouragement nor the opportunity to build a nationally based service.

In the years following the creation of the PDB in 2005 all public services, whether directly managed or contracted out, subsequently suffered the consequences of the worldwide financial crisis. In the NHS, although there were significant cost-improvement requirements, financial support was preserved in numerical terms. Forensic pathology was however outside this protective envelope. It was thus subject to the financial stringencies of the Home Office and CJS. These have created major changes to the availability of legal aid, cuts to police budgets and very significant rationalizations in support functions.

It is within the resultant NHS, university and medico-legal environment that the forensic pathology service has to deliver its professional product and plan for the future of the specialty.

3.2: The operational framework of forensic pathology services

3.2.1: Managerial arrangements

The Home Office has the responsibility of delivering forensic pathology provision and it does this through the Pathology Delivery Board (PDB). The current constitution and composition of the PDB (which tries to reflect the various constituencies with an interest) is given in Appendix 10. As described in 3.1.6, the PDB is now the legally designated organisation responsible for the system of revalidation of forensic pathologists within England and Wales who are on the Home Office Register. There is a Memorandum of Understanding³⁸ in place between the GMC and the PDB describing the principles of their joint working and this is included as Appendix 11.

On an operational day-to-day basis, the responsibilities of the PDB are discharged by the Home Office Forensic Pathology Unit (HOFPU). Its role, based within the Home Office Science Directorate, is to monitor and maintain those standards pertaining to forensic pathology as set by the Home Office and the Forensic Science Regulator.

The unit also:

- supports and funds the training of prospective forensic pathologists;
- investigates complaints made against members of the register and;
- maintains close liaison with regional forensic pathology user groups and other key stakeholders.

The main focus of their work tends to be long-term projects linking forensic pathology with the police investigation of homicide.

The mortuaries within which the forensic pathologists work are maintained by local authorities and the NHS. They are all inspected by the Human Tissue Authority on a rolling program. Some mortuaries are specifically appointed to 'forensic standards' whereas the majority are not, but forensic autopsies are carried out in both.

When samples from a body are taken for the purposes of a police investigation, the power used is Section 19 of PACE³⁹. The power to retain these samples is by virtue of Section 22 of PACE. At the time of retention, a list is made of all material taken from the body and copied to the coroner. The coroner's officer or the police Family Liaison Officer will then inform the next of kin what exactly has been retained. When the material is no longer required for a CJS purpose, it will be offered back to the coroner and the next of kin will be consulted as to the means of disposal. It is important to note that human tissue taken for a criminal justice purpose is exempt from the provisions of the Human Tissue Act 2004 by virtue of Section 39. Following the ACPO/NPIA led National Audit of Human Tissue in 2012, the Home Office now works closely with the HTA and police in ensuring police held human tissue is not retained for longer than is necessary.

During the course of a forensic autopsy, the pathologist will inevitably assemble material such as notes, photographs, copy statements etc. This material is potentially 'unused

³⁸ This is currently being updated

³⁹ PACE: Police and Criminal Evidence Act 1984 and its subsequent amendments and revisions

material' as defined by the Criminal Procedure and Investigations Act 1996. It is the practice of some pathologists to retain this material, in some cases at home addresses under insecure conditions. This is no longer an acceptable practice. The sensitive nature of this material, especially post mortem photographs, demand that it is kept in secure locations. The forensic case fee includes a financial element for secure storage. Alternatively, at the conclusion of a case, all the materials could be stored with the police file as is normally the case with all other material for which there is no further immediate use.

3.2.2: Group Practices and the employment of Home Office Registered Forensic Pathologists (HORFPs)

As described above, the Group Practice system has, in the majority of ways, functioned well. At the time of going to press, the Group Practice structure, area of coverage and the number HORFPs within each is given in Table 3.2 overleaf. The minimum number of HORFPs required to qualify as a Group as specified by the PDB is 3 members (see Appendix 6). It can be seen that there are now two larger and 4 smaller units derived from the original 8 (see Figure 3.1). The initial regional divisions across England and Wales were an attempt to produce some equity in income and caseload, the two of which are directly related for independent, self-employed consultants. As can be seen in the Table 3.1 (section 3.1.3), self-employed consultants now constitute 71% of those on the Home Office Register.

Since their inception, the two major changes to the Group Practice system have been the loss of the Humberside and South and West Yorkshire Group (co-terminus with the demise of the FSS) and the expansion of the London Group to cover the West Midlands (see sec 3.1.1).

The number of consultants in any group is controlled by the existing members who appoint additional group members to meet the demands of the current and projected workload. Recent appointments have been made following advertisement with properly constituted appointments committees. However, as will be seen below in section 3.2.4, there are a reducing number of homicides and a reducing number of forensic autopsies undertaken. This has resulted:

- in fewer appointments being made and a loss of 50% of the trainees to other locations abroad and within the UK (but outside England and Wales) and
- in allegations being made that forensic pathology operates as a 'closed shop' with decisions being led by self-interested concerns over income.

Investigations have not led to the substantiation of this allegation, but it cannot be ignored in the sections below that there is a huge variation in the individual incomes from self-employed practice that was never envisaged when the remuneration formula was established (section 3.1.3). Employed HORFPs are of course protected from the effect of case load reduction and there are other sources of income such as teaching, coronial work and court fees. It does however appear that the strongest driver in the shortage of appointments has been the lack of growth in the workload. This unfortunately leads to a fixed cohort of consultants growing older together with little 'churn' in the younger ranks.

Group Practice Area	Police Forces Served	Home Office Registered Forensic Pathologists
East Midlands	Derbyshire Leicestershire Lincolnshire Northamptonshire Nottinghamshire	4
Greater London, South East and West Midlands	Bedfordshire Cambridgeshire City of London Essex Hertfordshire Kent Metropolitan Norfolk Suffolk Surrey Sussex Thames Valley	10
West Midlands	West Midlands Staffordshire Warwickshire West Mercia	No longer a separate Group Practice: Supported by the Greater London Practice
Mid and South Wales and Gloucestershire	Dyfed-Powys Gloucestershire Gwent South Wales	4
North East	Cleveland Durham Northumbria North Yorkshire	4
North West	Cheshire Cumbria Greater Manchester Lancashire Merseyside North Wales	9
Humberside and South and West Yorkshire	Humberside South Yorkshire West Yorkshire	No longer a separate Group Practice: Supported by the North West Practice and neighbouring practices, as required
West and South West	Avon & Somerset Devon & Cornwall Dorset Hampshire Wiltshire	4

Table 3.2: The Group Practice structure in England and Wales in 2014

Additional problems of the Group Practices are that:

- in the case of the smaller ones, the appointment of an additional full time colleague requires an increase in projected workload of 25% to maintain the same individual incomes, unless others are dropping down to part-time employment as part of the Group's plan;
- self-employed practice within groups does not offer remuneration during maternity leave or illness (other than through personal insurance);
- under the PDB's rules of admission to the Home Office Register (Appendix 5), it is an absolute requirement that before a person can be considered s/he has to have the offer of employment from a Group Practice. Whilst the intentions of this were good at its inception, ensuring that isolated professional practice could not occur, its effect is to prevent successful forensic pathology trainees with a CCT from obtaining employment as a forensic pathologist within England and Wales unless they have first been appointed as a member of a Group Practice.

3.2.3: The forensic pathology workload for individuals and Groups

When the remuneration for self-employed HORFPs was calculated in 2006 (see Appendix 7 and section 3.1.3), a nominal average number of 60 forensic cases per HORFP per year was assumed, having been derived from data at the time. For the annual period 2013 Q4 to 2014 Q3 inclusive, the distribution of individual and group average workload is shown in the Table 3.3 below.

Group Practice Area	Individual annual case loads (anonymised) & (group total)	Average annual case load per HORFP for the Group (rounded)
East Midlands	26, 31, 41, 45 (143)	36
Greater London, South East and West Midlands	21, 35, 49, 76, 83, 85, 85, 91, 94, 100 (719)	72
Mid and South Wales and Gloucestershire	10, 19, 19, 24 (72)	18
North East	0, 50, 50, 57 (157)	39
North West, Humberside and South and West Yorkshire	53, 57, 59, 60, 61, 64, 68, 95, 120 (637)	71
West and South West	26, 49, 51, 53 (179)	45

Table 3.3: Individual and average annual workload within the Group Practices (2013-2014)

For further ease of interpretation, the individual results are shown re-plotted on the graph below.

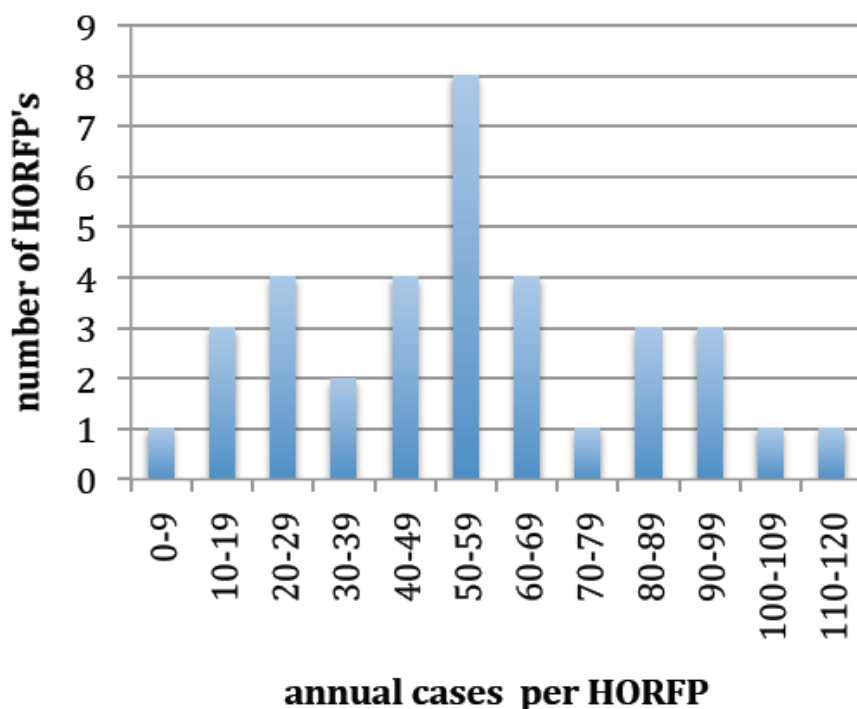


Fig 3.2: The number of Home Office Registered Forensic Pathologists (HORFPs) completing a given number of forensic autopsies within a year (2013-2014)

The PDB correctly assumed that there would be a variation about the mean and hence, on the basis of judgement, advised a lower limit of 20 forensic cases per year and an upper limit of 95 forensic cases per year. This was based on the reasoning that:

- a lower limit was needed to maintain individual skills and the advantages accompanying the Group Practice structure and
- an upper limit was necessary to ensure that the work was done thoroughly to the proper standard.

It can be seen from these figures that there is indeed a wide range of activity and that the range both between groups and between individuals considerably exceeds the (admittedly arbitrary), guidelines set by the PDB.

Although the underlying principle is that consultants share an equitable on-call system across a particular geographical area and take up the cases arising during those periods, the individual variation would mitigate against this being the only driver of case allocation. Another is the variation in serious crime across the country. The murder rate varies from 1.7 per million of population in Gloucestershire to 16.3 in the West Midlands. The Metropolitan District is at 12.8 and the average for England and Wales is 9.7⁴⁰. Even this however would

⁴⁰ Homicide Index, Home Office. Annual figs for 2012/2013

suggest that other factors e.g. personal referral patterns, willingness to undertake cases, efficiency of reporting etc., are also coming into play.

It should however be remembered that a variation in case numbers is not necessarily bad: it can allow different patterns of working, different workloads with age, accommodation of health issues, and other professional activities (teaching, committee work etc.). The variation would only become harmful when it threatened standards of practice and engendered enmity and destructive competition for cases in a contracting market.

3.2.4 Trends in death and homicide rates

Death and autopsy rates

The total available workload for forensic pathologists is very dependent on the number of unlawful deaths occurring each year. This can be put into perspective by considering what happens when people die in England and Wales. This is set out in Table 3.4 below.

Year	Registered deaths (1000's)	Deaths reported to coroners						
		Number (1000's)	As % of registered deaths	Number of coronial autopsies	% of reported deaths having a coronial autopsy	Number of inquests	% of autopsies leading to an inquest	Number of forensic autopsies
2009	491.3	229.9	46.8%	105,354	45.8%	28,213	26.8%	2296
2010	493.2	230.6	46.8%	101,943	44.2%	27,401	26.9%	⁺ 2157
2011	484.4	222.4	45.9%	93,954	42.2%	27,162	28.9%	2129
2012	499.3	227.7	45.6%	94,814	41.6%	28,279	29.8%	2005
2013	506.8	228.0	45.0%	94,455	41.4%	29,942	31.7%	2029
2014*	*	*	*	*	*	*	*	1974

⁺ Estimated figure due to no returns being received from one Group Practice due to closure

*Figures for 2014 will be available from the MOJ in May 2015

Table 3.4: The annual registered deaths in England and Wales, the number of deaths reported to coroners and the number of coronial and forensic autopsies undertaken

To get a visual impression of the proportion of forensic autopsies carried out in relation to other death and autopsy metrics, the figures for 2103 (the latest year for which full data is available), are shown in figure 3.3 below. It can be seen that the proportionate number of forensic autopsies is very small, comprising approximately 2% of all autopsies and 0.4% of all registered deaths.

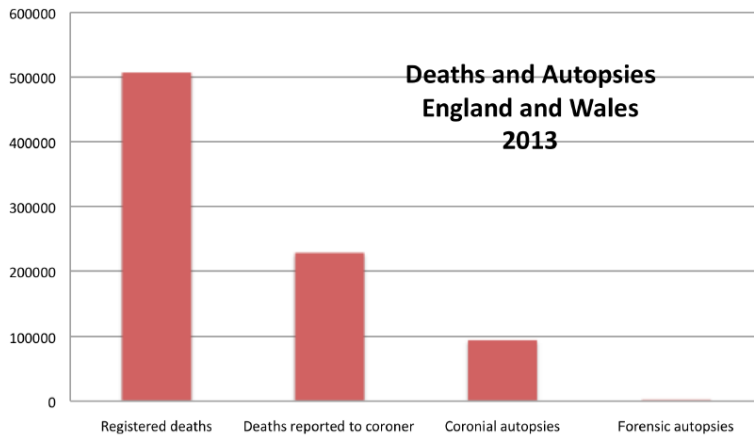


Fig 3.3: The annual registered deaths, reported deaths, coronial autopsies and forensic autopsies in England and Wales in 2013

Of the forensic autopsies undertaken, a quarter to a third turn out to be homicides.

The obvious conclusion from this section is that the specialty of forensic pathology is not only small with very significant variations in individual and regional workload; it is also very dependent upon the homicide rate.

Homicide rates and trends

The changes in the homicide rate over time are shown overleaf in Figure 3.4.

It can be seen that there was a steady annual increase until a peak in 2003⁴¹, but since then there has been quite a dramatic drop. In 2012 there were 540 recorded homicides (almost half the 2003 number), slightly increasing to 551 in 2013. It should be noted however, that the 2003 figures included the 172 deaths due to the actions of Dr Harold Shipman, but even so, since 2003, excluding the 'Shipman effect', there has been a fall from 876 to 551 (37% over 10 years). Reported numbers of homicides vary slightly with time, as some may subsequently be re-categorised as non-homicide cases and vice versa, but what is given here is sufficiently accurate for the arguments advanced.

These figures give rise to some interesting questions such as why is the homicide rate reducing? Excluding Dr Shipman, what has changed since 2003 to cause an almost 40% reduction? There may be many factors such as increased efficiency in medical intervention, less alcohol consumption in public, policing methods, and social issues affecting wealth and reduced poverty. In addition, an increased use of social media is thought to reduce the numbers of youths congregating in the streets and this may play a part. There is also a theory put forward by some that this reduction in violence is a natural progression since medieval times of continuous

⁴¹<http://webarchive.nationalarchives.gov.uk/20110220105210/rds.homeoffice.gov.uk/rds/pdfs2/hosb703.pdf>
: see pg 81

'civilianisation' in the Western World⁴²: other lobbies suggest that the removal of pollutants from the environment may result in a positive effect on human behaviour.

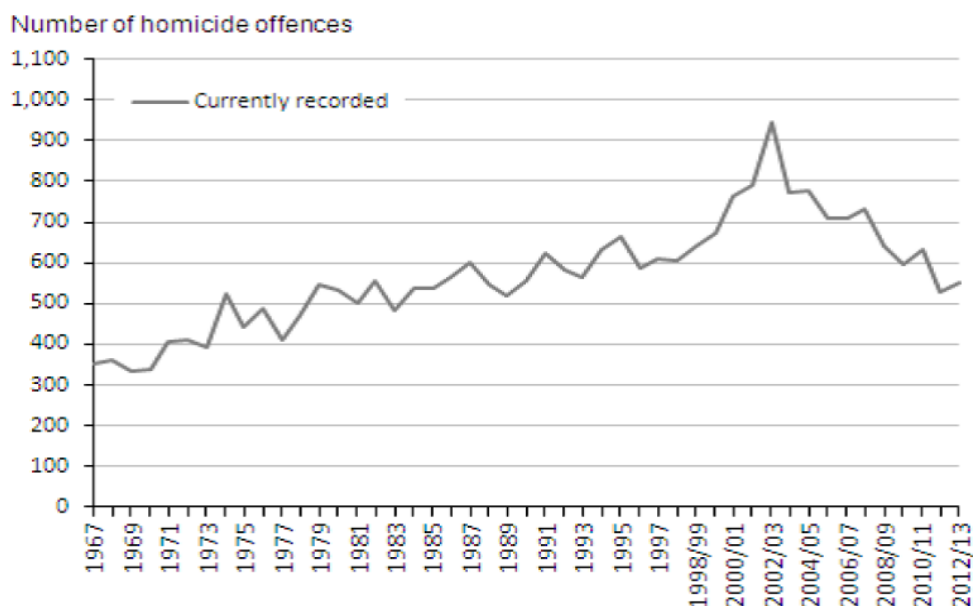


Figure 3.4: Recorded Homicides in England and Wales, 1961 to 2013 (Office of National Statistics and Home Office 2014).

Whatever the cause, the fall in the homicide rate does appear to be a steady downward trend of sufficient size to be relevant to the future planning of forensic services.

The other variable to consider is whether the proportion of suspicious deaths referred for a forensic post-mortem examination is changing. Data from the Home Office is presented in Table 3.5 below.

Financial Year	Number of Forensic Post Mortem Examinations	Number of Recorded Homicides	Percentage of autopsies demonstrating a homicide
2009/10	2282	620	27.17%
2010/11	2056	639	31.08%
2011/12	2065	553	26.78%
2012/13	2030	558	27.49%
2013/14	1951	537	27.52%

Note: the number of forensic autopsies differ slightly to the table at 3.4 as the latter covers a calendar year whereas table 3.5 covers a financial year.

Table 3.5: The number of forensic autopsies, recorded homicides and percentage of autopsies demonstrating a homicide (2009 – 2014).

⁴² Pinker, S. (2011) *Better Angels of our Nature*. London: Penguin

This clearly shows that the downtrend in forensic post-mortems is consistent with the downtrend in homicides. There is therefore no apparent reduction in the proportion of cases referred for a forensic autopsy.

Potential for Missed Homicides⁴³

The next question posed by the above statistics is whether the homicide rate is actually, in fact, truly decreasing as it appears, or if, at least in part, it is a reduction due to an increased number of missed homicides. The potential for missed homicides has been recognised as a problem⁴⁴ for nearly half a century and has recently been addressed by The Forensic Science Regulator (FSR).

For the FSR 2012 audit (see section 3.1.4 above for details of this process), HORFP's were requested to submit reports of any cases where a coronial post mortem examination had been commenced but stopped and referred on for a forensic post mortem. This is likely to have been due to mortuary staff or the non-forensic pathologist discovering injuries or other identifying issues as the autopsy progressed which they felt were sufficiently suspicious to be more appropriately managed by way of a forensic post mortem.

A total of 33 cases were submitted for review. Initial analysis of the results was made by the FPSG, (see sec 3.1.4) and the audit team took the view that **all** of the cases should have been deemed as warranting forensic autopsies from the outset, and that the decision not to have a forensic post mortem was a flawed one. It is important to note however, that within the context of the FSR's audit, the only information on which the panel had to rely upon was the HORFP's report.

It was therefore decided that further enquiry should take place into each of these cases and the FSR commissioned the HOFPU to conduct further investigations. Agreement was sought and granted to conduct this work from the Chief Coroner; the National Police Lead for Forensic Pathology and the Pathology Delivery Board (PDB). Final approval to go ahead with this study was received in November 2013 and questionnaires were sent to respondents between February and April 2014.

Of the 32 cases (one of the original 33 was found to be a road traffic case), 15 (47%) were either confirmed or potential homicides: in analyzing the causes for this, factors such as crime scene findings, cognitive bias, the involvement of alcohol and drugs, and old age were all confounding variables. The relevance of these findings will be referred to later, but at this juncture, although it has been demonstrated that there are a number of cases not being referred directly for a forensic autopsy when they should have been, the number does not explain the falling homicide and (consequently) falling forensic autopsy rate.

⁴³ The author would like to acknowledge the information supplied by D Jones of the HOFPU in this section

⁴⁴ HRM Johnson: Medicine Science and Law 1969: 9:102: The Incidence of Unnatural Deaths Which have been Presumed to be Natural in Coroners' Autopsies

An extract of the final report on missed homicides can be seen at Appendix 12.

3.2.5: Where the forensic autopsies are done

Prior to the Coroners and Justice Act 2009, any examination of a dead body found within a coronial district had to be done within the coroner's district of authority or in a neighboring district, but section 15 of the Act removed this restriction. Nevertheless, there has been little geographical rationalisation of the mortuary service. All the mortuaries in England and Wales are inspected and have to be licensed by the Human Tissue Authority, and there are currently 260 such licenses issued. 220 of these are on NHS premises, 24 are maintained by local authorities, one is a military establishment, and 15 are organisations licensed for storage purposes and forensic providers. A list of the current licenses issued can be found on the HTA website.

The majority of forensic autopsies take place in 'standard' mortuaries. A 'forensic' mortuary has added facilities such as a separate sterile working area, downdraft tables, viewing galleries and briefing rooms etc. It was in the Forensic Regulator's business plan⁴⁵ to publish standards for forensic mortuaries and these are now out for consultation. At present there are about 15 mortuaries appointed to 'forensic' standard distributed across England and Wales. In practice the added sophistication of the forensic mortuary standard is often irrelevant to the needs of the forensic examination, but there are some occasions when it is vital.

So as to gauge the distribution of sites on which forensic autopsies are carried out, in the first six months of 2014 (January – June inclusive), there were 896 forensic post mortems undertaken in 111 mortuaries⁴⁶. As part of this total, in the Metropolitan Police District, there were 130 forensic post mortems undertaken in 21 mortuaries⁴⁷. Of note is the fact that none of these autopsies was carried out at the Royal London Hospital which had previously had Home Office funding to bring it up to forensic standard (see sec.3.1.2).

These figures clearly demonstrate that there are a large number of locations in which forensic autopsies are undertaken. It implies that on many occasions, forensic pathologists must effectively be working alone, despite being part of a group. Although this will be inevitable on some occasions, the original intention of Group Practices, frequently emphasized by the Forensic Science Regulator, that there should be close daily professional contact between individual pathologists, is clearly not being achieved.

It is self-evident that this geographical distribution of forensic workload is far from optimal. It duplicates resources and wastes time. During the collection of information for this report the issue of regionalisation of centres was frequently discussed. On no occasion did anybody from any constituency defer from the view that the geographical rationalisation of sites into bigger and better equipped units was to be encouraged.

⁴⁵ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/143740/business-plan-2012-2017.pdf. See sec 1.2

⁴⁶ Data from Home office

⁴⁷ Data from Metropolitan Police

3.2.6: Concluding remarks

Managerial arrangements for forensic pathology are now well established through the PDB and the Home Office FPU. The Group Practice system is firmly in place, although there have been significant changes since its inception in the West Midlands and South and West Yorkshire and Humberside. Across England and Wales there is a significant variation in the number of autopsies carried out by individuals.

Forensic autopsies represent approximately 2% of the total number of autopsies undertaken (approximately 0.4% of all registered deaths), with the balance (coronial autopsies) being done mainly by non-forensically trained histopathologists. Although 'missed homicides' are a concerning issue, their number is marginal in their effect on workload. Analysis of where the forensic autopsies are undertaken leads inescapably to the conclusion that the arguments for greater centralisation of better facilities are overwhelming. The reduction in the homicide rate means that the traditional forensic workload is falling and there will be less consultant career opportunities for those in training.

The twin pincers of small and reducing workload and indifference of the NHS and university sectors combined with a restricted area of practice make forensic pathology as a sole professional activity highly susceptible to the vagaries of external change. This makes it very difficult to plan for the future, both in terms of facilities and trainees.

3.3: The professional work of forensic pathologists

3.3.1: Serving the Criminal Justice System (CJS)

In relation to the pathologists currently on the Home Office Register there has been a consistent message whilst taking evidence for this review that the autopsy work done and the reports produced for the CJS are of a consistent quality and fit for purpose. This is not to say that there are no differences between HORFPs in issues such as presentational style and specific areas of expertise, and the same findings may lead to variations in interpretation, but the product of their professional work is dependable and meets the needs of the CJS.

The standards for the forensic pathologist's autopsy report are set out in the Code of Practice issued jointly by the Home Office, The Forensic Science Regulator, the Department of Justice and the Royal College of Pathologists (Appendix 8, Section 7). This makes clear the expected layout, content and style. In particular it emphasizes the importance of the critical conclusion check (see sec 7.1[c]), whereby another properly qualified forensic pathologist scrutinizes the report to ensure that:

- The report is internally consistent
- The conclusions drawn are justifiable from the information set out in the report, and
- The report is capable of being understood without reference to other material.

There is also provision for an opinion to be changed and for the views of others to be recorded.

A key aspect of a forensic pathologist's report is that it should be submitted in good time to meet the constraints of the legal process. Although the autopsy is usually completed expeditiously, there is however, continuing evidence that on some occasions reports arrive late. Reviewing the data from the FPSG annual audit⁴⁸ (see section 3.1.4), although the numbers are small, demonstrates the delivery times given in Table 3.6 below.

Year	Percentage of case reports issued (days)			
	< 20 days	21-50 days	51-100 days	over 101 days
2013	5%	11%	38%	45%
2012	4%	16%	31%	48%
2011	6%	13%	28%	53%
2010	3%	13%	30%	53%

Table 3.6: The time taken for the completion of forensic pathology reports (2010 – 2013)

There is a weak correlation between the annual number of cases completed and the delivery time of the report. The main reasons given for reporting delays are waiting for toxicology results and sub-specialty reports. The latter will be considered separately below. Late reports add to the distress of relatives, the late disposal of bodies and wasted court time. In the future, greater pressure to progress cases more quickly within the CJS will mean that the longer delivery times will need to be reduced.

The English court system is adversarial in nature which can tend, unfortunately, to mitigate against openness and the re-consideration of findings in the light of another opinion. A cynical view for which there is no hard evidence would be that winning was important for the support of a professional reputation. Part of this problem seems to arise from the varying implementation of the Criminal Procedure Rules⁴⁹ and this is outwith the pathologists' control. If there was good compliance with the requirements of case management as set out in the Criminal Procedure Rules (particularly Parts 3 and 33), many differences would be resolved before the trial commenced. The absence of robust case management leads to the view that 'it will all be sorted out in court': one corollary of this is that on occasions there is slipshod pre-court preparation and the development of disagreements in court that should have been resolved between the experts at a much earlier stage. Another factor affecting this is the timing of the release of reports by the police and coroners.

⁴⁸ Data from Forensic Science Regulator

⁴⁹ http://www.legislation.gov.uk/uksi/2014/1610/pdfs/ukxi_20141610_en.pdf

Although the prosecution or the defence might instruct forensic pathologists, it is clear and accepted by the pathologists that their primary duty is to the court. This necessitates that they should be completely independent in forming their opinion, and, to prevent criticism, preferably be seen to be so. Independence will be considered in more detail later when the future of the service is considered.

3.3.2: Attending the crime scene

All the Group Practices operate a 24/7 on-call rota within their membership. The views expressed by the users of forensic pathology services were that they were available when called.

Forensic pathologists in England and Wales do not visit all crime scenes: even if they wished to, it would not be possible to see all victims at the place of the crime since many are taken to hospital and subsequently die distant from the scene. The evidence presented indicated that there was generally good liaison between the police and the forensic pathologists, and that local knowledge and helpful working relationships led to constructive procedures. When requested forensic pathologists would normally attend crime scenes, but often a discussion followed by telephone advice was sufficient. Without wishing to comment on the appropriateness of the decisions, there have been some instances when forensic pathologists chose not to attend crime scenes when the police considered that it could be advantageous to do so.

There are however, considerable concerns currently being expressed about the initial response to the finding of a body in what could, or could not be, suspicious circumstances. This is outwith the domain of the forensic pathologists and is considered later in the report.

3.3.3: The methodology and content of the forensic autopsy

Current practice

The current standards for carrying out a forensic autopsy are set out in the Code of Practice issued jointly by the Home Office, The Forensic Science Regulator, the Department of Justice and the Royal College of Pathologists (Appendix 8, Section 6).

These standards are a mix of guidance and didactic rules. For instance:

- they 'recommend' that all pathologists follow the Guidelines on Autopsy Practice published in 2002 by the Royal College of Pathologists
 - that 'adequate' photographs are taken of the whole body
- but they prescribe that:
- all organs 'must' be dissected accurately and
 - examination of the generative organs 'must not' be omitted.

Whilst the objective of a forensic post-mortem is not in doubt (i.e. the establishment of the cause of death and the recovery of evidence), the pathologist, (as is usual for any medically qualified consultant), is given considerable scope to use their expert knowledge and experience for individual decision-making. The pathologist can, for instance omit

histopathology samples but needs to justify the decision and defend that position if it later proves to be questioned. In the vast majority of cases, in court, the forensic pathology evidence simply confirms the mode of death. Conviction or acquittal of the accused usually depends upon other factors such as opportunity, witnesses, DNA and crime scene findings. Nevertheless, crown pathology evidence can be challenged when a second autopsy is done. Because of this there is a good case for greater agreement on what constitutes an adequate data set that all experts might accept whilst still reserving the right to come to different conclusions from the findings (see sec 3.4 below).

The situation is further complicated by the demands of a legal team who may require, irrespective of the practical relevance, that 'no stone is left unturned'. The possibility of this tends to work against cost-effectiveness and individual practitioner autonomy to determine the required extent of the examination of the body. It also promotes the frequency of second autopsies. In terms of meeting the needs of justice, it is for instance, difficult to see why, other than to meet the conditions of the Code of Practice, all the viscera have to be examined in detail when someone previously healthy (who occupied a passive role in the events), has died suddenly from decapitation in a terrible road accident.

Having put forward these arguments, for balance, it has to be remembered that the defence may claim alternative causes of death that have unfortunately happened immediately before the cause of death as determined by the pathologist (e.g. a myocardial infarction preceding an assault). There have been a number of instances when a prosecution was stopped because of the absence of organ examination and histology because other causes of death could not be definitively excluded. Any potential change of practice does therefore need the most careful consideration.

Future developments

The methodology of the forensic autopsy has served society well and is embedded in custom and practice: it has, in principle, remained largely unchanged for over half a century. During this time a number of developments such as imaging, rapid toxicology, DNA and recognition of genetic factors have taken place. Although such developments have been discussed within the profession, there appears to be little consensus on implementation. This is true internationally as well as in England and Wales.

Because of its importance, both in:

- apparently more closely accommodating the attitudes and beliefs of certain religious and ethnic groups and
 - its potential to radically change autopsy practice,
- of the recent developments, imaging will be considered in greater detail. The use of imaging to assist specific aspects of forensic practice (e.g. gunshot wounds) was used within a year of the introduction of radiographs in 1895. Since then there have been many innovations, but the two most significant which have achieved a high level of sophistication in the last decade are:
- Spiral CT (computerised tomography) and
 - Imaging of soft tissues by MRI (magnetic resonance imaging)

There has been a huge growth in research in imaging over the recent past both in the UK and internationally. In the US, the Charles C Carson Center for Mortuary Affairs at Dover Air Force Base in Delaware has accumulated a very large library of scans of military personnel who died whilst on active service. This growth in interest in scanning can be appreciated by the dramatic increase in publications in this area that disproportionately outstrips those in other clinical subjects⁵⁰, as shown in figure 3.5 below.

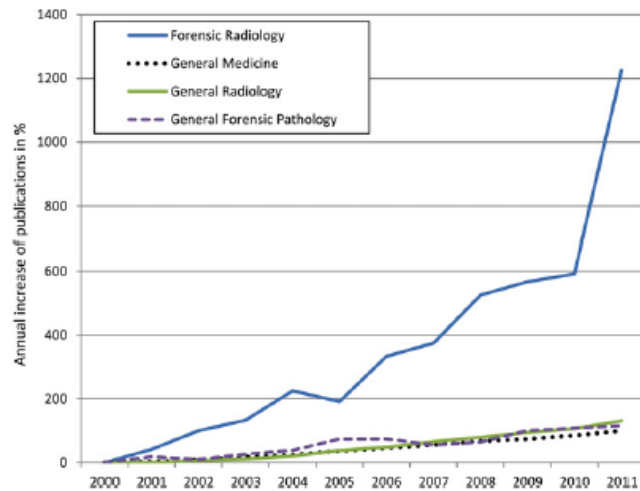


Fig 3.5: The growth in forensic imaging publications compared with other medical specialties (2000 – 2011); (taken from Baglivo et al.: detail in footnote 50)

In the UK, imaging has been the subject of a specialist NHS sub-group⁵¹ where it was concluded that it had a definitive place, the details of which needed to be identified. The key recommendations were as follows:

- i. An integrated, phased implementation programme for a national cross-sectional autopsy imaging service based on a regionalised service provided by 30 mortuary-based imaging centres in England.
- ii. A single, integrated service involving radiology and pathology services, based on a single cost no matter what discovering the cause of death involves and supported by transparent costs for each professional group delivering the service.
- iii. There should be a national costing exercise undertaken to determine the true cost of the current autopsy service for coroners within the NHS.
- iv. There should be continued funding of research within the field to drive forward the medical evidence base for the service and technology development.
- v. A national teaching and training programme for all professionals involved in the service should be funded and developed with sub-specialty recognition for all professions involved in the delivery of the service.

Professional standards for such a service were published by the Royal College of Radiologists

⁵⁰ Baglivo M, Winklhofer S, et al: J Forensic Radiology & Imaging: 2013; 1;3-9. The rise of forensic and post-mortem radiology – Analysis of the literature 2000 – 2011.

⁵¹ Can Cross-Sectional Imaging as an Adjunct and/or Alternative to the Invasive Autopsy be Implemented within the NHS? Report from the NHS Implementation Sub-Group of the Department of Health Post Mortem, Forensic and Disaster Imaging Group (PMFDI). October 2012.

and the Royal College of Pathologists in 2012⁵². Although best practices are still evolving, internationally there seems to be a general acceptance that imaging should become a tool within the forensic armamentarium. CT is good for bony injuries, gas collections, foreign bodies and calcifications whilst MRI is best for soft tissue detail⁵³. **At present, there is still professional debate concerning the reliability of its evidence base** and the code of practice for forensic pathology (Appendix 8, pg 21), specifically states that *'The Regulator and the College do not consider the use of non-invasive examination methods, by themselves, sufficient in cases involving violent or suspicious deaths'*.

Although superficially very attractive to those groups who do not wish for their relative's body to be examined, the term 'non-invasive' or 'minimally invasive' post mortem as a description of imaging can be rather misleading. The public's concept of what an imaging post mortem entails when the body may be subject to colonoscopy, angiography and ventilation has been discussed recently in a commentary article. This called for a greater public debate and awareness to be progressed alongside the technical advances that were being made⁵⁴. In September 2013 the Chief Coroner published guidance applicable to both coronial and forensic autopsies on the use of post mortem imaging in adults⁵⁵. In particular, the guidance requires the local coroner to discuss the pros and cons of imaging in specific cases with the pathologist and re-emphasises the importance of the external examination of the body.

The introduction of imaging and considering changing what constitutes a forensic autopsy satisfactory for the court has very considerable implications for remuneration models and postgraduate training. These are not considered here in detail but could become key issues in the future.

3.3.4: Sub-specialty forensic pathology

All people and groups from whom evidence was taken were agreed that the provision of sub-specialty forensic pathology expertise is a serious current and future problem for forensic pathology. Sub-specialty practice separates into two categories, paediatric pathology and sub-specialty organ specific pathology.

Paediatric forensic pathology

Paediatric forensic pathology is high profile. It engenders considerable media interest and there have been several celebrated cases in which disputes have been played out in public

⁵² This is available at http://www.rcpath.org/Resources/RCPATH/Migrated%20Resources/Documents/G/G129_PMIImaging_Oct12.pdf; and can be found as Appendix 13

⁵³ Nolte KB, Mlady G, et al: Acad For Path 2011 (1) 1: 40-51. Postmortem X-ray computed tomography (CT) and the forensic autopsy: A review of the utility, the challenges and the future implications.

⁵⁴ Ruddy GN, Morgan B: Forensic Sci Med Pathol (2013) 9:433–434. Virtual Autopsy

⁵⁵ Guidance No. 1: *The use of post mortem imaging (adults)*. Available at <http://www.judiciary.gov.uk/wp-content/uploads/JCO/Documents/coroners/guidance/guidance-no1-use-of-port-mortem-imaging.pdf>; and included in full as Appendix 14

with adverse effects on a practitioner's reputation and GMC registration. In some fields, such as the 'shaken baby syndrome', there is still a disputed evidence base and court challenges on professional opinion are much more common than in adult practice. Disputes between experts have developed, and adverse comments from the judiciary have led to GMC action.

All this has occurred when, since 2004, there has only been one paediatrically qualified forensic pathologist on the Home Office Register. The specialty has dealt with this shortfall by performing 'double doctor' autopsies with a paediatric pathologist working alongside a conventionally qualified HORFP using NHS provision for other specialist advice and ancillary investigations for diagnostic imaging and laboratory testing on a case-by-case basis.

The large amount of time spent assembling data before a report can be submitted, dealing with the various statutory overviews, giving evidence in both the family and criminal courts, and dealing with additional submissions by practitioners acting for the defence, have also made paediatric forensic pathology unattractive. The problems of paediatric forensic pathology are not new and to try to encourage more paediatric pathologists to become involved, the Home Office has created a Criminal Justice Training Course to enhance their legal knowledge and skills.

There is now a small cadre of paediatric pathologists who do have the appropriate legal training and there have been proposals to establish a supplementary Home Office Register for this specialist work. It has been discussed at the PDB on more than one occasion but has always failed as a concept on the grounds that the individuals concerned have not completed a full postgraduate training programme in adult forensic pathology. It is an issue of judgement whether or not this argument has validity when applied to a specialist domain of practice. The situation does however remain both unsettled and unsettling. At the very least there surely needs to be a national list of suitable paediatric pathologists kept, whether or not there is a new supplementary register.

The PDB represents all constituencies in the forensic pathology landscape and for clarity and in the public interest it is important that they return again to the proposal that there should be a Home Office Register of Paediatric Pathologists who have sufficient training, knowledge and experience to conduct forensic post-mortem examinations with (or ultimately without) a current Home Office pathologist depending on the specific aspects of the case. There will always be some situations, irrespective of a particular individual's expertise when two heads are better than one. Resolution is required to remove ambiguity and to allow a future pathway to be defined.

Organ specific sub-specialty forensic pathology

Sub-specialty forensic pathology opinions are an on-going problem for the specialty. They mainly relate to neuropathology, ophthalmic pathology and bone pathology. The shortage of practitioners is frequently cited as being the cause of delayed reports. Across the NHS there are many consultant pathologists active in sub-specialty work, but few are interested in serving the CJS: the question is why? The evidence received during the review strongly suggested that it was a combination of the discomfiting courtroom environment, poor

financial return for the work involved and the lack of sympathy of NHS employers to recognize the need for unpredictable absences to enable them to attend case conferences and the courts.

At the time of writing there are only 4 neuropathologists, 2 ophthalmic pathologists and 1 bone pathologist active in forensic work across England and Wales. One of these has had to be persuaded not to retire, one is about to retire, and the others are in the latter stages of their careers. The situation is serious and fragile.

Part of the problem is that most of the forensic pathologists are in Group Practices working in no regular physical or geographical location within a major hospital pathology service. This does not make informal professional interchange easy, yet this is the usual process through which mutual professional support is developed and sustained. Fewer, larger forensic autopsy centres on NHS premises would, in the opinion of this report, go a considerable way to easing this problem. It would seem sensible to have a pro-active programme to try to recruit specialty pathologists who were prepared to undertake forensic work and to give them the necessary judicial knowledge and courtroom skills, as has been done with paediatric pathologists. Similar to paediatric work, a register of approved persons with the appropriate knowledge and skills would seem sensible. In addition, the provision for a judge to allow experts to give evidence via video link could be utilised in order to encourage more sub-specialty medical experts to engage in the criminal justice process.

3.3.5: International comparisons

All the evidence presented to this review has demonstrated that the English and Welsh concept of a forensic pathologist is unique when compared with the rest of the developed world. In other jurisdictions such as Canada, Australia, New Zealand and the US, the role of a forensic pathologist (whatever the local terminology for such a person is), extends beyond homicides and other serious crimes into that of the wider investigation of death and expert advice to the equivalent of our coronial and criminal justice systems. They are based in, and largely work in, large centres in close contact with significantly sized general pathology departments which have within them the equivalent of our 'coronial' pathologists. Although to some extent dictated by geography, the bodies for examination are usually brought to them (rather than vice-versa), and they work regularly in the same location. There is no reason why this regionalisation could not be done in England and Wales, but local coronial and police preferences may not welcome such changes.

It is worthwhile to review the Goudge Inquiry⁵⁶ in Canada in 2007. This Inquiry was set up to review the discovery of poor paediatric forensic practice. As part of its evidential sourcing, it commissioned a report on what an ideal forensic service would look like. Although written for a paediatric inquiry, this report has applicability to all forensic and death investigation services. Their report was entitled '*A Model Forensic Pathology Service*', and was written by Stephen Cordner, Helen McKelvie, Fiona Leahy, and David Ranson from

⁵⁶ <http://www.attorneygeneral.jus.gov.on.ca/inquiries/goudge/report/>

the Victorian Institute of Forensic Medicine in Australia⁵⁷. Section 1 of their report develops the principles from which a comprehensive death investigation service can be produced. In their report this covers both forensic and coronial pathology, which they assume to be much more closely integrated (unlike the demarcation found in England and Wales). The following paragraphs are taken from pages 14 – 17 of their report.

Purposes of the death investigation system

A reliable death investigation system is essential to a properly functioning justice system, which in turn underpins a safe and fair society. The fundamental purposes of the death investigation system could be regarded as follows:

- *In the public interest, to ensure that defined deaths are subject to independent and accountable investigation and judicial review to underpin criminal and civil justice*
- *To determine who has died, why and how the death occurred, and to determine if further action should be taken in relation to the death*
- *To use information derived from the investigation to try and prevent other death and injuries*
- *To support family, friends, and others directly affected by these deaths*

The services necessary to meet the purposes

- *Timely and accurate reporting of defined categories of death (underpinned, as a necessary corollary, by an accurate death certification system)*
- *Timely identification of the deceased*
- *Thorough and timely information gathering including, where relevant, from the scene, family, friends, associates, witnesses, medical and other records*
- *Medical and scientific investigation of the cause and circumstances of death*
- *Acute bereavement support and referral for families and others directly affected by the death investigations*
- *Information provision and liaison for families and others directly affected by death investigations*
- *Management of families where medical investigation reveals matters of significance including the possibility the possibility of inherited disease*
- *Coordinated case management including a standardized investigation model for further investigation of cause and circumstances of deaths by relevant experts of cases unresolved by medical and scientific investigation (e.g., engineers, researchers, police, specialized investigators—fire, workplace, electricity, etc., lawyers)*
- *Collection and management of death investigation information and evidence*
- *Judicial assessment of investigation evidence*
- *Provision of findings and recommendations, including ensuring these are effectively communicated to all relevant parties, including families*

⁵⁷ http://www.attorneygeneral.jus.gov.on.ca/inquiries/goudge/policy_research/pdf/Cordner_Model-Forensic-Pathology.pdf

- *Liaison, audit, and reporting re responses to recommendations arising from death investigations*
- *Public education about the death investigation system*
- *Policy development to underpin service provision*
- *Training and professional development for death investigation system staff and other agencies involved in the death investigation*

The principles that should be applied to achieve the purposes and to provide the services

- *Death investigations must be undertaken within a judicial, legislated model applying the principles of natural justice and judicial independence. This includes the structural and operational arrangements for death investigations providing for clear role definition, independence, and accountability of the individuals and agencies involved.*
- *Taking account of legal and ethical requirements, all death investigation services must be undertaken with a therapeutic approach including sensitivity to different cultures and faiths.*
- *Each reported death must be investigated to the extent necessary to meet the purposes of the death investigation system, acknowledging that in some instances these purposes may need to be balanced against each other.*
- *The services necessary to meet the purposes must be undertaken by those with the most relevant expertise.*
- *All agencies involved in death investigation must take a collaborative approach involving effective and efficient communication.*
- *Consistent standards of death investigations must apply across the jurisdiction. (To this end, written standards should be developed and applied.)*

Although developed to describe and produce an 'ideal' system, these principles nevertheless provide a valuable background against which to compare England and Wales with the rest of the world. The Corder report (footnote 57), draws into sharp perspective the differences that exist between the two systems and provides a basis for public and professional debate should the possibility of system change emerge in the future.

3.3.6: Concluding remarks

There is good evidence that the 'forensic product' of the current cadre of HORFP's is fit for purpose and meets the needs of the CJS. Standards are described for both the forensic report and the forensic autopsy. Each report has a 'critical conclusion check' done by a second pathologist and when finished is complete within itself without reference to external material. HORFP's have a good record of attending crime scenes when requested to do so.

The current forensic autopsy, as described by the standards document has mandatory and discretionary components. The mandatory components require the autopsy to undertake an examination of all the viscera, when in straight forward cases, establishing the cause of death may not need this. It is possible that the adversarial nature of cross-examination in

court drives the autopsy to completeness rather than to the point at which the cause of death is clearly established. If, through imaging and other developments, the content of the forensic autopsy changes, there will be substantial effects on training and consultant remuneration models.

Paediatric and sub-specialty opinions remain an area of immediate and future concern. The service provided is fragile and dependent on a very small number of practitioners who are not getting any younger. Urgent action is needed to improve the current situation and this may need active measures being taken rather than allowing passive recruitment. The continued provision of sufficient high quality general and specialist advice is of great importance to the judiciary who are currently expressing concerns over its dependability in relation to the needs of the courts.

When the English and Welsh forensic pathology model is compared with overseas jurisdictions, it is found to be unique in its *modus operandi* and in the range of professional work it undertakes. In other developed nations forensic pathologists lead a national death investigation service, working in close co-operation with coronial pathologists and the equivalent of coroners and the police. This work is carried out in larger regional centres to and from which bodies are transported from the location of the crime. There is much in the Canadian and Australasian model which is worth consideration when planning for the future in England and Wales.

3.4: Second autopsies

3.4.1: Definition

Second autopsies, sometimes termed defence autopsies, are a repeat forensic examination by a different pathologist. This examination reviews the original forensic autopsy report to agree or challenge its conclusions and usually includes the examination of the body or remains.

3.4.2: The principles of justice and retention of bodies

Everybody giving evidence to this review agreed that the current methodology surrounding second autopsies needed re-assessment with a view to change. The nub of the problem is that if criminal charges are to be brought, the interests of justice dictate that the defendant should have the right to re-evaluate the forensic findings and, if necessary, have further tissue samples taken. Furthermore, if there is more than one defendant, each has the right to instruct their own forensic pathologist. The view has been expressed that on many occasions second autopsies result from the instructions of the legal team as a form of completeness rather than necessity in specific cases. This power to re-examine forensic evidence is particular to forensic pathology. In comparison, the crime of scene is not held inviolate until the defence can examine it, but they can review and take an opinion on the forensic evidence recovered.

This right of re-examination exists even if, (as in the majority of cases), the forensic findings, although required to determine the cause of death, are not part of the prosecution case. The latter is usually more dependent on opportunity, witnesses, crime scene evidence and means. The consequence of this legitimate even-handedness is that there can be very prolonged delays before the body is released to the relatives for the funeral. Although always distressing, the distress is particularly acute in suspicious child deaths where there have been occasions on which the body has been held for many months (sometimes exceeding the age of the child at death), whilst awaiting specialist reviews. Adult bodies have even been retained for years until the outcome of an appeal.

An additional complicating factor is the situation when a homicide or unlawful death has clearly occurred, but the police have not been able to charge a suspect. Then the release of the body is in the gift of the coroner, and although there is guidance, there appears to be no nationally agreed policy. The advice given in Home Office Circular 30/1999 is that if no one has been charged, the coroner will order a second post mortem examination by an independent pathologist, retain the report and then hand it to the defence if there is a subsequent defendant in the case.

3.4.3: Professional views

The forensic pathologists themselves agree that the way the system operates at present is far from ideal, that it is unfair on relatives, and that second autopsies rarely affect the process of justice. This view is shared internationally. The problem would reduce dramatically if second autopsies became a critical desk-top review of the original autopsy. The original autopsy will anyway have been subject to a critical conclusion check intended to confirm that the original autopsy was done properly and that the conclusions from the facts were sound. A forensic pathology report should have, and be professionally accepted to have, all the necessary evidence set out and be comprehensive. A pathologist acting for the defence can then critically review the report in terms of its findings, deductions and conclusions. This second pathologist's conclusions and opinions may differ from the first, but the facts upon which these are based should be accepted by both of them. This would make the holding of bodies and second physical examinations of the remains an unnecessary exercise in the vast majority of cases.

There is a strong measure of agreement to this principle across pathologists, police and lawyers. However, what is feared, is that whatever the relevance (or irrelevance), of the first forensic report to the prosecution or defence, barristers might seek weaknesses within it to cast doubts across the whole of their opponent's case. When this happens, it not only encourages the taking of didactic and unbalanced professional positions, it can also embarrass and weaken the professional standing of the pathologist.

3.4.4: Possible resolution of the problem

The answer is to have professional agreement on what constitutes a comprehensive autopsy in a given situation. As seen above in section 3.3.3, the current standards for a forensic autopsy are a mixture of mandatory and judgement-based procedures. It is also true that in the past there have been a small number of celebrated cases where the original

autopsy has been found wanting⁵⁸, and this does leave a disturbing niggles of doubt if only a desk-top review was possible.

One approach to solving this problem has been the suggestion that the autopsy should be videoed to demonstrate that it has been carried out properly and that its factual findings will therefore be beyond reproach. The forensic pathologists themselves vary in their attitudes to this: some would be willing to accept it as a consequence of the current climate of societal challenge but none feel that it would add to the integrity of the report. The conclusions of this review are that because:

- Not all forensic pathologists conduct the autopsy in the same way
- The presence of the video recording might inhibit discussion when this would be valuable, (whether the video had or did not have sound).
- The quality of video stills is not always sufficient for the necessary detail. The video would not replace the need for still photographs because its sensitivity was so much lower.
- There would be a need to define what constituted an acceptable recording
- The potential to use specific items in the recording in court to weaken the pathologist's standing; if there were discussions around a particular issue, this might be used as a critical point in court.
- There is the question of the dignity of the dead and the possibility of voyeurism on social media.
- The stressful effect on relatives seeing video evidence presented in court.

at the present time, nothing would be added to the interests of justice or the interests of the relatives of the deceased by making video recording mandatory. However, having come to this conclusion at this time, it also has to be stated that in some cases with disputed forensic evidence, just what was and was not done, and in what sequence, has been the subject of court dispute. Despite the existence of a Code (Appendix 8) there is therefore still a need for the profession to resolve and agree on well-founded procedures which are accepted by all.

The present situation as regards second autopsies is very unsatisfactory and urgently needs attention. Possible ways of contributing to this are:

- Defining a minimum high quality photographic set of stills that are timed and dated and clearly set out the details of the external and internal examination of the body and the relevant organs
- Strengthening the critical conclusion check so that it is done by a second pathologist external to the group within which the autopsy was done
- Regularising the actions of coroners and police to enable bodies to be released within a reasonable time.

One possible way of substantially reducing the number of unnecessary 2nd PM's would be to make the authorization for them to be a judicial process where the defence was required to

⁵⁸ The relevant pathologists are no longer on the Home Office Register.

make a formal application and justify the reason for the second post mortem to a coroner or a judge.

3.4.5: Concluding remarks

This report would recommend that there is immediate attention given to the organisation of second autopsies to prevent the unnecessary retention of bodies. This will require co-operation between forensic pathologists, coroners, the Home Office, the Ministry of Justice, police and lawyers at national level with the objective of making the second autopsy a desk-top examination of the first autopsy report in the vast majority of cases. This does not mean that the second pathologist will necessarily come to the same conclusion as the first from the autopsy findings, but it does mean that they will accept and agree on the factual findings.

3.5: Mass casualties

3.5.1: The problem

Although thankfully rare, sometimes there is a catastrophic natural, civil or terrorist event that results in mass casualties. Those who die do so because of the injurious incident but the dead need identifying. Also, and very importantly, the relatives, if only for closure, need to know that their loved one's death was inevitable and could not have been averted either by earlier action or by proper immediate care at the scene or in the hospital. There are two practical problems for pathology:

- Assembling and handling the bodies in a suitably equipped and sufficiently large area: storage and preservation are major issues.
- Having enough suitably skilled pathologists to complete the autopsies in an acceptable time frame.

It should be noted that in accordance with Interpol Standards, if some of the fatalities were foreign nationals, pathologists from the victims' home countries might be deployed.

3.5.2: The solution

In England and Wales all Local Authorities in conjunction with police forces have identified locations where facilities for multiple simultaneous autopsies can be set up at short notice. These facilities include cold storage, multiple examination tables, identification suites, and suitable drainage arrangements. When tested (e.g. the London bombings, the Marchioness disaster) they have functioned well.

One problem is however, that because of the small number of HORFPs, most of these mass casualty autopsies have to be done by pathologists more used to undertaking coronial work. Although uncommon, there have been occasions when this has led to sub-standard examination and reporting. Such occurrences are another strong argument for strengthening the links between forensic and coronial pathologists and encouraging them to work together in larger centres.

In mass fatality incidents, the non-forensic autopsy pathologist should conduct their work under the close supervision of a HORFP and it is suggested that one HORFP could oversee the work of up to five non-forensic pathologists. The current arrangements for the deployment of HORFPs are that the Group Practice region within which the incident falls will take the lead and call in HORFP colleagues from other areas as required. However the arrangements for calling out non-forensic pathologists to assist appears sketchy and inconsistent. The NHS should have in place formal call out arrangements for such mass fatality incidents.

3.6: The training of forensic pathologists and histopathologists

3.6.1: Introduction

The changes to postgraduate training in the UK over the recent past have been described earlier in Section 3.1.5. Postgraduate training is now regulated by the GMC. The GMC is empowered whether or not to approve curricula and assessment systems, training programmes, and posts held by trainees. It sets standards for postgraduate medical education and training and tests whether or not these requirements are being met through its quality assurance activity. These criteria apply across the whole of the UK, not just England and Wales and the training programmes are UK-wide.

To keep in step with Europe, and to ensure competency within sub-specialty practice, in recent years some additional definitive 'specialist' programs of training have been defined rather than allowing an individual trainee to informally specialise within a generic subject area. This has important connotations for the recruitment of, and flexibility of, consultants when appointed to a substantive post which will last a professional lifetime. The full impact of its effect in clinical practice and the maintenance of a clinical service has yet to be assessed. Pathology has been one area where such changes have been substantial.

The 5th edition of the 'Gold Guide' (A reference guide for specialty postgraduate training in the UK), was published in May 2014⁵⁹, and within pathology, from 2010 – 2012, the following specialties were approved for separate Certificates of Completion of Training (CCT's)⁶⁰:

- Diagnostic neuropathology
- Forensic histopathology
- Paediatric and perinatal pathology
- Histopathology (with cytopathology as a sub-specialty addition)

⁵⁹http://www.rcpath.org/Resources/RCPath/Migrated%20Resources/Documents/T/Gold_Guide_5_MAY2014final.pdf

⁶⁰ See the Royal College of Pathologists website

3.6.2: Training in forensic histopathology

The Home Office currently provides most⁶¹ of the funding for postgraduate training posts in forensic pathology in England and Wales. This originated as 'Recommendation 18' of the Wasserman Report (Appendix 3) in 1989, was introduced in 1991, and has continued since. The posts are established under the management of the Regional Postgraduate Deans and COPMeD (Conference of Postgraduate Medical Deans (UK)), appoints a specific postgraduate dean to be responsible for the specialty nationally⁶². The Royal College of Pathologists hosts the Specialist Advisory Committee that represents all relevant stakeholders and oversees the running of the national programmes. The curriculum for the training programme in forensic histopathology is shown as Appendix 15.

The Home Office provides for there to be a maximum of 8 trainees in post at any one time. There are currently 6. Recruitment to the specialty, which is not done on a national basis, is healthy: there are typically three or four good applicants per post. Progression of the trainees through the training system has generally been satisfactory. Over the recent years there have been two trainees who have not completed the forensic CCT programme who have completed training in different areas of pathology.

The current training arrangements have produced two significant anomalies:

- Because of the postgraduate Dean's minimum requirements that define a suitable training environment, trainees (currently 6 in total) are only based at 4 centres – Liverpool (2 trainees), Newcastle (2 trainees), Cardiff (0 trainees at present) and Leicester (2 trainees). London and the West Midlands (the biggest and busiest Group Practice), and Bristol only get trainees on attachment rather than being wholly responsible for them. The absence of a training centre in the nation's capital is a casualty of history as described earlier in Part 2 of this report.
- Because the great majority of a forensic pathologist's work is directed at suspected homicides, and the number of these is falling (see sec 3.2.4), there have been insufficient posts advertised by the Group Practice system to match the production of those completing training. Neither have the NHS nor the universities offered alternative employed opportunities. This has led to a loss of training investment. From 2009 – 2014, only 40% of trainees funded by the Home Office have become established members of Group Practices in England and Wales.

The PDB correctly decided to make single, isolated forensic practice impossible (for all the proper reasons described elsewhere in this report), and hence made it necessary for a forensic pathologist who had completed training to have the offer of joining a Group Practice before being considered for the Home Office Register. An unintended consequence of what was in principle a correct decision at the time, has, without the possibilities of other job opportunities, effectively made a proportion of forensic pathologists who have completed training unemployable in England and Wales in the presence of a falling national workload.

⁶¹ The Welsh Assembly part-fund a second trainee if there is one in placement in Cardiff

⁶² This is currently the Dean of Postgraduate Medicine, West of Scotland Region

3.6.3: Training in general histopathology

The present training curriculum in histopathology was launched in 2010⁶³. The content was designed to meet the needs of a modern health service. Basic training over the first few years covers surgical pathology (gross and microscopic examination of specimens removed at surgery or biopsy), cytopathology and autopsy practice. All trainees in 'stage A' of training have to complete 20 autopsies per year and in 'stage B' have to complete 20 adult and 2 paediatric autopsies per year.

After this however, continuing autopsy practice to the level of being capable of independent consultant practice is an option. If candidates do continue this training route, they must complete at least 20 autopsies per year and pass the Royal College of Pathologists Certificate of Higher Autopsy Training (CHAT) (as well as the other components of the final FRCPath exam) before the award of the CCT. Importantly, it is this training route that provides the consultant body that performs the majority of the coronial autopsies in England and Wales.

The Royal College of Pathologists has reviewed the consequences of these training developments⁶⁴. The number of new post mortem trained pathologists needed per year is unclear but approximately 50 histopathologists (all of whom had to be autopsy competent to pass the College's Fellowship), retire per year from a pool of about 1500 in the UK. While not all of the retiring consultants would have been post mortem active many would have been. At the time of writing it is difficult to judge exactly what the impact of the new training arrangements will be because the pathology training programmes have been in transition from the previous curricula with elements of 'double running'.

The problem is that the number of trainees choosing the new 'autopsy competent' route is very unlikely to meet the needs of the coronial system (or even perhaps the NHS) in the future. In addition some of the trainee doctors passing the Royal College of Pathologists Certificate of Higher Autopsy Training may choose not take up post mortem practice in the service of the coronial system. The reasons for this are various, (including societal trends), but must include the low level of coronial fees, difficulties in obtaining time to do the work properly, and the absence of advertised NHS consultant posts to include autopsy time to complete coronial autopsies during normal contracted clinical sessions. There is an unequivocal view expressed by the histopathologists responsible for postgraduate training that the number of pathologists leaving post mortem practice is definitely not being matched by the number entering.

The conclusions from this are:

- The numbers of post mortem proficient pathologists in the country is likely to fall dramatically in the next ten years.

⁶³ Available at:

http://www.rcpath.org/Resources/RCPATH/Migrated%20Resources/Documents/H/histopathology_curriculum_ar.pdf

⁶⁴ The data in the following paragraphs has been supplied by the RCPATH

- Even if post mortem numbers continue to fall at their current rate of 1% per year this will not cancel out this shortage.
- Therefore in the medium term (10-15 years) there will be too few post mortem proficient pathologists to meet the needs of the country.
- A concerted effort is required now to prevent unsustainable pressure on the standard post mortem and coronial systems in the medium term. The worry is that there could be a 'tipping point' where the pressure on those able to do the work becomes so high that they withdraw from coronial duties and the service fails.

Another aspect of the separation of pathology specialty practice as described in section 3.6.1 is that two of the problem areas, neuropathology and paediatric pathology are now completely different training programmes. This is not discussed in detail here but the potential implications for the forensic service to the CJS are obvious from the issues described in section 3.3.4.

3.6.4: Concluding remarks

There are clearly two major current and future confounding issues in the provision of forensic and coronial pathology:

- Because of the defined professional remit of the forensic pathologist, the numbers required for consultant practice are low and at present the supply from training exceeds the consultant employment opportunities in England and Wales.
- Now that there is an option not to emerge from histopathology training proficient in consultant level autopsy practice, the numbers of trainees choosing this option will not be sufficient to meet the needs of the coronial system.

The consequences of this anomaly to the public interest, especially in light of the intended introduction of the Medical Examiner system to increase the accuracy of death certification (see section later section 3.7), are obvious and urgent action is necessary. Although possible future developments will be discussed later, it seems self-evident that there needs to be greater interchange between the forensic and general pathology training systems. This would be greatly helped, as would the role of neuro- and paediatric pathology if forensic pathologists, histopathologists and sub-specialty pathologists were working more closely together in larger units.

3.7: Society and the investigation of the cause of death

3.7.1: How the public consider and understand death

The relationship between death and society and between the dead and the surviving is in a state of evolution. Not only do different religious and ethnic groups handle these issues differently, with the secularization of society and the reduction in a belief of the existence of a soul, secular people are developing their own ways to deal with grief. Sometimes this means having the memory of the deceased as an accompanying friend who will never be met again.

One of the more common difficulties the lay person has with death is why it happened, especially when the 'cause of the death' is not necessarily the cause of 'dying'. The case of a fatal cardiac event or cerebro-vascular accident may or may not be related to a terminal malignancy that has characterised the medical, psychological and social trajectory of dying preceding the death. A suicide may or may not be related to news of a fatal condition. A fatal (single vehicle) accident may or may not be a suicide. The death of someone of advanced age may have several contributing diseases; and so on and so forth. The dying does not always predict the death *ipso facto*. Notwithstanding the precision (or ambiguity) of the diagnosis and/or the post-mortem observations of the underlying pathology, extrapolations need to be made with care when explaining causation to relatives. Recognition by the public of the tenuousness of the understanding of the relationship between dying and actual death is often poor.

These remarks about the relationship between 'dying' and 'death' also impact upon family and carer responses to the determination of death, the course of grief after bereavement, and the community understanding of the (medical) control and fragility of life itself. There are different social responses, (sympathy, revulsion, terror, apathy etc.), to different diagnoses and officially declared causes of death. Their implications and impact can be long-lasting and serious, both morally and socially.

The construct and circumstances of an individual death appear (to the reviewer), to be often under appreciated by clinicians (of all specialties) in preparing to break bad news. The clinician or family liaison officer etc., involved may be truly empathic, but s/he does need to know the likely thoughts and interpretations that the surviving relatives will put upon the information they are given. The challenge of doing this is difficult enough when the clinician and the relatives speak the same language and come from similar cultural backgrounds: in a multi-ethnic society when having to work in a different language through an interpreter the transmission of sensitively presented accurate information is far from guaranteed. This is a pity since an explanation of the death should be the start of healing, not the creation of suspicion and anger.

3.7.2: Ethnicity and religion

Death is an inevitability which ends life. When it happens, irrespective of the suffering it alleviates, it is a cause of sadness in those who remain. Throughout history, its occurrence has been associated with a wide range of ceremonies and funeral rites. The form these have taken has varied over time and, at any one time, has depended upon religion, ethnicity, culture, social setting and economic resources. Britain is now described as a 'multi-cultural' or 'multi-ethnic' country. Its approximate constituent groups are as shown in Table 3.7⁶⁵ overleaf.

⁶⁵ From the 2011 census: Ethnicity and national identity in England and Wales; Office of National Statistics; available at http://www.ons.gov.uk/ons/dcp171776_290558.pdf

Ethnic groups, England and Wales, 2011	
Description	Percentages
White	86.0
Mixed/ Multiple Ethnic Groups	2.2
Asian/Asian British	7.5
Black/African/Caribbean/Black British	3.3
Other Ethnic Group	1.0

Table 3.7: The ethnic mix of England and Wales, (ONS Census 2011)

One of the most important predictions from population trajectories since the last census in 2001 is that the future growth in the population is likely to be within the current minority groups such that in 2051, 20-30% of the population will be from what are now BME communities⁶⁶. Hidden within these 'ethnicity' figures are different religions and denominations. Some of these are specific to a particular group, whilst others span across several.

The 2011 census recorded religious affiliations as shown in Table 3.8⁶⁷.

Religious Affiliation, 2011	
England and Wales	Percentage of the population
No religion	25.1
Christian	59.3
Muslim	4.8
Hindu	1.5
Sikh	0.8
Jewish	0.5
Buddist	0.4
Other religion	0.4

Table 3.8: Religious groups in England and Wales (ONS 2011)

Because the future population growth is predicted to be in the BME groups, it follows that the minority religions be likely to grow. It should also be noted that the second largest group in the table specify that they have no religion - demonstrating the social drift to a more secular society.

⁶⁶ A portrait of modern Britain (2014) available at:

www.policyexchange.org.uk/images/publications/a%20portrait%20of%20modern%20britain.pdf

⁶⁷ Office for National Statistics 2011 Census: available at <http://www.ons.gov.uk/ons/rel/census/2011-census/key-statistics-for-local-authorities-in-england-and-wales/rpt-religion.html#tab-Changing-picture-of-religious-affiliation-over-last-decade>

In the matter of ethnicity and religious belief, an often-omitted factor is the important rise of those from mixed race/ethnic backgrounds. So-called 'mixed race' people are now thought to be the fastest growth group in the UK. This is an additional complication in the way clinicians, family liaison officers, and coroners' officers etc., can best interact with them. Despite forethought, there is an ever-present possibility, because of the ambiguity of appearance, of not addressing them in the way they would most prefer. Sociologists tell us that mixed race people may or may not be easily 'seen' by others (i.e. may be socially and politically invisible), and may subscribe to religious beliefs in highly selective ways (like many of those who declare themselves 'non-religious') but may be heavily affected (in religious belief terms) by matters relating to dying, death, and bereavement. This indeterminateness makes social and psychological reactions to news about death unpredictable and sometimes complex. The area of practice is highly challenging because it is new, often unrecognised despite obvious population trend data, and yet has major implications for the treatment of families by clinicians, the police and coroners. There is little recognition in the literature of this social development yet being studied in major projects.

The social trends in ethnicity and religion described above are new. Traditionally, in England and Wales, the legal system relating to autopsy practice and the recording of the cause of death has been developed in the interests both of individuals and of the public on a secular basis within the matrix of a traditionally Christian ethic. All faiths are, in law, regarded equally when individuals come within the purview of the CJS, either as suspects or victims.

This is surely correct: the administration of justice, for it to be applicable in a fair and free society must favour no one individual or group over another. It was however recognised by Cordner and his colleagues in describing an 'ideal' death investigation system (see section 3.3.5, footnote 56), that providing that the requirements for justice had been met, the forensic service also owed a duty to the relatives of the deceased and to give respect to their beliefs. Specifically they said the service should provide:

- *Acute bereavement support and referral for families and others directly affected by the death investigations*
- *Information provision and liaison for families and others directly affected by death investigations, and*
- *Taking account of legal and ethical requirements, all death investigation services must be undertaken with a therapeutic approach including sensitivity to different cultures and faiths.*

Much of what is written by them already occurs as part of good practice in England and Wales. In undertaking this review the responsibility of pathologist to the relatives was mentioned by a number of pathologists, but as a group there appeared to be a variation in their interpretation of where their responsibilities started and stopped. The wider responsibility of either the forensic or coronial pathologist to the relatives does not appear in the codes of conduct relating to either forensic or coronial autopsies (Appendices 8 and 9). On the other hand the Royal College of Pathologists has emphasised communication in responding to consultation from the Department of Health (see footnote 32), and communication and managing the bereaved in its pathology training curricula (Appendix 15).

Communication with the surviving relatives and friends by medical professionals, family liaison officers and coroners' officers is a factor which was emphasised by the lay persons consulted during the taking of evidence for this report. This is something that the profession could review and perhaps come to a consensus decision about, accepting that in some cases which are *sub-judice* the release of information might be prohibited by law. If this is not a restriction, then the preparation of 'family friendly' post mortem reports (as is already done in some neonatal units), is a development that could be encouraged.

Whilst in no way moving away from the position that the interests of justice are paramount and must be served, given the current societal trend towards recognising individual differences in ethnicity and belief, it seems reasonable to reconsider the proportion of bodies that come to autopsy in coronial practice and the need to perform an exhaustive autopsy in forensic practice when the cause of death is clear from the outset. This is of course a fundamental shift of professional practice from that which has served the interests of justice well over many years and so must not be taken lightly, but to question the norms of the *status quo* is nevertheless legitimate.

3.7.3: Does the cause of death matter to society?

There are a number of important reasons why the cause of death should be accurately recorded. These include:

- Trend data for public health metrics to plan health services for the future
- Detection of geographical differences in the survival of given diseases
- Assessing the success or otherwise of control measures and environmental policies in reducing occupational and environmental deaths
- Detecting changes in the incidence and virulence of a disease
- Assessing the impact of inequality and poverty
- Reviewing targeted interventions
- Research
- Providing information for the surviving relatives in case there are implications for them.

Also, as the human genetics programmes progress, it becomes increasingly clearer that genetic drivers make a very significant contribution to the time and potential disease pathway to death. There has in fact, never been a period in history when the accuracy of the cause of death has been more important to those who remain. It is easy to imagine a situation in which the genetic code of the dead is revealed to give advice to the living. Superimposed on all these 'medical reasons', there is a general trend in society demanding transparency and accountability in public services combined with a 'decline in deference' to authoritarian organisations.

The question is therefore, how accurate are death records when their data is so important for society? And the answer is, not as reliable as one would like, given the investment and closure that might be made on their metrics.

Changes to the death certification process were proposed by the 3rd Shipman Enquiry Review⁶⁸ and the parallel running Luce Review⁶⁹ and further examined by the House of Commons Constitutional Affairs Committee in 2005-6⁷⁰. All were critical of the situation they found, and reform came in the Coroner and Justice Act 2009 (which was later amended by the Health and Social Care Act 2012). This required the certified cause(s) of all deaths that are not investigated by a coroner to be independently scrutinized and confirmed by a new officer called a 'Medical Examiner'. Support for the appointment of medical examiners can also be found in recommendations 275 – 279 of the Mid-Staffs Report (2013)⁷¹.

The situation at the time of writing (March 2015), is that although these changes were intended to be implemented by April 2014, the medical examiner system is still not realised. It was estimated that about 500 medical practitioners (senior doctors or senior GPs working part time), would be appointed to 170 full time equivalent medical examiner posts across England and Wales under the leadership of a National Medical Examiner for England and Wales. Although the National Examiner has been appointed and there are training packages prepared, no actual medical examiners are in post. In essence, 12 years on after the 3rd Shipman Report and the Luce Review, in relation to death certificates, nothing has progressed.

To prepare for the introduction of medical examiners, in 2008 the Department of Health piloted the new death certification process in six areas across England and Wales and these were analysed by the Office for National Statistics (ONS)⁷². The ONS was provided with information including the cause(s) of death proposed initially by the certifying medical practitioner and also the confirmed cause(s) of death following medical examiner scrutiny of the deceased's medical history and hospital notes. The study reviewed 5112 deaths occurring in 2010 and 2011, predominantly in hospital settings: the areas were not statistically representative of England and Wales.

Analysis showed that despite advances in diagnostic procedures, following scrutiny, medical examiners were more likely to add supplementary information to the death certificate. This led to more conditions being registered as contributory, and the order on the certificate being altered. As a result there was a change to the underlying cause of death in 22% of cases. Applying a similar multiplier to the non-reported death statistics in section 3.2.4,

⁶⁸ Smith J (2003): the Shipman Enquiry 3rd Report: Death certification and the investigation of death by coroners. Available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/273227/5854.pdf

⁶⁹ Death Certification and Investigation in England, Wales and Northern Ireland: The Report of a Fundamental Review (2003)[known as the Luce Review, after the Chairman]. Available at: <http://webarchive.nationalarchives.gov.uk/20131205100653/http://www.archive2.official-documents.co.uk/document/cm58/5831/5831.pdf>

⁷⁰ Reform of the Coroners' system and death certification: Available at: <http://www.publications.parliament.uk/pa/cm200506/cmselect/cmconst/902/902i.pdf>

⁷¹ Report of the Mid-Staffs Foundation Trust Public Inquiry: Vol 3; Present and Future; Annexes (2013); pg 1704. Available at : <http://www.midstaffspublicinquiry.com/sites/default/files/report/Volume%203.pdf>

⁷² Office for National Statistics (2012): Death Certification Reform: A case Study on the potential impact on mortality statistics, England and Wales. Available at: http://www.ons.gov.uk/ons/dcp171778_288141.pdf

accepting the limitations of the case selection, it can be seen that this equates to a mis-certification of 50 - 60,000 deaths per year.

These figures are neither surprising nor new. A meta-analysis examining English language articles between 1980 and 2004 concluded that at least a third of all death certificates are likely to be incorrect⁷³. This figure was supported by a review undertaken by the London School of Hygiene and Tropical Medicine⁷⁴: another studying the critically ill in a UK teaching hospital found major missed diagnoses in 39% of cases.⁷⁵ Data from other countries produces similar results.

There is also a European dimension to recording the accuracy of the cause of death⁷⁶. Article 2 of the European Convention on Human Rights gives signatory states an obligation to protect the lives of their citizens. It says:

“Everyone’s life shall be protected by law. No-one shall be deprived of his life intentionally save in the execution of a sentence of a court following his conviction of a crime for which the penalty is provided by law. Deprivation of life shall not be regarded as inflicted in contravention of this article when it results from the use of force which is no more than absolutely necessary: (a) in the defence of any person from unlawful violence; (b) in order to effect a lawful arrest or to prevent escape of a person lawfully detained; (c) in action lawfully taken for the purposes of quelling a riot”.

The courts have found that in some circumstances this duty implies an obligation to investigate deaths. A number of important judgements of the European Court of Human Rights and the domestic courts have significance for the conduct of some coroners’ inquests, though the inquest is not the only process through which the obligation to investigate can be met.

Another consequence of Article 2 is the question of what constitutes ‘state custody’. If those detained in a care home because they lack ‘capacity’ as set out in the Mental Capacity Act 2005 die in care, they potentially fall under the remit of the coroner as a death in detention. If this became custom and practice, it would greatly increase the number of reported deaths, even when those deaths were natural and of known cause.

In summary, for a number of significant reasons, the accurate recording of death is important to society, and in reality it could be more accurately certified in over 50,000 cases per year. There is clearly a need for action.

⁷³ Roulson J, Benbow EW and Hasleton PS (2005): Discrepancies between clinical and autopsy diagnosis and the value of post mortem histology: a meta-analysis and review. *Histopathology*; 47; 551-559.

⁷⁴ Clarke A, Gladwin J (2003): Improving the health of the living? An investigation into death certification and coronial services and some suggestions for change. Submission to the Luce Review (footnote 68), para 5, pg 40.

⁷⁵ Perkins GD, McAuley DF et al. (2003): Discrepancies between clinical and post mortem diagnoses in critically ill patients; *Critical Care*; 7(6); R129-32

⁷⁶ See Paras 10 & 11 of footnote 69

3.7.4: Concluding comments

The social, ethnic and religious mix of England and Wales is in a constant state of flux whilst simultaneously more people are declaring themselves to be secular. Although it must always be secondary to the interests of justice, given the trend in society to take more cognisance of an individual's rights and sensitivities, there is a case to be examined for reflecting this in the principles of death examination in both coronial and forensic work.

The medical examiner system proposed in law for the benefit of society, has still not been implemented in medical and legal practice. The results of a pilot study looking at the effect of introducing such a system have demonstrated that changes were necessary to the initial certification of nearly a quarter of the deaths recorded. Given the importance of the cause of death to the public interest, urgent action is needed to improve this situation.

Importantly, it must not be forgotten that to the surviving relatives and friends, good communication is vital, and this is emphasized in the GMC's '*Good Medical Practice*'. To communicate well takes effort, particularly in today's multi-cultural society. Although the majority already do, all professionals working around the occurrence of death need to regard good communication as an essential part of modern practice and make every effort to achieve it.

3.8: The coronial autopsy service

3.8.1: The Office of the area Coroner and the Coroners and Justice Act (2009)

Although in existence earlier, during the reign of Richard 1, the office of coroner was recorded as early as September 1194 by Article 20 of the "Articles of Eyre" to "keep the pleas of the Crown" (Latin, *custos placitorum coronae*) from which the word "coroner" is derived. Coroners were introduced into Wales following its military conquest by Edward I of England in 1282 through the Statute of Rhuddlan in 1284. A feature of coroners is that they work within a geographical area known as their jurisdiction: they are embedded in English and Welsh constitutional life as law officers with a community commitment. As such they enjoy considerable autonomy and as was demonstrated by the Touche case in 2001, their decisions can only be challenged by a legal process of appeal to the higher courts⁷⁷.

Following re-definitions, there is currently some confusion about a coroner's 'area' and other terms. England and Wales is divided into 98 coroner areas, formerly known as 'districts', and each is a separate legal geographical entity. Each must have a senior coroner in charge. In a few areas there are also 'area coroners' who are at a level below the senior coroner. The coroner area is (normally) the limit of the senior coroner's jurisdiction, although following the Coroners and Justice Act 2009, bodies may be now moved outside the senior coroner's area and inquests may also be held outside in appropriate circumstances.

⁷⁷ Court of Appeal (Civil Division): R(Touche) v Inner North London Coroner (2001) QB 1206

The value of coroners to the public interest is not in doubt, but their fitness for purpose in the twenty first century has been repeatedly challenged. The Luce Review⁷⁸ listed 15 critical defects when it reported in 2003. The Constitutional Affairs Committee, reviewing the situation at that time and considering the draft bill that became the 2009 Act was similarly critical in 2006⁷⁹. Their summary read:

- *Reform of the system of death certification and investigation is long overdue. The coronial system in England and Wales has been neglected for decades and coroners' service to society is constrained by limited legal, financial and human resources. The death certification system is over complex and vulnerable to dangerous abuse.*
- *The Government's draft Bill will do much to improve the coronial system, building a reformed service around a reduced number of full-time, legally qualified coroners serving larger jurisdictions. National leadership will be provided by a Chief Coroner and a statutory Coronial Advisory Council. Coroners' powers of inquiry and investigation will be modernised and bereaved families and other interested persons will have new rights and status, including a right of appeal.*
- *However, the Government has made no provision in the draft Bill to remedy the critical defects in the death investigation system. There is no effective supervision of or support for certifying doctors, nor is there any mechanism for ensuring, so far as possible, that deaths which should be investigated are reported to the coroner. The Government has ignored the recommendations of both the Shipman Inquiry and the Luce Review and drawn back from its own proposals for reform of death certification, put forward by the Home Office in 2004.*
- *Moreover, the Government has failed to nationalise the coronial system, leaving local authorities as the main source of funding. It is, therefore, likely that the current inequalities of resourcing and variable levels of service to the bereaved in particular and society in general will continue.*
- *The Government is in danger of wasting a golden opportunity for substantial reform of the systems of death certification and investigation in England and Wales. Much of the improvement which might come about as a result of the proposals in the draft Bill will be threatened by the paucity of resources which are likely to be devoted to this important area.*
- *We believe that this draft Bill falls well short of what is required to reform the system.*

It does however need to be clearly recognised that many coroners contributed willingly and positively to the Luce Review, the Constitutional Affairs Committee and other enquiries, recognizing and wishing to reform the historical anomalies of the matrix within which they worked. Many are frustrated by the limitations of their service. All the coroners giving input to this present review were openly frank about the problems and welcomed reform and rationalization within the system.

Legislation in the form of the Coroners and Justice Act 2009 resulted from the issues identified in the various reviews described above. A summary of the changes and the

⁷⁸ see Section 4: pgs 16-17 of footnote 69

⁷⁹ see Summary, pg 3 of footnote 70

secondary legislation subsequent to it can be found in The Chief Coroner's Guide (CCG) published in 2013⁸⁰. Some of the changes most relevant to this report are:

- All newly appointed coroners must be legally qualified and satisfy the judicial-appointment eligibility condition on a 5-year basis. This does not apply to coroners appointed before July 2013. Persons with medical qualifications practicing in a medical capacity are no longer eligible for appointment. (Schedule 3, 2009 Act).
- Medical Examiners were to be introduced to examine all deaths not directly dealt with by coroners. (Chapter 2, section 19, 2009 Act)
- It enabled coroners' districts, now known as 'areas', to be changed to create larger administrative areas (para 13 of CCG).
- It removed the restrictions on where an autopsy can take place, allowing bodies to be moved geographically (Section 15, 2009 Act)
- A coroner is now able to release a body, where appropriate, during the investigation stage of the investigation process, without having to first open an inquest (para 86 of CCG).
- If an investigation has been commenced, the coroner may, on request, provide the next of kin or personal representative with a Coroner's Certificate of Fact of Death (para 87 of CCG).
- Section 14 of the 2009 Act gives a coroner the power to ask 'a suitable practitioner' to make a post mortem examination of a body. The coroner can determine what sort of examination he or she would like the practitioner to make. 'Special examinations' are no longer defined. A 'suitable practitioner' is defined in section 14(3) as either a registered medical practitioner or a practitioner who is of a type or description the Chief Coroner has designated as suitably qualified and competent to carry out such examinations. It should be noted that there are no plans at this stage to designate anyone other than registered medical practitioners as suitable practitioners to undertake autopsies (paras 72-75 of CCG). The coroner is free to select which individual practitioner s/he wishes to undertake the examination of the body.
- Inquests may be heard anywhere in England and Wales (pg 40 of CCG)
- It created the Office of Chief Coroner for England and Wales (see below)

3.8.2: The Office of Chief Coroner

The 2009 Act (para 8 of CCG) created the new post of Chief Coroner to provide judicial oversight of the coroner system. The Chief Coroner's main responsibilities are to:

- provide support, leadership and guidance for coroners;
- set national standards for all coroners;
- develop training for coroners and their staff;
- approve all future coroner appointments;
- keep a register of coroner investigations lasting more than 12 months
- and take steps to reduce unnecessary delays;
- monitor investigations into deaths of service personnel overseas;
- oversee transfers of cases between coroners;
- direct coroners to conduct investigations;

⁸⁰ Available at: <http://www.judiciary.gov.uk/wp-content/uploads/JCO/Documents/coroners/guidance/chief-coroners-guide-to-act-sept2013.pdf>

- provide an annual report on the coroner system to the Lord Chancellor, to be laid before Parliament; and
- collate, monitor and publish coroners' reports to authorities to prevent other deaths.

Very importantly, the Chief Coroner's position was established to provide leadership and oversight. It is a common mis-conception that he has day-to day direct line-management control of individual coroners. An exception is in relation to complaints when he may be required by the Judicial Conduct and Investigations Office (JCIO) to provide quasi-line management functions by giving specific training and advice.

The Chief Coroner is there to monitor the performance of the service overall, and to provide support, leadership and governance to the coroner system. The coroners referred to in the Act as 'Senior Coroners' still run the coroner's service in an area of England and Wales in accordance with the law **and are judicially independent in their actions and decisions**. The Chief Coroner has no budget for the delivery of the coronial service and coroners are funded by very diverse local authorities. All coroners are appointed by local authorities, but they are not 'employed' by them.

On his appointment the Chief Coroner said⁸¹:

'I will aim to provide quality and uniformity in the coronial system, with a national consistency of approach and standards between coroner areas. Openness, inclusiveness, thoroughness and fairness must be at the heart of the process if it is to be effective and serve the needs of the public'.

He has pursued his aims through the publication of 17 Guidance notes, 5 Law sheets and a variety of other initiatives listed in his First Annual Report⁸² (Appendix 16). The role and the influence of the Office are clearly still developing but the direction of travel is unambiguously towards standardisation and modernisation of the coronial service. It must not be forgotten, however, that individual coroners retain a degree of autonomy in their work, especially in the exercise of their judicial discretion which can only be challenged in the High Court.

3.8.3: The coroner and autopsy practice

The indications for an autopsy and current case numbers

The law prescribes that in England and Wales coroners shall investigate the body of a person lying within their jurisdictions where they have reason to suspect that:

- the deceased has died a violent or unnatural death;
- the cause of death is unknown; or,

⁸¹ Para 9, Appendix 16

⁸² Available at: <http://www.judiciary.gov.uk/related-offices-and-bodies/office-chief-coroner/chief-coroners-annual-report-2013-14/>

- has died while in prison or otherwise in state detention such as an immigration centre or while detained under the Mental Health Act 1983.

The objects of the investigation are to establish the identity of the deceased, and how, when and where they came by their death. This investigation may or may not result in an autopsy.

Strictly speaking, all autopsies, including forensic autopsies are 'coronial' in the sense that the coroner orders them to occur. Forensic autopsies have been considered earlier in this report: this section looks specifically at those autopsies in which foul play is not suspected at the outset. There are estimated to be approximately 700 – 800 pathologists in the UK who perform autopsies for coroners but there is no central register.

It is custom and practice that registrars of births and deaths, doctors or the police must report deaths to a coroner in certain circumstances. These are listed in the *Guide to Coroner Services* (footnote 89, para 3.2) as deaths where it appears that:

- no doctor saw the deceased during his or her last illness;
- although a doctor attended the deceased during the last illness, the doctor is not able or available, for any reason, to certify the death;
- the cause of death is unknown;
- the death occurred during an operation or before recovery from the effects of an anaesthetic;
- the death occurred at work or was due to industrial disease or poisoning;
- the death was sudden and unexplained;
- the death was unnatural;
- the death was due to violence or neglect;
- the death was in other suspicious circumstances; or
- the death occurred in prison, police custody or another type of state detention

In these circumstances, a coroner will request an autopsy if there are reasonable grounds to suspect that the cause of death is unknown, i.e. a medical practitioner does not feel able to provide a natural cause of death, '*to the best of his knowledge and belief*' or because they have not seen the patient for more than two weeks.

As can be seen from section 3.2.4, in 2013 (the last year with full statistics):

- There were 506,800 deaths of which
- 228,000 (45%) were reported to the coroner.
- 94,455 (41.4%) of the reported deaths (18.6% of the total deaths) had an autopsy of which
- 29,942 (31.7%) of the autopsies led to an inquest.

The Chief Coroner in his Annual Report⁸³ expressed his belief (without quantifying it), that

⁸³ Para 13, Pg 10 of Appendix 16

too many autopsies were being undertaken in England and Wales. He encouraged coroners 'to make sufficient well-focused early inquiries to see whether a finding that the death was from natural causes can be made without the need for any post mortem examination'.

International comparisons

The Luce Review⁸⁴ drew attention to the variation in deaths referred to the coroner and the number of autopsies carried out in different countries. Their findings in 2003 are shown in Table 3.9 (to the nearest whole %).

Jurisdiction	Percentage of total annual deaths referred to coroner (or equivalent)	Percentage of total annual deaths subject to an autopsy
England and Wales	38%	23%
Scotland	24%	12%
Ontario, Canada	27%	11%
New South Wales, Australia	14%	10%
British Columbia, Canada	28%	10%
New Zealand	14%	10%
Victoria, Australia	13%	10%
Republic of Ireland	27%	9%
Northern Ireland	24%	9%
Alberta, Canada	25%	7%
England and Wales (2013) ⁺	45%	19%

⁺These figures given in section 3.2.4 are included for comparison

Table 3.9: International comparisons in autopsy rates (see footnote 84)

The evidence given by the relevant contributors listed in Appendix 2 was that this situation has not significantly changed since the Luce Review. *The inescapable conclusion is that England and Wales carry out more autopsies in proportion to the total annual deaths by a clear margin of up to approximately 40% when compared to other jurisdictions.* This is especially surprising when other parts of the UK, (Northern Ireland and Scotland), are much more similar to other parts of the world. There is no evidence from other jurisdictions that the lower number of referred deaths and autopsy rates reduces the ability to meet the needs of justice or death certification.

This excess of autopsies is a feature of the coronial system in England and Wales that could well be significantly changed:

- by the introduction of the proposed Medical Examiner system
- closer working between doctors, police and coroners when deaths are reported and
- a greater preparedness of medical practitioners to be more pro-active in the registration of deaths

⁸⁴ Section 7, Pg 19 of footnote 69

It is possible, based on the pilots, that the referral rate to the coroner might increase, but the number of autopsies ought to fall.

The quality of the coronial autopsy and the report

In 2006 the National Confidential Enquiry into Patient Outcome and Death (NCEPOD) was directed to an audit of the coronial autopsy⁸⁵. It painted a bleak and unsatisfactory picture of the present and (then) future provision of this service. The principal recommendations were:

- *Government should consider and agree the fundamental purposes of the coronial autopsy. An ideal opportunity exists to do this during the passage through Parliament of the Bill⁸⁶ for reform of the coroner's system as recently announced.*
- *There should be nationally uniform criteria and standards for investigation of reported deaths. This includes the diagnostic level of investigation at autopsy and the definition of what a post mortem examination comprises.*
- *There should be regular (independent) peer review of coronial autopsy reports and processes to maintain consistency of agreed standards and accountability, and all pathologists and coroners - in training and as continuing professional development – should review the autopsy reports and related documents of their peers.*

The only part of these recommendations that has been adopted is the Royal College of Pathologists publication 'Standards for Coroners' pathologists in post-mortem examinations of deaths that appear not to be suspicious' in February 2014, which can be found as Appendix 9. This document however remains advisory, and although it describes clear and appropriate standards, there is no statutory obligation on pathologists to adhere to them or on coroners to insist on them.

Some of the individual findings of the 2006 NCEPOD report were considerably worrying:

- Over 25% of the reports were found to be poor or unacceptable (pg 32)
- Over 20% of the reports had no clinical history (pg 51)
- In one third of mortuaries it was standard practice that the pathologist was not obliged to inspect the body externally before evisceration. The practice of pathologists arriving at the mortuary to find that the body had already been opened and eviscerated was described as 'widespread' (pgs 57, 115). In only 18% of cases was the pathologist involved with the evisceration of the bodies (pg 56)
- There were areas of concern where foul play and third party involvement or industrial injury had not been indicated in the report or sufficiently evaluated (pg 89)
- Nearly 40 % of the reports did not include a clinicopathological correlation (pg 95)

The difficulty with interpretation of the 2006 NCEPOD report (see pg 30) was that it was a snapshot audit over a short period (7 days) auditing 1691 deaths from an annual total of

⁸⁵ NCEPOD 2006: The Coroner's Autopsy: Do we deserve better? Available at http://www.ncepod.org.uk/2006Report/Downloads/ncepod_2006_report.pdf

⁸⁶ this became the 2009 act

approximately 500,000 that took place nearly 10 years ago. However, from the evidence given to this review, although the extent may vary, there is suggestive hearsay testimony to believe that a number of these factors are still present in parts of the coronial autopsy system. Unfortunately, this reflects indiscriminately on the service when there is also strong evidence that there are centres adhering to the highest standards.

The question is, why does this situation exist? Possible answers are as follows:

- Some coroners dislike long reports and pathologists working under their direction are encouraged to be brief and to the point, rather than comprehensive.
- Apart from a minority of practitioners, the changes in the contractual arrangements of pathologists working in the NHS and university systems have resulted in few coronial autopsies being done in normal working hours as part of their main employment. They therefore have to attend to coronial duties as private practice, out of hours and often in a mortuary distant from their place of everyday work. This may encourage expedition at the expense of meticulousness.
- The fee for a standard coronial autopsy, currently standing at £96.80, is derisory and not conducive to thoroughness.

Conflicts of interest and the relationship between the coronial and forensic autopsy

It is always important for the pathologist to be properly independent: his or her duty is to the court and to tell the truth to the best of their ability. Whilst this is really a property of the mind, to the public and other interested parties, it is best that the independence is not only inherent, but clearly seen to be so by the pathologist having no connection, either personally or professionally with either the deceased or others involved in the case. This is covered in the Code of Practice for coronial autopsies (Appendix 9), where it says it is important for the pathologist to consider that if *'the death has occurred in the pathologist's own hospital, is it appropriate that he or she makes the post-mortem examination and, if not, to advise the Coroner. Such a decision must take due account of any potential conflicts of interest which should be disclosed to the Coroner'*.

It is also essential that the pathologist has the necessary skills and experience in unusual cases. The Code of Practice (Appendix 9), advises the pathologist to reflect on *'whether he or she has the appropriate expertise to make the post mortem examination and, if not, to advise the Coroner to seek an appropriate expert to conduct or advise on the procedure. If that expert cannot attend, the pathologist should seek advice from the expert to determine what material might be required for later examination and interpretation, and ensure it is recorded and/or preserved in an appropriate manner'*.

Difficulties can also arise when the pathologist perceives the request to undertake a post-mortem examination may result in criminal proceedings. When the pathologist is unhappy to do the post-mortem examination (for example, where the police appear to be interested, but are unwilling to seek the services of a forensic pathologist), the coronial pathologist must resist pressure to make the examination. He or she should then advise the Coroner of the reasons for declining the request to undertake the case.

There are a number of occasions on which an autopsy begins with a non-suspicious death

then subsequently discovers suspicious findings. The Pathology Unit within the Home Office has recently reviewed 33 such cases identified during the Forensic Science Regulator's Audit in 2012 (see Appendix 12). At least 10 of these transpired to have been potential homicide cases. In 2014, 103 such cases were identified and will be subject of further enquiry. When this occurs, and the autopsy is not being undertaken by a HORFP, then the autopsy should be halted and the situation reported to the coroner. It was emphasized by the Shipman Inquiry that *'there must be an ever-present readiness to keep in mind the possibility that death might not have been natural'*⁸⁷. The need to adopt an open mind on all occasions and not become fixated on a preconception has been recognised and addressed by the Forensic Science Regulator who has issued draft guidance⁸⁸.

The role of the coronial pathologist therefore includes consideration of the possibility of concealed homicide or negligence in care and the examination must be conducted in such a way that the opportunity to detect evidence of such a possibility is not missed. That is why the standards for the post-mortem examination of a non-suspicious death are so important: it is essential that they are followed so that should such an event occur, there is maximum information and minimum loss of evidence passed on to the HORFP who will continue the examination.

3.8.4: The present operation of the coronial system

It would be fair, on the evidence provided to this review to describe the coronial autopsy system as 'a curate's egg' at the present time. There is much good practice within it and what the public can expect has been set out clearly and sensitively in the *Guide to Coroner Services*⁸⁹. On the other hand, there is considerable anecdotal evidence indicating that individual coroner autonomy and variability in autopsy standards continue, in some instances, to give cause for concern.

The *Guide to Coroner Services* clearly indicates the rights and expectations of relatives of the deceased and the intent to be sensitive to different religious and ethnic groups. It describes the possibility of the use of imaging and when possible, of tailoring the autopsy to accommodate relatives' wishes. It is the coroner who will decide if a scanning technique is appropriate (if available), depending on the circumstances of the death. Where a scanning technique is used, the family or other next of kin will be usually required to pay a fee (for this and for any additional tests that the coroner decides are needed).

⁸⁷ The Shipman Inquiry, Third Report: Death Certification and the Investigation of Deaths by Coroners, 2003. Point 9.33. www.official-documents.gov.uk/document/cm58/5854/5854.pdf

⁸⁸ The Forensic Science Regulator (2014): Draft guidance: Cognitive bias effects relevant to forensic science examinations.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/356003/2014.08.28_FSR_Cognitive_bias_draft.pdf

⁸⁹ Ministry of Justice; Feb 2014: available at

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/363879/guide-to-coroner-service.pdf

The Coroners and Justice Act 2009 was intended to modernize the coronial service and update the Coroners Rules. However the birth and passage of the bill was not easy (see above section 3.8.1) and in its final form disappointed several interested parties. A common view is that it was a wasted opportunity for root and branch reform, and since its appearance several changes have already been made in later legislation. For instance, the 2009 Act originally set out a number of new rights of appeal to the Chief Coroner against decisions of coroners. During the debates on the Public Bodies Bill in 2011, Parliament however agreed to repeal these provisions. Instead, the previously existing means of redress remain in place⁹⁰, so that decisions are still contested by way of judicial review or by application by, or under the authority of, the Attorney General to the High Court under section 13 of the 1988 Act. The modifications to the 2009 Act have been such that in April 2014 a clarifying fact sheet was prepared for Members of Parliament: this is included as Appendix 17 for reference. Further details on coroners' investigations came into force in July 2013⁹¹.

At national level, the Chief Coroner has been continuing with his agenda for change. As can be seen in Appendix 16, progress is continuing in:

- Training
- Advice and guidance
- Appointments
- Role of senior coroners
- Investigations and inquests
- Reports to prevent future deaths

This is all positive movement in the public interest: the question is, given the absence of line management authority of the Chief Coroner within legislation, how effective will his initiatives be? Perhaps, hopefully, like many senior posts in English and Welsh public life, his position of influence will be more effective than defined authority in effecting change through encouragement and example. Whilst the large majority of coroners are following his lead and recognizing his authority, there is some definite and considerable anecdotal hearsay evidence that for a small number this is not necessarily the case.

The coroners themselves also have concerns about the future integrity of post-mortem provision. There is no 'hard data' in this area but trying to capture impressions without specific attribution produces the following commentary:

- Most of the pathologists try to do a good job
- The great majority of paediatric cases go to central facilities
- In the main, forensic pathologists (HORFPS) travel rather than bodies being transported
- All the PM's are completed within a week, and the great majority within 3 days
- Less than half the reports are completed within a month

⁹⁰ See footnote 77

⁹¹ STATUTORY INSTRUMENTS: 2013 No. 1629: CORONERS, ENGLAND AND WALES; The Coroners (Investigations) Regulations 2013

- The main problems with pathology are the workload of those who do it and conflict with hospital work
- Remuneration is increasingly a reason for pathologists not to undertake coronial work
- A move to centralisation is understandable, but the costs of transporting bodies is high
- NHS hospitals are unwilling to subsidize coronial work – they want it to be cost neutral
- My jurisdiction is on the edge of an abyss – if a pathologist leaves or retires the system will collapse
- There is a huge reluctance to engage in anything contentious
- Toxicology and histology results hold up the reports
- NHS posts in histopathology seem slow to be filled
- In the future we will not have enough pathologists to meet the workload
- Difficult to find a pathologist independent of the local trust
- Over half the local pathologists have withdrawn from coronial work
- The NHS will not allow autopsies to be done in normal working hours
- I have to approve an increasing number of special PM's because the basic rate is too low

These statements give a clear impression that the provision of standard pathology services for the coronial system is fragile at present and unsecured for the future. As with forensic pathology, action is needed now to ensure future provision compatible with legal and public expectations.

3.8.5: Concluding comments

The coronial system has a long and dignified history. Given the rapid progress of medical and forensic science and the changes in the working practices of the NHS and universities it has understandably come under strain. There is adequate evidence from reports and observations that on occasions high standards are not being maintained. The Coroners and Justice Act 2009 was seen by many as an opportunity for fundamental reform: in practice this has not happened. Key aspects of the Act have been repealed, others have not been enacted. When the English and Welsh autopsy metrics are compared internationally, we are clearly out of step. Too many autopsies are carried out and we have no integrated system of death investigation.

The Office of Chief Coroner has been established and he has made efforts at national level to steer the service forward but his authority is limited: coroners are still essentially autonomous judicial officers against whom it is difficult to appeal. From several years ago there is evidence that all was not well with the standard of coronial pathology, and there are more recent indications (admittedly from non-statistically significant sources), that although there is a committed core of coronial pathologists, the workload, remuneration and unwillingness to become involved in contentious issues does not auger well for the future health of the service. Historical events have superimposed on this a lack of commitment from either the NHS or the universities to support the service through facilities and consultant job plans. In addition, evidence from the Royal College of Pathologists is that autopsy competent trainees (see section 3.6.3 above) completing the CCT programme will be insufficient to replace losses from retirement.

Some of the reason for the current situation must be the lack of a unitary oversight of a service that is meant to have national standards but which is funded by Local Authorities. Coronial pathologists are usually NHS consultants working privately outside their normal hours: Home Office Registered Forensic Pathologists are instructed by the coroner but largely self-employed with autopsy fees paid by the police. The Forensic Science Regulator is appointed by and answerable to the Home Secretary but not part of the Home Office. The Ministry of Justice has policy responsibility for, but no role in, the delivery of coroner services. Death registration statistics are the business of the Office for National Statistics which is independent of Ministers and reports through the UK Statistics Authority to Parliament.

The General Register Office for England and Wales (responsible for registering deaths and providing the raw data for statistical analysis), in 1996 became part of the then newly created Office for National Statistics and the office of Registrar General was merged with that of Head of the Government Statistical Service. Following the Comprehensive Spending Review in 2007, on 1 April 2008, the General Register Office for England and Wales (GRO) became a subsidiary of the Identity and Passport Service (IPS), then an executive agency of the Home Office. The move followed changes to make the Office for National Statistics (ONS) more independent of the British Government, which meant the ONS was no longer responsible for the registration role it held. In 2013 the IPS was renamed HM Passport Office and as of 2013 the GRO is now part of that organisation, which remains an agency of the Home Office.

The multiplicity of factors surrounding the investigation of death in England and Wales is understandable through history, but has resulted in a confused landscape with no central governance. Functioning at present through the desire of the majority of those within it to make it do so, urgent action needs to be taken to address the identified difficulties and thereby secure the public interest for the future.

3.9: The police and the forensic and coronial services

3.9.1: Aspects of the current operational model

There was general agreement from senior police officers that at present, the forensic pathology services usually meet the needs and interests of the courts and the CJS. Local knowledge and good interpersonal working relationships were critical to efficiency and outcome. There was particular praise for the ready availability of advice at crime scenes, the actual autopsy procedures over the first 24 – 36 hours and the quality of the written reports. It was rare, in the experience of the police, for the content of the reports to be challenged.

Sometimes problems occurred with the time it took for completed reports to be delivered and there were even instances of going to court without the final pathology report being available. Some of this was 'pathologist specific' with those pathologists with the most instructions taking the longest time: unequal workloads led to delays. Other commoner reasons given for late reports included delays secondary to toxicology, neuro, eyes, bones and other sub-specialty pathology components.

Paediatric cases continued to be problematic. On occasions there was a lack of consistency in approach which could be a particular issue in the family courts.

The funding of coronial and forensic post mortems has some anomalies. On the one-hand, a flat fee is illogical since the work per autopsy varies: on the other hand, the flat fee system gradually averages out over time. It is the police who meet the costs of a forensic, (but not a coronial) autopsy. Under the Coroners (Investigation) Regulations 2013⁹², in cases of suspicious death the coroner now has to take note of the view of the chief officer of police although it is still s/he who is actually responsible for commissioning the autopsy to forensic standard. Senior police were clear that there was no downward pressure to avoid doing a forensic autopsy just because it cost so much more that a non-suspicious coronial procedure⁹³.

There was a view within the police giving evidence to this review that the standard of coronial post mortems was very variable, as was the caliber of the coroners' officers. Coroners were also known on a minority of occasions to be highly idiosyncratic in their *modus operandi*, especially around the retention of bodies.

There was also agreement in relation to second post mortem examinations on two key points:

- The first post mortem examination should be done to a standard to which there was no doubt about the facts: interpretation of the facts might differ, but the findings should not be in doubt.
- The current practice (which happens on occasions), of retaining the body for many months and sometimes years is totally unacceptable. It is distressing to the relatives and degrading to the deceased.

Ideally the second post mortem examination should be accepted to be a desk-top review of the findings of the first autopsy. To do this means some changes to forensic autopsy practice so that an accepted data set of the first autopsy's findings is always recorded. This would definitely mean more uniformity in the set of photographic stills taken at the time of the autopsy. It was suggested that a survey should be carried out to establish just how many second post mortems had added anything to the outcome of court proceedings. The police appreciated that although videoing is appealing as evidence of a properly carried out procedure, it also has some contrary aspects⁹⁴. There was no strong appetite for its mandatory introduction.

3.9.2: Missed homicides and acting on unexplained deaths

Missed homicides have been considered earlier in section 3.2.4, and there was appreciation from the police of the work undertaken in this area by the Home Office Forensic Pathology Unit (see Appendix 12).

⁹² See footnote 91: Regulation 12

⁹³ A full forensic autopsy usually costs over twenty times that of a basic coronial autopsy

⁹⁴ These were listed in section 3.4.4.

Some people giving their opinions to this review commented on the critical nature of the experience of the first law officer to arrive at the scene of an unexplained or un-natural death. It was voiced that the training of probationary officers did not allocate sufficient time to crime scene issues and that some jurisdictions had 'outsourced' the interpretation of death scenes to ambulance staff and paramedics. In addition, the Forensic Science Regulator had commenced consultation of the problem of cognitive bias⁹⁵ in relation to first impressions and subsequent transfer of information up the command chain.

The police are well aware of the importance of the first response and have a nationally agreed document which clearly sets out standards for what should happen. This is included in full as Appendix 18⁹⁶. Additional examples of locally interpreted good practice in relation to sudden death were submitted by the Lancashire and Northamptonshire forces. During discussions with the police common themes which emerged were:

- The training of new police recruits was variable across the country.
- A common sense approach is required, starting from an open mind which treated unexplained deaths in the community with a high index of suspicion.
- Each case should be treated on its merits with a low threshold for escalation.
- It was noted that there were good protocols around unexplained child death but that similar guidelines for raising suspicions did not exist for adults.

As an improvement to assist the detection of missed homicides, the National Homicide Index could be modified to include forensic post mortem data in order that ratios between forensic post mortems and homicide rates can be monitored. Variations in the correlation between these two scales may provide evidence that forensic post mortems are not being utilized to prevent missed homicides.

3.9.3: Regionalisation of services

There are currently 244 mortuaries in England and Wales licenced by the HTA to carry out coronial and forensic autopsies (see section 3.2.5). The police recognize that reducing this number would have considerable savings and make it easier to standardize the premises. There was general agreement that a degree of regionalisation would be good, particularly in a hub and spoke model. It was noted that this could result in more travelling time for the police, that some coroners would be opposed, and that the interests of relatives must not be forgotten. Also not to be forgotten were the facilities needed for the management of mass casualties and terrorist activities.

Regionalisation of mortuaries would fit well with the increasing regionalisation of major crime services and the possible future reductions in police forces. Hence any regionalisation

⁹⁵ see footnote 88

⁹⁶ This appendix in relation to Pathology is still an interim document because the Murder Investigation Manual (2006) has not yet been converted into e-based Authorised Professional Practice. The document is however the accepted practice advice for police having been approved by the National Policing Leads on Pathology and Homicide and the Homicide Working Group.

of the pathology services might be easier to accommodate in the future given the possible changes in the police service.

Because regionalisation would enable better and larger centres to operate for longer working hours, there would be much more ready availability of scanning, which was increasing in both incidence and value. Scanning was regarded by many of the police as the way forward to improve both coronial and forensic work. It was also repeatedly expressed that there was, nationally, a shortage of sub-specialty practitioners and those with a paediatric interest and that regionalisation could only improve this. A list of people available to do this work would be welcomed by the police.

3.9.4: Contractual arrangements

Although local arrangements and personal relationships facilitate working practices so that the CJS is satisfactorily served by the Group Practice system of forensic pathologists, there is some frustration within the police about the contractual arrangements. The police are mindful of the fact that it is the coroner who actually bears the responsibility for instructing a pathologist. It is however them who fund forensic autopsies and who rely on the quality and timeliness of the outcomes for CJS purposes. Accordingly they have put significant effort into trying to regularise this working relationship and now have an official '*Police User Requirement for Forensic Pathology*'; for reference, this is provided in full as Appendix 19. They are in universal agreement that the present situation is highly unsatisfactory.

The need for a formal service specification for forensic pathology would appear to be self-evident. The absence of nationally agreed contracts covering fees, standards, report delivery times etc., is unique to forensic pathology. On the other hand, in defence of the Group Practices, Memoranda of Understanding have been drawn up which cover many aspects of the professional relationship between the police and the Group Practice system. At the time of submitting this report, three such agreements are in place, but three others have expired and have not, as yet, been re-signed. Some forces are clear that they would prefer formal contracts so that providers could be held to account if they breach e.g. late reports etc.

3.9.5: Concluding comments

At present the forensic pathology service meets the needs of the CJS in the great majority of cases. There are no indications that financial pressures are reducing the number of forensic examinations undertaken and it is rare for the content of reports to be challenged. As with all other contributors to this review, the police would like to see changes to the current practice of second autopsies.

Future changes to the police service might make regionalisation of autopsy services easier to accommodate and simultaneously produce some savings of scale. Recent modifications to the Coroners Rules allowing the transport of bodies would permit this, but may be opposed by some coroners. The needs of relatives would need to be accommodated by ensuring speedy movement of the body to and from a designated mortuary.

The police agreed that the experience and skills of the first officer to attend at the scene of an unexpected or un-natural death were critical, and that there should be a low threshold for escalation of suspicion until proven otherwise.

Of particular frustration to the police was that although the forensic services worked on a day-to-day basis, there were no proper contractual provisions in place. They had produced a nationally agreed user requirement as a stimulus to try to correct this.

Part 4

The future and preparing for it

- 4.1: The models of employment provision of forensic and coronial pathologists
- 4.2: Regionalisation of mortuary services
- 4.3: The investigation of death
- 4.4: The interface between the legal and the forensic and coronial pathology systems
- 4.5: The provision of funding and independence
- 4.6: The role of the Government
- 4.7: Recommendations for change

4.1: The models of employment provision of forensic and coronial pathologists

4.1.1: Introduction

The current *modus operandi* of both forensic and coronial pathology can be appreciated only through an understanding of the history of their development (Part 2 and section 3.1). Over the past quarter of a century there have been a number of reviews. Each has identified problems and proposed solutions which have only been partly implemented. Also, without reference to the interests of forensic or coronial pathology (or pathologists), universities have closed departments (usually on fiscal grounds), and the NHS has not seen itself as having a responsibility to fund sessions in consultant job plans to support the CJS or the coroner's service.

This has forced forensic practitioners down the self-employed route and coronial pathologists to undertake coronial duties mainly as private practice outside normal working hours. Essentially practitioners in these specialties have been obliged to conform to straightjackets not of their own making. Forensic and coronial pathology have lost their integration with teaching hospital departments of pathology.

4.1.2: The Group Practice system for forensic pathology

The reason for introducing Group Practices was to produce the forensic pathology system that was best for the public interest given the degrees of managerial freedom available at the time. In principle, from a professional viewpoint, making group membership obligatory for entry to the Home Office Register prevented lone practice and had the intention of creating a critical mass of pathologists sufficient to promote internal audit. These objectives have been achieved but problems have arisen. These are:

- Two Group Practices have collapsed and their work has been taken over by an adjoining practice. All practices now cover a wide geographical area. Combined with the large number of widely distributed mortuaries, despite HORFP's being members of a Group Practice, this has unintentionally promoted isolated working and has mitigated against a regular place of work. The Forensic Science Regulator is rightly concerned that there should be regular and frequent professional interchange.
- Forensic pathologists have continued to produce the same professional product over the years the Group Practice system has been in place. Whilst the work they do is of quality and crucial to the CJS, it is nevertheless well defined in scope. There is, for instance, little evidence of groups developing cohesively to produce a total service product with different members having particular interests. There is still heavy dependence on sub-specialty pathologists.
- Because HORFP's were not offered an employed status route, self-employment has become the norm. In the face of unmodified professional activity, the falling serious crime numbers automatically result in a smaller market for their skills. This means that trainees have reduced future opportunities and more of the investment in them will be wasted. Without modification or the introduction of an employed alternative, the present model does not have an attractive future.

- Whilst Memoranda of Understanding have been drawn up, the police service finds itself frustrated that there are no signed-off contractual relationships with Group Practices with well-defined outcomes.
- Great variations have developed in the number of forensic cases undertaken by different HORFPs to such an extent that it needs attention.

Whilst the paragraphs immediately above have identified some aspects of the Group Practice system that might benefit from modification, the underlying driver which created it, i.e. for forensic pathologists to work in a mutually supportive, self-critical environment was correct and in the majority of ways it has been achieved. However, as before, the specialty has suffered external events which were never envisaged at the outset and which have affected its internal workings. Now is a good time to review the Group Practice structure and whilst maintaining its strengths, to consider whether or not there need to be boundary changes (perhaps mirroring the possible changes in serious crime units), or modifications to the scope of work.

4.1.3: Coronial pathology

It is clear from section 3.8 of this review that the current and future provision of pathology to meet the needs of coroners is insecure. There are insufficient autopsy competent pathologists being trained and many of those currently doing the work are stopping doing it. Fear of the courts, possible referral to regulatory bodies and the derisory fee structure mitigate against new entrants. On top of all this, much of the work has to be done distant from the main employment base and NHS Trusts are unsympathetic of the need to release people to attend court. NHS consultant posts rarely have sessions within them for coronial work. This needs to change, and to change soon.

Pathologists who wish to practice coronial autopsy work are in an unsympathetic landscape. The population of that landscape is barely sufficient to maintain the service and is destined to become smaller. This has relevance to forensic pathology in two ways:

- High standards of coronial pathology are essential to be able to detect unnatural causes of death not obvious at the outset
- There are insufficient forensic pathologists to fill the coronial gap that will occur if the current projections become a reality.

4.1.4: Future funding patterns

This report does not seek to change the working models of existing pathologists who are comfortable with their own current arrangements: these can continue. The problem is, if there is no change, the future of both the forensic and coronial systems is extremely fragile. This is contrary to the public interest and to the interests of trainees and future consultants. The report can therefore come to no other conclusion (primarily in the public interest) than to recommend that in parallel to the funding provisions that exist at present:

- a publically funded salaried service is introduced for forensic pathologists and
- coronial autopsy sessions are job planned within NHS contracts.

For coronial sessions to be within NHS job plans, since the funding source will be from the current coronial financial provision, to make this possible whilst maintaining the standards for coronial autopsies set out by the Royal College of Pathologists (Appendix 9), *the current coronial fee structure will need to be revised*. Also, and very importantly, the NHS will need to accept its responsibilities in the provision of facilities and funding.

4.2: Regionalisation of mortuary services

The number and variety of mortuaries is described in section 3.2.5. They constitute a large number of variable specification many of which are under-used. This geographical variation promotes professional isolation on a day-to-day basis and is contrary to the advantages pathologists gain when working in close professional proximity to each other. It makes it difficult, particularly for forensic pathologists, to have a regular place of work.

In England and Wales it has, for many years, been custom and practice to use the nearest mortuary to where the body was located. The reason for this has been a longstanding requirement of the coronial system, supported for the convenience of relatives and police. This is not what happens in other countries where bodies are transferred efficiently to and from more centralized resources with arrangements made for the relatives to view the body locally.

The need to conduct an autopsy in a specific location was removed by the Coroners and Justice Act 2009 and a reduction in the number of mortuaries would fit well with the increasing regionalisation of major crime services and the proposed reductions in individual police forces. Provided that the needs of relatives are not forgotten and efficient transfer and viewing facilities are provided, the movement of bodies is now a viable option. The advantages of larger centres with more pathologists working out of the same mortuaries and being part of a department (possibly with a hub and spoke arrangement), have been rehearsed earlier and are acceptable to the police.

There would be great advantages, financially, professionally and in the maintenance of standards for regional centres of excellence to be established. Although there are a small number of sites where the hub may be established around a local authority mortuary, in the great majority of cases, these regional centres would be on NHS premises. This has the added advantages of bringing forensic and coronial pathologists closer together geographically, having sub-specialty opinions on hand and imaging and ancillary laboratory services close by. For this to be achieved, it will be necessary to have the support of the NHS and funding available to provide whatever modifications are required to buildings and offices etc.

4.3: The investigation of death

4.3.1: The situation at present

At present, in England and Wales, the investigative process which follows the discovery of an unexpected or unexplained death is unique within developed countries. The response of the 'first attender' sets the tone as to whether it will be initially processed down the

coronial or forensic pathway. The choice of this pathway dictates the complexity of the pathological examination and the funding streams for the work. This report has outlined the concerns surrounding:

- the inexperience of the first officer at the scene
- cognitive bias
- the problems of coronial cases having to be transferred to the forensic pathway and
- the excess number of autopsies undertaken in comparison with other countries.

In addition, despite better diagnosis, recent work continues to demonstrate the high level of death certificate inaccuracies and the impact of this on health planning.

Many of these issues could have been managed by the introduction of the Medical Examiner system which was contained within the Coroners and Justice Act 2009. The problem is, although a National Medical Examiner has been appointed, and training packages have been developed, the system has never been implemented. Following the evidence presented during this review, the conclusion of this report is that the present system of examining deaths in England and Wales is not fit for the future. The reasons are set out in the text of the report: not least of these are the combined difficulties ahead in the supply, recruitment and activities of both forensic and coronial consultant pathologists.

4.3.2: How things might be changed

This report's strong recommendation is that a new nationally based '**Death Investigation Service**' should be introduced for England and Wales and that the dormant medical examiner legislation should be used as a vehicle for its introduction. Such a service would require:

- Close working of the police, GPs, hospital doctors, and medical examiners, when a body is discovered to determine those cases that need referral to the coroner
- Close working of the police, clinicians, pathologists and the coroner to determine those cases which need an autopsy
- Entry of those cases requiring an autopsy into a forensically led autopsy service.

The concept of this forensically led autopsy service is that it would contain within it all forensic pathologists and those autopsy competent histopathologists who currently and in the future would do coronial autopsy work. What the exact ratio between forensic and coronial pathologists would be is a matter for professional debate, but to clarify thinking for the reader, the reviewer's concept is that if the autopsy rate was to approach that of other countries, the service would need approximately 400-500 whole time equivalents of whom 20-25% (100 – 125) would be forensically qualified. The underlying assumption is that for part of the working week, the coronial pathologists would undertake other work such as surgical biopsies, cytology etc., as part of an NHS contract within an NHS hospital.

Clearly this is a radical suggestion, but the time is ripe for it. It is also probably the only way (when combined with the other proposals on regionalisation), that improvements can be made within a cost-effective envelope. Additionally, it solves the problem of how to

maintain churn within forensic pathology by allowing the entry of younger consultants in the presence of a falling homicide rate. It is relevant to note the following points:

- In this model, forensic pathologists would not only be doing the traditional forensic cases, they would also be engaged in contributing on a regular basis to the coronial service.
- The expansion of numbers would clearly take time; there are major implications for the training system
- Recruitment into forensic pathology is good: the specialty turns away unsuccessful candidates who are suitable for training in the specialty
- There would need to be much greater cross fertilization between the forensic and histopathology training programmes
- The expansion of consultant posts in forensic pathology would be funded within a salaried structure
- The coronial consultant posts would have sessions job-planned within the framework of an NHS contract for autopsy work
- The funding for the autopsy work, whether forensic or coronial needs careful consideration; this is considered later in section 4.5.

4.3.3: The possible consequences of change

If a death investigation service was introduced, it would be an opportunity for the medical and legal professions to discuss what exactly a particular autopsy should consist of. At present the Codes of Conduct for both coronial and forensic work (Appendices 8 and 9), leave a little wriggle room, but not much in terms of thoroughness. This is understandably right and proper to ensure that not too many corners are cut. If corners are cut, even if they are irrelevant to the accuracy of the material findings, these lacunae can be used unfairly by a barrister to discredit by association the veracity of the core of the pathologist's evidence.

There is however a valid debate to be had around establishing the purpose of a particular autopsy at the outset rather than continuing down the 'one size fits all' route: this is particularly so with the introduction of new examination modalities such as scanning and the downwards pressure on budgets. The public interest in getting the main and subsidiary causes of death correct have been enumerated earlier in section 3.7.3. The medical examiner system would help greatly in this by improving the accuracy of certification of the majority of deaths that do not result in an autopsy (currently up to 80% of all deaths in England and Wales). On the other hand, the medical examiner system may cause some deaths not previously referred to the coroner to be so referred. This report does not want to reduce the importance of knowing the accurate cause of death: on the contrary it would emphasise its importance.

The question for debate is whether in those cases that come to autopsy, either forensic or coronial, is the objective just to find the main (and possibly additional contributory factors), or is it to diligently study all aspects of all the organ systems to histological level? This is perhaps best illustrated by a witnessed head injury in a previously fit young man inflicted either by accident (e.g. hitting the head in a car crash), or by a deliberate act (e.g. hit over the head with an iron bar in an attack). The cause of death is obvious, it is not a mystery. There may be additional findings such as airway obstruction secondary to unconsciousness

producing the fatal hypoxia, and toxicology to reveal drug usage so a post-mortem is clearly needed. But is it really necessary to section and study all the organs for the sake of completeness?

Whilst a consideration of such issues is recommended, the consequences of the conclusions could have a major impact on both forensic and coronial pathology and pathologists. Moving from a universal code of practice standards to improve cost effectiveness poses real threats to quality, and moving from a fixed 'item for service' model of remuneration is quite destabilising.

4.4: The interface between the legal and the forensic and coronial pathology systems

4.4.1: The police

The police are responsible for the detection of crime and, when there is sufficient evidence, for charging the suspects and engaging with the CPS. The experience and alacrity of the first officer at the scene is critical to the body being entered into the appropriate investigation pathway. Although all student officers undergo prescribed training there is an awareness by the police that training does vary across the country. Also, in some areas of England and Wales first attender decisions have been delegated to trained ambulance staff and paramedics. The issue of a cognitive bias from the first reporter being transferred up the command chain has been discussed earlier in the report and evidence has been presented that there are homicide cases being discovered during the coronial autopsy.

An allegation sometimes made against the police is that they will try to enter the body into the coronial route to avoid paying the £2500 fee for a full forensic autopsy. The soft evidence for this came from a small number of individual examples described by forensic pathologists. However, at meetings with senior investigating officers representing all parts of the country, they gave a clear message that they wanted all deaths to be investigated properly, that budgets were not a factor in decision making and that the professional and reputational risks of missing a suspicious death greatly outweighed the fee. The data presented in section 3.2.4 clearly shows that the downtrend in forensic post-mortems is consistent with the downtrend in homicides. There is therefore no apparent reduction in the proportion of cases referred for a forensic autopsy and this supports the police statement.

On the other hand, the data presented on missed homicides which are initially entered into the coronial route does give cause for concern. Sections 3.2.4 and 3.8.3 describe instances of this happening and this is worrying: the 103 cases being reviewed for 2014 are those which became apparent: how many more did not? These data do indicate that in the public interest, it is critical that the first responsible individual at the scene of an unexplained death (whether police or other professional), does need to be aware of the signs that might indicate an unnatural death, and to have had the training to be able to exercise the appropriate level of skill. This situation would of course come within the purview of the standards set by a national death investigation service.

Whether or not a national death investigation service is implemented there is no doubt that there is a good case to be made for:

- In the first instance assuming that all unexplained deaths are suspicious until proven otherwise
- The police ensuring that their officers who are first on the scene have proper training with an appropriate threshold for declaring a death non-suspicious.
- Considering the creation of trained crime scene investigators as in other countries. These could be drawn from a series of backgrounds (e.g. police, nursing, para medics etc), and provide 24 hour coverage.

4.4.2: The courtroom

The duty of professional and expert witnesses is to tell the truth when giving factual evidence and to make it clear when they are giving an opinion based on their experience and consideration of all the relevant facts. The duty of barristers is set out in their professional Code of Conduct drawn up by the Bar Standards Board⁹⁷.

This says, para 302:

'A barrister has an overriding duty to the Court to act with independence in the interests of justice: he must assist the Court in the administration of justice and must not deceive or knowingly or recklessly mislead the Court'.

This would appear to be exactly the same or at least an analogous duty as that borne by the expert witness. On the other hand the code of Conduct continues (para 303) to say:

'A barrister:

(a) must promote and protect fearlessly and by all proper and lawful means the lay client's best interests and do so without regard to his own interests or to any consequences to himself or to any other person (including any colleague, professional client or other intermediary or another barrister, the barrister's employer or any Authorised Body of which the barrister may be an owner or manager);'

A number of persons providing evidence to this review clearly felt that the second of these paragraphs on occasions over-rode the first. Lines of questioning sometimes proceeded as fishing expeditions to find a weakness in an expert witness which might be irrelevant to the evidence they were giving, but the association of ignorance in one area weakened the strength of the testimony in another. Legal professionals, including judges had also reported doctors to the GMC. On other occasions, an expert giving an honest opinion may be repeatedly pressed to become more didactic to move from shades of grey into black or white.

Although forensic pathologists are used to and aware of the stresses of court, many coronial and sub-specialty pathologists are not. A number of these have had bruising experiences. In collecting evidence for this review, it is the opinion of the reviewer that the adversarial nature of the courtroom is a major factor reducing the availability of expert witnesses and making them unwilling to undertake court related work.

⁹⁷ Available at: <https://www.barstandardsboard.org.uk/regulatory-requirements/the-old-code-of-conduct/the-old-code-of-conduct/part-iii-fundamental-principles/>

What can be done to correct this situation? The Home Office has introduced a bi-annual course in criminal justice and court room skills training for those wishing to undertake coronial or forensic work that might result in a court appearance. This has recruited well and feedback has been good. Another important aspect is pre-trial preparation. It has been mentioned earlier in the main text of the report that if the requirements of case management as set out in the Criminal Procedure Rules [CrPR] (particularly Parts 3 and 33), were followed much of this conflict would be resolved before the trial commenced. This review has heard of several instances where pathologists, lawyers and police have still not fully adapted to compliance, despite the CrPR being introduced as long ago as 2005. The absence of timely case management in practice leads to the view that 'it will all be sorted out in court': one corollary of this is that there is slipshod pre-court preparation and the development of disagreements in court that should have been resolved between the experts at a much earlier stage. Correcting this situation is in the hands of the judges and coroners and they should act to ensure good practice.

4.4.3: Sub-specialty specialist opinions and second autopsies

In taking evidence from the legal contributors, the two subjects which repeated emerged as problems were specialist opinions and second autopsies. These have already be discussed in sections 3.3.4 and 3.4 respectively. There is no doubt in the views of this report that both areas need immediate attention for the reasons already given.

Specialist opinions are in perilously short supply and reputedly are the commonest cause of the delay to reports being finalized. More pathologists willing to give sub-specialty opinions need to be recruited and trained in court room skills: otherwise the service will collapse. This is a requirement for the immediate future, it is not an option.

In taking evidence for this review, nobody thought that the current process for second autopsies was satisfactory. The emotional cost to the relatives can be overwhelming. There is an immediate need for the forensic pathologists and the legal profession to agree that there should be one post mortem examination of the body, done properly to establish the facts without the expectation that it will need to be repeated. The second post mortem could then be a desk-top exercise which may come to a different final opinion on the factual findings, but should not require a re-examination of the remains. Second post mortems need to become an anachronism of the past: their occurrence could be greatly reduced by judges and coroners insisting on early pre-courtroom meetings of the experts. One possible way of substantially reducing the number of unnecessary second post mortems would be to make the authorisation for them a judicial process where the defence was required to make a formal application and justify the reason for the second examination of the body, or removal of some of its tissue, to a coroner or a judge.

4.5: The provision of funding and independence

A major factor in the provision of both forensic and coronial pathology services is the need for independence. It has been recognized earlier that the duty of expert witnesses is to the

courts and although the pathologists themselves see this as an attitude of mind uninfluenced by their salary source, that is not necessarily the view of relatives, lawyers and the media. Consequently, independence has to be perceived to be present as well as being an inherent expectation and professional duty.

Providing the perception and actualité of independence is not easy. Virtually all models have conflicts of perception and/or implementation. One of the advantages sometimes quoted for the self-employed forensic pathologist is that s/he is 'independent' but contrary to this it could be said that continued instructions depend on meeting the wishes of the police and prosecuting council: the coronial pathologist working with fees derived from the coroner has apparent independence but the fee structure does not encourage compliance with the expected code of practice etc., etc.

One of the problems inherent in the current structure is the multiplicity of sources of funding that supports the totality of the service. It was not within the possibilities of this report to identify all these individual components and to undertake a financial analysis of the outcome if they were all brought together in a single location.

Without rehearsing the arguments here, in other parts of the report evidence has been presented indicating that there needs to be an expansion of forensic pathologists having the option of an employed status, and the establishment and identification of a body of autopsy competent coronial pathologists who would work along side them in larger regional centres within a hub and spoke model.

It is envisaged that the employed forensic and coronial pathologists would:

- have conventional job plans with identified clinical sessions for performing autopsies and the necessary report writing etc.
- be employed on NHS terms and conditions of service
- have the freedom, as other NHS consultants do, to undertake additional work either within their employment contract or as independent practitioners.

The problem that both the forensic and coronial practitioners face is that their remuneration is at present in many different locations and hence subject to many different factors and decision making trees. ***It is a recommendation of this report that an exercise is undertaken to identify and bring all this financial resource under a common organisation which has no affiliations that would allow its independence to be successfully challenged.*** This body would then be the funding source for independent practitioners and the sessional components of employed forensic and coronial pathologists undertaking autopsy work and report writing etc. It would also administer the costs of running the mortuaries for these activities. Although the autopsy component of salary would arise from this independent source, it is envisaged that most of the coronial pathologists would also have substantial commitments to the work of their hospital trusts, but they would be employed on NHS "T's and C's" and receive a single monthly salary cheque from the hospital's finance department.

What form this independent body would take needs discussion. With the reluctance of the Home Office and Ministry of Justice to establish additional arm's length bodies in the current political climate, these would appear, at present to be unlikely destinations. Having reviewed all the apparent possibilities, the conclusion of this review is that the establishment of a Special Health Authority is probably the best and most possible option.

4.6: The role of the Government

Finally, it is important to consider the role of Government. The past 5 years have seen confused implementation of previously passed legislation, a failure to establish the Medical Examiner system and the continuation of a system which to its detriment diverges in several fundamental ways from those in other countries.

As presented in the text of the report, high quality forensic and coronial pathology is central to the justice and death certification system. It has never been more important to the living to have the accurate cause of death of their relatives, and mortality data is vital for health planning nationally. There is a good chance that once all the sources of funding have been identified that a modern death investigation service could be established in a cost effective way. Additional money, if required would be very small compared with that invested in other care areas such as cancer and heart disease, but the returns for the criminal justice and health care systems would be enormous.

The solution is in the hands of the Government. The evidence presented to this review was that the public has an increasing expectation of knowing how and why their relatives died, and with the growth of an ethnically diverse society these expectations will be different in the future than in the past.

The current situation in forensic and coronial pathology lends itself to system change within a re-styled medical examiner system. It would be greatly in the public interest and that of public health planning to seize this opportunity: the recommendation of this report is that the government should decide to do this and provide the necessary infrastructure to make it work.

4.7: Recommendations for change

The main recommendations of this report and a summary of its findings are given at the beginning in the 'Executive Summary and Recommendations' to which reference should be made. This section simply draws these and other subsidiary recommendations into a single location with their referenced sources within the text.

National Death Investigation Service

This report proposes that the solution for the future is to operate the forensic and coronial pathology systems in conjunction with each other in a national death investigation service led by forensic pathologists (see section 4.3.3 and 4.6). This could be introduced through

the dormant legislation in the Coroners and Justice Act 2009 relating to the Medical Examiner system.

Regionalisation

Regional centres should be established and It is recommended that all the funding for forensic and coronial autopsies currently distributed across various organisations is brought together in a single independent location (see sections 1.2, 4.1.4, 4.2, 4.5, and 4.6). There are several models that would achieve this, including the establishment of a Special Health Authority (see section 4.4).

There are too many mortuaries in use in England and Wales. There needs to be regionalisation of both forensic and coronial autopsy practice. This is now possible within the law (see section 4.2).

Training

It seems self-evident that there needs to be greater interchange between the forensic and general pathology training systems. This would be greatly helped, as would the role of neuro- and paediatric pathology if forensic pathologists, histopathologists and sub-specialty pathologists were working more closely together in larger regional units (see 3.6.4).

Police officers likely to be first attenders at the scenes of unexplained deaths should receive a uniform standard of training in identification of signs which might give rise to suspicion. The threshold for referring such cases up the supervisory ladder should be low (see section 3.9.2).

Employment models

This report does not seek to change the working models of existing pathologists who are comfortable with their own current arrangements: these can continue (section 4.1.4). The problem is, if there is no change, the future of both the forensic and coronial systems is extremely fragile. This is contrary to the public interest and to the interests of trainees (in whom the wastage rate on investment is over 50%(section 3.2.2)) and future consultants. The report that (sections 3.8.3 and 4.1.4):

- a publically funded salaried service is introduced for forensic pathologists and
- coronial autopsy sessions are job planned within NHS contracts.

Group Practices

The Group Practice model for forensic pathology has many good attributes. Since it was initiated, changes have occurred to produce a national imbalance in activity. There is scope to re-assess its operation whilst taking into account the proposed changes to regional police crime services. The variation in caseloads between areas indicates that Group Practice areas should be re-drawn in order to make the workload more equitable (see section 3.2).

Review of 2nd post mortem procedures

The arrangements for carrying out second post mortem examinations need attention. Delays inherent in the present system are not in the humanitarian interests of the deceased's relatives nor required for justice. It is recommended that second post mortems are only authorised following a formal application to a coroner or judge (see sections 3.4.4 and 3.9.1), and become a desk top review of the first report (section 3.4.5)

Reduction in the number of coronial autopsies

International comparisons suggest that with a change to the way deaths are managed, the coronial autopsy rate in England and Wales could be reduced by up to 40% (see section 3.8.3).

Review of the Codes of Practice

The Codes of Practice and Performance Standards for Forensic Pathology (2012) should be reviewed to consider if the autopsy should be more tailored to the individual circumstances of each case so as to be more cost effective and reduce unnecessary examination of the viscera (see section 3.3.3). Consideration should also be given to defining a minimum high quality photographic set of stills that are timed and dated and clearly set out the details of the external and internal examination of the body and the relevant organs (see section 3.4.).

Strengthening the critical conclusion check so that it is done by a second pathologist external to the group within which the autopsy was done (see 3.4.4) may contribute to reducing the number of second post mortems.

Sub-specialty and Paediatric Pathologists

There should be a national list of suitable paediatric pathologists kept, whether or not there is a new supplementary register (see section 3.3.4).

There should be a national list of suitable sub-specialty pathology experts (particularly brain, bone and eye pathologists). Further recruitment of these should be proactive and they need to be suitably trained in criminal justice issues (see section 3.3.4).

Mass fatality incidents

The NHS should have in place suitable call out arrangements for NHS pathologists to assist with mass fatality incidents. Non-forensic pathologists engaged in mass fatality incidents should work under the supervision of a Home Office Registered Forensic Pathologist (see section 3.5).

Contracts with the police

Group practices currently interface with the police through 'Memoranda of Understanding'. The police have now drawn up 'User Requirements for Forensic Pathology'. These could form the basis for more formal contractual arrangements (see section 3.9.4).

National Statistics

The National Homicide Index could be modified to include forensic post mortem data in order that the ratio between forensic post mortems and homicide rates can be monitored. Variations in the correlation between these two scales may provide evidence that forensic post mortems are not being utilized to prevent missed homicides (section 3.9.2).

Autopsy fees

Consideration should be given to the current fee structure payable for autopsies and possibly revised on the basis that 'you get what you pay for' (see sections 3.8.3 at page 75; 4.1.2 at page 85 and 4.1.4 at page 87).

The Law

The Criminal Procedure Rules (particularly Parts 3 and 33) should be vigorously enforced in order to avoid costly and unnecessary challenges by experts for the prosecution and the defence in court (see section 3.3.1). In addition, the provision for a judge to allow experts to give evidence via video link could be utilised in order to encourage more sub-speciality medical experts to engage in the criminal justice process (see section 3.3.4).

Retention of notes and other materials

During the course of a forensic autopsy, the pathologist will inevitably assemble material such as notes, photographs, copy statements etc. This material is potentially 'unused material' as defined by the Criminal Procedure and Investigations Act 1996. The sensitive nature of this material, especially post mortem photographs demand that it is kept in secure locations. A national storage option would be an expensive option but clearly HORFP's working as part of a National Autopsy service would have suitable and secure storage facilities within their workplace. In the meantime it is recommended that all unused material should be stored with the police file as is normally the case with all other unused material (see section 3.2.1).

Communication and societal change

Managing death well is very dependent on communication and understanding the religious construct of the surviving relatives, especially with respect to post mortems. In a multi-cultural profession embedded in a multi-cultural society communication and understanding can be difficult when death occurs. Pathologists and other clinicians, police, and coroners and their officers all need to be sensitive to this and do what is possible to manage the situation well so that it is the start of healing, not a source of bitterness (sec 3.3.3 & 3.7).

Appendices

Appendix 1: Terms of Reference

Terms of Reference

Future of Forensic Pathology in England and Wales

1. Introduction

Home Office Ministers and the Home Office Forensic Policy Group have commissioned a fundamental review of forensic pathology services in England and Wales. This has also been agreed by the Pathology Delivery Board.

The current service is provided by thirty five to forty forensic pathologists who are listed on the 'Home Office Register' of forensic pathologists, and work within 6 regional practices, providing a twenty four hour a day, seven days a week service to police and coroners in suspicious death and homicide cases.

Home Office forensic pathologists providing this service are in the main self employed but a small number are employed by a local University/NHS Trust.

The current model of delivering the service usually works well and costs around £12m pa. However, there are inherent risks within the current model, which the Forensic Policy Group and Ministers have asked to be reviewed

This document sets out the terms of reference for that review.

2. Terms of Reference.

The review will examine the current model of delivery and define the historical context and how the model evolved. It will consider previous government lead reviews, including the Wasserman Report and the Leishman Review. It will also examine the role and function of the following elements of the current model:

2.1 Function

- Current system of funding and the case fee
- Funding of trainee forensic pathologists
- Conditions of membership of a group practice
- Critical Conclusions checking and peer review
- Process for application and registration of HO pathologists
- HO pathologists Protocol and conditions of registration

2.2 Organisation

- Structure of the group practice system
- Review of the geographic and demographic areas of responsibility
- Review of the MOU/SLA system with police forces

2.3 Governance

- Role, function and membership of the Pathology Delivery Board
- Review of central administration within the Home Office (Pathology Unit)

3. Method.

1. A brief history of the current model will document the historical context and how the current model evolved

2. A comprehensive risk assessment will be produced which will identify and document the risks in connection with maintaining the current system

3. A literature review will identify all previous reports and academic work relevant to the delivery of pathology services.
4. Research will be conducted to understand the future service demand
5. A minimum specification will be drawn up from the main stakeholders which will include
 - Police
 - Coroners
 - CPS and the Courts
6. Key stakeholders will be consulted by a combination of quantitative (questionnaire) and qualitative (interviews) methodologies, in order to gain a broad view from the Criminal Justice System about service requirements and preferences for future delivery. Stakeholders are likely to be:
 - ACPO and National police leads
 - Police forces
 - Coroners including the Chief Coroner
 - Pathologists
 - Chair and members of the Pathology Delivery Board
 - Forensic Science regulator
 - National Health Service employers
 - University employers
 - Royal College of Pathologists
 - General Medical Council
 - Ministry of Justice
 - Crown Prosecution Service
 - Other models practiced internationally
 - Other external organisations (Charities/Pressure Groups)

4. Outcome.

The product of the review will be a proposal for the future delivery of the service. This will be fully costed with a risk assessment of each option. The final report will be presented to the HO Forensic Policy Group and then to Ministers for consideration.

5. Governance and Administration.

The project will be lead by an independent nominee of sufficient standing, who will provide strategic direction and oversight to the project manager and Pathology Unit within Home Office Science. The cost of the project will be borne by the Pathology Unit with the Home Office, except any costs associated with the independent nominee.

6. Timescales.

As the number of staff employed on this project is small and the task is large, it is anticipated that the final report will not be available for at least 12 months, but a high end finish time is estimated to be 18 months. However in accordance with the wishes of Ministers as directed on 21/1/2014, the reporting limit will be February 2015. In the interim,

the project will report to the Forensic Policy Group at each of their planned meetings until the end of the project.

Appendix 2: Individuals, organisations and focus groups from whom evidence was taken

Individuals, organisations and focus groups from whom evidence was taken
(in alphabetical order)

Name	Affiliation/Description
Adams Mr Jeff	Head of the Science Section of the Forensic Science Regulation Unit.
Baker Dr Mary	Former CEO Parkinson's Disease Society; President, European Brain Council; Chair, BMJ Patient Advisory Group; Consultant to World Health Authority
Bogod Dr David	Consultant anaesthetist, Nottingham University Hospitals NHS Trust and former Deputy Coroner for Cardiff
Carey Dr Nat	HORFP and current Chair of the RCPATH Forensic Histopathology Specialist Advisory Committee (for postgraduate training)
Collis Dr Sallyanne	Specialty Registrar in Forensic Pathology, Forensic Unit Royal Liverpool University Hospital: Trainee representative
Cordner Prof Stephen	Former Director of the Victorian Institute of Forensic Medicine & Professor of Forensic Medicine at Monash University. Now Head of International Programmes at the Institute.
Crane Prof Jack	Former State Pathologist for Northern Ireland: GMC's Responsible Officer for forensic histopathology
Elkins Mr Ian	Strategy and Policy Lead for the CPS with specific responsibilities for expert evidence and forensics
Foster Mr John	Crime Scene Manager Co-ordinator for the Metropolitan Police Service
Furness Prof P	The National Medical Examiner, Department of Health: Consultant Histopathologist, Leicester Royal Infirmary: Past President RCPATH
Grieve Dr James	Senior Lecturer in Forensic Medicine at Aberdeen University: Honorary Consultant Pathologist for the Grampian Health Board
Harrison Ms Anne	Head of Specialist Operational Support Organised Crime Command; National Crime Agency
Harrold Dr Karen	Assistant deputy coroner for Portsmouth and south east Hampshire: Senior Legal Manager, Crown Prosecution Service, Portsmouth & Operations Directorate
Henderson Dr Karen	Assistant coroner Brighton and Hove; consultant anaesthetist Brighton and Sussex University Hospitals NHS Trust
Hilliard HH Judge Nicholas	Common Serjeant of London at the Central Criminal Court; formerly barrister and Senior Circuit Judge: now
Innes Prof Martin	Prof of Police Science, Director of the Police Science Institute, University of Cardiff

Name	Affiliation/Description
Jennings Mr Carl	Member, Police Science and Technology Unit, Home Office
Johnson Dr Paul	HORFP; Consultant Forensic Pathologist, Forensic Pathology Unit, Department of Pathology, Royal Liverpool and Broadgreen University Hospitals NHS Trust
Kellehear Prof Allan	Professor of End-of-Life Care; Faculty of Health Studies; University of Bradford
Lennox Mr David	Senior civil servant, Northern Ireland Department of Justice which has responsibility for the State Pathologist's Department.
Lockyer Dr Brett	Specialty Registrar in Forensic Pathology, Forensic Unit Royal Liverpool University Hospital: Trainee representative
Lowe Prof James	Professor of Neuropathology and Associate Dean for Medical Education at the University of Nottingham: Chair of the RCPATH's Cellular Pathology Specialist Advisory Committee and its Death Investigation Group.
McLellan Prof Alastair	Dean of Postgraduate Medicine, West of Scotland Region: Responsible for forensic histopathology on COPMED(UK).
Martin Prof Joanne	National Clinical Director for Pathology for NHS England: Professor of Pathology at Queen Mary College, University of London and Director of Academic Health Sciences at St Bartholomew's Health NHS Trust
Milroy Prof Chris	Director of Forensic Pathology for Ottawa, Canada and Chief Examiner in Forensic Pathology for the Canadian College (Royal College of Physicians of Canada).
Orde Dr Matthew	Consultant forensic pathologist, Vancouver General Hospital and Associate Clinical Professor, University of British Columbia
Osborn Dr Michael	RCPATH's sub-Specialty Advisor on non-forensic pathology: consultant histopathologist at Imperial College Healthcare NHS Foundation Trust
Palmer Dr Roy	Formally South London Area Coroner
Payne Dr Heather	Senior Lecturer (Consultant) in paediatrics at UWCM: On secondment to the Welsh Government with responsibility for safeguarding and paediatric death investigation
Pearson Mr Richard	Detective Superintendent for major crime and child abuse: Hampshire
Pratt Mr Alan	Director of Science & Technology, the Home Office; Chair of the Pathology Delivery Board
Prentice Dr Archie	Former President of the Royal College of Pathologists; Consultant haematologist, Royal Free Hospital, London

Name	Affiliation/Description
Price Mr Chris	Head of the Police Science and Technology Unit, Home Office
Pugh Mr Gary	Director of Forensic Services in the Metropolitan Police Service
Ranson Prof David	Deputy Director, Victorian Institute of Forensic Medicine; Associate Professor, Department of Forensic Medicine; Monash University; Melbourne
Rebello Mr André	Senior Coroner for the Area of Liverpool
Rennison Mr Andrew	The Forensic Science Regulator (now demitted office)
Rothwell Mr Trevor	Formerly Director of the Forensic Science Laboratory at Huntingdon and Senior Scientist at the Forensic Science Headquarters.
Rutty Prof G	Head of the Leicester University's Forensic Pathology Unit and Honorary Consultant in Histopathology to the University Hospitals of Leicester NHS Trust.
Silverman Prof Bernard	Chief Scientific Adviser at the Home Office
Simpson Ms Debbie	Chief Constable of Dorset Police: ACPO National Lead for Forensic Pathology
Squibb-Williams Ms Karen	Currently Head of Acorn Chambers and an independently practicing barrister: former Strategic Policy Advisor for CPS headquarters
Taylor Mr Glenn	Head of Scientific and Coronial Services, Portsmouth
Taylor Prof Peter	Deputy Postgraduate Dean for South Yorkshire, Consultant haematologist, Rotherham NHS Foundation Trust
The Right Honourable The Lord Thomas of Cwmgiedd	Lord Chief Justice of England and Wales
Thornton HH Judge Peter	The Chief Coroner of England and Wales
Troyer Dr John	Deputy Director of the Centre for Death and Society at the University of Bath
Turner Dr Marjorie	Consultant Forensic Pathologist, University of Glasgow and former Chair of the RCPATH Forensic Histopathology Specialist Advisory Committee (for postgraduate training)
Turner Ms Lorraine	Business Development Manager, United Kingdom Accreditation Service (UKAS)
Walker Dr Alfredo	Staff Forensic Pathologist and Assistant Professor, University of Ottawa in the Division of Anatomical Pathology (Eastern Ontario Regional Forensic Pathology Unit).
Whitwell Dr Helen	Retired consultant pathologist; formerly clinical academic and NHS consultant
Wilcox Dr Fiona	Senior Coroner for Inner London West
Winter Mr Derek	Senior Coroner for the City of Sunderland

Group Practices	Composition
East Midlands Group Practice	4 HORFPs
Greater London and South East & West Midlands	10 HORFPs
Mid and South Wales and Gloucestershire Group Practice	4 HORFPs
North East Group Practice	4 HORFPs
North West, Humberside and South and West Yorkshire Group Practice	9 HORFPs
West and South West Group Practice	4 HORFPs

Police Focus Group	Senior officers:
	Becky Riggs – Hampshire Constabulary, Det Supt Richard Carr – Merseyside Police, DCI Terry Crompton – Greater Manchester Police, DI Warren Hines – West Midlands Police, DCI Michael Ashcroft – Sussex Police, DCI Scott Cunningham – Police Scotland, DCI Andy Smith – Suffolk Constabulary, DCI Dave Chewter – Kent Police, Amanda Pirie – Scottish Police Authority, Ms Anne Harrison – NCA, DCI Glen Lloyd – Metropolitan Police Service, DCI Martin Kinchin – Northamptonshire Police, DCI Dean Holden – Lancashire Police, Mr Martin Bottomley – Greater Manchester Police, DCI Gareth Bevan – Avon & Somerset Constabulary

BAFM Focus Group	Representatives
	Dr C Wilson (Chair; President of BAFM; North West) Dr N Cary (London, Midlands and South-East) Prof G Ruddy (East Midlands) Dr R Delaney (West and South-West) Dr A Davison (South Wales) Dr J Bolton (North East)