Department of Health

Reforming death certification: Introducing scrutiny by Medical Examiners

Lessons from the pilots of the reforms set out in the Coroners and Justice Act 2009

May 2016

Title: Reforming death certification: Introducing scrutiny by Medical Examiners
Lessons from the pilots of the reforms set out in the Coroners and Justice Act 2009

Author: PIH/HSB/PM/24641

Document Purpose:
Policy

Publication date:
May 2016

Target audience:
NHS and Social Care Organisations
Local Government
Central Government
General public
Bereavement Services
Funeral Industry
Professional and Regulatory Bodies
Religious or Faith Groups
Coroner Services
Healthcare Professionals
Registration Services

Contact details:
Public health policy and strategy unit
DeathCertification@dh.gsi.gov.uk

Published to gov.uk, in PDF format only.

www.gov.uk/dh

Reforming death certification: Introducing scrutiny by Medical Examiners

Lessons from the pilots of the reforms set out in the Coroners and Justice Act 2009

Prepared by

Peter N Furness

The National Medical Examiner, c/o Sandringham Building Level 3, Leicester Royal Infirmary, Leicester LE1 5WW

Alan K Fletcher

Lead Medical Examiner, Sheffield Northern General Hospital, Sheffield S5 7AU

Neil A Shepherd

Lead Hospital Medical Examiner, Gloucestershire Cellular Pathology Laboratory, Cheltenham General Hospital, Sandford Road, Cheltenham, Gloucestershire GL53 7AN

Bob Bell

Lead Community Medical Examiner, Brockworth Surgery, Brockworth, Gloucestershire GL3 4PE

Daisy Shale

Senior Medical Examiner's Officer, Sheffield Northern General Hospital, Sheffield S5 7AU

Kathryn Griffin

Senior Medical Examiner's Officer, Gloucestershire Royal Hospital, Gloucester GL1 3NN

Contents

Executive summary

i. A Parliamentary Select Committee identified weaknesses in the UK system of death certification in 1893, but its recommendations were not acted upon until after the Smith inquiry into the crimes of Harold Shipman, a doctor who murdered over 200 of his patients and certified those deaths as being due to 'natural causes'.

ii. We know that death certification is often performed badly, with consistent reports of about 50 per cent of MCCDs being capable of improvement. Referral of deaths for medico-legal investigation by the coroner is known to be inconsistent.

iii. Provision was therefore made in the Coroners and Justice Act of 2009 for all deaths in England and Wales not investigated by a coroner to be scrutinised by an independent 'medical examiner'.

iv. These reforms have not yet been fully implemented, but pilots have now tested and developed the system proposed in the legislation with scrutiny of over 23,000 deaths. This paper describes the lessons learned from this experience.

v. The initial aims of the reforms were met, at an overall cost per death scrutinised which is considerably less than the current cremation form fees (which will be abolished).

- Accuracy of death certification improves
- Referrals to the coroner are more consistent and appropriate
- Rejection of the medical certificate of the cause of death (MCCD) by the Registrar is eliminated
- Input from relatives is assured.

vi. In addition, independent scrutiny of medical records, supplemented by discussions with the bereaved, has proved to be a consistent source of high-quality information about the quality of care – irrespective of the nature of the problem and irrespective of the type of organisation involved.

vii. Bereaved relatives are particularly pleased to have their opinions requested and to be offered an authoritative and independent explanation of the cause of death. Doctors are usually pleased to have support and guidance in death certification, work which historically has seen little training and is often badly performed.

viii. Inquiries into healthcare failings in Mid-Staffordshire and Morecambe Bay have emphasised that these reforms, when implemented, will have broader benefits in monitoring the quality of care. This monitoring will also cover primary care and care homes.

RECOMMENDATION:

ix. On the basis of this experience those involved in the pilots believe that these reforms should be implemented as was envisaged by Parliament.

1. Background

1.1. Dame Janet Smith's inquiry into the murders committed by Harold Shipman identified weaknesses in the system of death certification in the UK, principally because a single doctor can certify a death as being due to natural causes without challenge – and hence, literally, get away with murder. (1) Her report pointed out that this weakness had first been identified in the report of a Parliamentary Select Committee in 1893, but over a century later it had still not been corrected.

1.2. As a direct consequence of Dame Janet's inquiry, reforms to the system of death certification in England and Wales received all-party support in Parliament, in the form of the Coroners and Justice Act 2009(2). That Act sets out how – subject to implementation of its provisions by the Secretary of State for Health – all deaths in England and Wales that are not investigated by the coroner will be subject to scrutiny by a 'medical examiner'. Medical examiners will be senior doctors, specifically trained for this role, who will evaluate the cause of death proposed by the attending doctor on the basis of proportionate scrutiny of the medical records, an interview with the next of kin and an external examination of the body. Others responsible for the provision of healthcare may also be questioned. The agreement of the Medical Examiner will be necessary before the death can be registered, unless the death is investigated by the coroner.

1.3. From the outset this reform had several aims beyond just 'catching the next Harold Shipman', as set out in Table 1:

Table 1: Initial aims of death certification reform

To ensure rapid referral to the coroner of any death where there are reasonable grounds to suspect that death may not be entirely due to natural causes
To avoid referral to the coroner of deaths where such referral is unnecessary
To provide a non-coronial route to certify deaths that are clearly due to natural causes, but where a doctor able to sign an MCCD is not available
To improve the accuracy of certified causes of death
To collect and report information on clinical governance issues identified during scrutiny
To ask the next of kin whether they had any concerns about the death that might justify further action (subsequently referred to as 'The Shipman Question')
To answer questions from the next of kin
To educate health service staff in matters relating to death certification

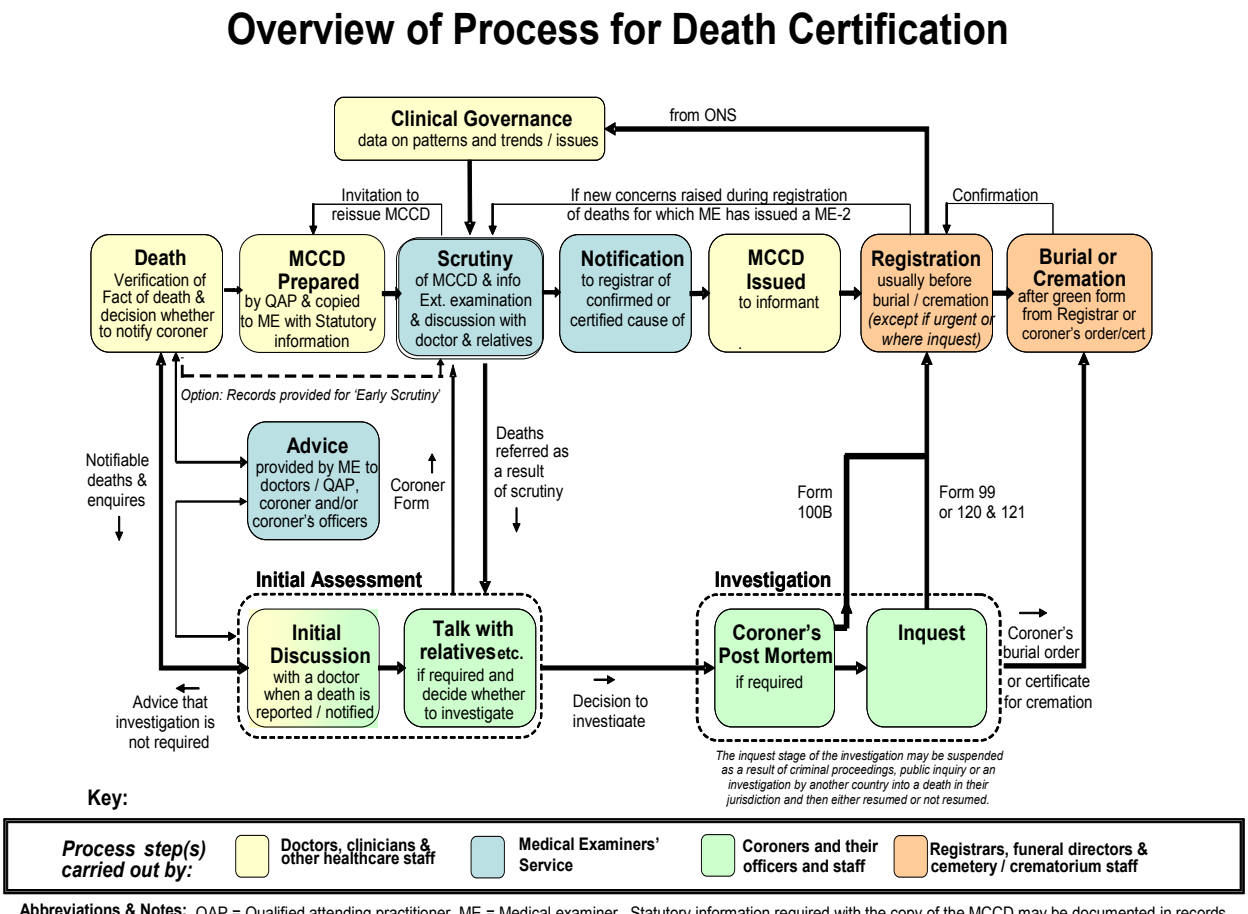
1.4. The 2009 Act provided for medical examiners in England to be appointed by Primary Care Trusts, but when these were abolished by the Health and Social Care Act 2012 the responsibility was transferred to Local Authorities, with the intention of providing medical examiners with independence from major healthcare providers. In Wales, appointing medical examiners is the responsibility of Local Health Boards.

1.5. Implementation was subsequently strongly supported by the Francis Report into the failings of Mid-Staffordshire NHS Trust.(3) Francis recognised that asking the relatives to identify their concerns, an approach he referred to as 'The Shipman Question', was also a valuable way to obtain independent warnings about failing healthcare providers. Implementation was similarly urged by the Morecambe Bay report into maternity services. (4)

2. Planning for implementation: Establishing the pilots

2.1. Planning for implementation of these reforms started before the 2009 Act was approved by Parliament. In 2008 a curriculum for training medical examiners was developed by a multidisciplinary group hosted by the Academy of Medical Royal Colleges.(5) An online training package was subsequently developed in collaboration with E-Learning for Healthcare; it is freely available.(6) This will be supplemented by some face-to-face training, to be provided by the Royal College of Pathologists (RCPath), which has been identified as the lead Medical Royal College for medical examiners. The Department of Health (England) undertook widespread consultation and detailed process mapping to develop more detailed plans for implementation. A 'flow chart' summarising the proposed new process is presented at Figure 1.

Figure 1 Proposed process of death certification



Abbreviations & Notes: QAP = Qualified attending practitioner. ME = Medical examiner. Statutory information required with the copy of the MCCD may be documented in records. External examination may be delegated in certain conditions. The Coroner Form is issued by a coroner for deaths that have been reported, notified or referred, but do not need to be investigated.

2.2. In 2008 several pilot sites for the process were established with DH funding, to test out the new proposals (Table 2). The pilots in Sheffield and Gloucester are still running and now act as an implementation resource; they have now scrutinised over 23,000 deaths.

The purpose of this paper is to document the results and conclusions of these extensive pilots.

Table 2 The Pilot sites listed in the table were established to test out the new proposals:

Location	Purpose
Sheffield	Initially secondary care, extended to primary care, paediatrics & neonatal
Gloucester	Primary care and secondary care
Powys	Rural location (no major hospitals, sparse population)
Inner North London	Small pilot in a Jewish community expecting rapid disposal of the body
Leicester	Small pilot in a Muslim community expecting rapid disposal of the body
Brighton and Hove	Small pilot in secondary care
Mid-Essex	Small pilot in secondary care

2.3. As a result of these processes, an 'implementation toolkit' is being developed to assist those responsible for implementing the reform of death certification in England and Wales and will be available in due course.

3. Lessons from the pilots

Do the reforms function as expected?

3.1. The main pilot sites in Sheffield and Gloucester have been running for over six years and have now scrutinised over 15,000and 8,000 deaths respectively. The other pilot sites were much smaller and of shorter duration, intended to address specific potential problems with implementation. The results will be discussed in relation to the initial aims of the death certification reforms as set out above.

Process

3.2. The process set out in Figure 1 has been modified slightly, in that certifying doctors are encouraged to discuss their proposed cause of death with a medical examiner before completing a medical certificate of the cause of death (MCCD), rather than afterwards. This dramatically reduces the large number of MCCDs that otherwise have to be destroyed and re-written and it provides an opportunity for support and education which most doctors welcome. This is particularly supported by the hospital-based part of the pilot in Gloucester, where before the pilots started the local pathology department had used a similar but less formal process for advising doctors on how to certify deaths. However, the spread of circumstances under which deaths are certified (urban / rural, primary care/secondary care etc.) has emphasised the need for a degree of flexibility in the process, subject to all essential aspects of scrutiny being delivered.

3.3. Providing an external examination of the body was normally found to be straightforward where death occurred in secondary care, but it is sometimes problematic in primary care. An audit of information gained from external examination of the body revealed that in 1,110 cases there were only 6 cases in which the examination impacted on how death was certified in and only 1 case where examination modified the decision to refer to the coroner. There were no occasions where the medical examiners questioned the standard or validity of an examination carried out on their behalf. It was concluded that

an external examination need not be mandatory, but that its use could be left to the discretion of individual medical examiners (subject to the National Medical Examiner auditing how often this exemption is used). Furthermore, medical examiners should be authorised to delegate the external examinations to anyone they deem to be appropriate, subject to the person undertaking the examination having completed the relevant sub-set of the online medical examiner training.(6) A proforma has been developed and tested to facilitate reporting the results of such an examination to the medical examiner.

3.4. Obtaining case notes for scrutiny in a timely manner was facilitated by locating the medical examiner's offices within a major hospital. Obtaining notes from primary care did not cause significant problems or delays, because an adequate summary of most primary care notes could be obtained in electronic form. In the Gloucester pilot, notes from a non-NHS organisation (a hospice) have also been successfully transmitted electronically. There was occasionally a difficulty in obtaining appropriate records for patients who have moved practices or moved to a different hospital in the short period of time prior to their death.

3.5. Where electronic records were not available, extensive use was made of fax transmission of relevant paper documents. The pilot in Powys, designed to test implementation in a sparsely populated rural location, functioned largely on the basis of faxed medical records and proved that a rural location is no barrier to implementation. It is anticipated that a gradual increase in the use of electronic patient records will in time make medical examiners less dependent on an office location located within secondary care and will improve the speed of scrutiny.

3.6. The other main line of communication for medical examiners is with their local coroner's office.(7) Close working relations were established in all the pilots and coroners welcomed the improved quality of medical information they received. The impact on coroners' workloads is discussed below.

3.7. We believe the new process may take slightly longer than before, which is not surprising as it involves much better scrutiny. However, we are not sure of how long, because in the pilots it was still necessary to complete cremation forms for the majority of deaths. When the reforms are implemented, cremation forms will be abolished. This will save time, but we were not able to test how much.

Ensuring appropriate referral to the coroner

3.8. If a death obviously requires investigation by the coroner, prior discussion with a medical examiner is not mandatory. However, in both the main pilot sites it rapidly became normal practice within secondary care to discuss all deaths with a medical examiner before informing the coroner. Where the certifying doctor is unsure of the need for coronial referral, a discussion with the medical examiner normally clarifies the position.

3.9. However, the pilots have also identified cases where the doctor would have completed an MCCD indicating that death was due to natural causes, but scrutiny by the medical examiner led to referral to the coroner and the coroner confirmed the appropriateness of that referral by opening an investigation. The size of this effect differed in the different pilot sites. In Sheffield, with its history of heavy industry, many of these additional inquests were respiratory deaths where the patient's occupation was recorded as 'retired', but inquiry revealed a previous occupation as a coal or steel worker and the cause of death involved a lung disorder which was likely to represent an occupational disease. Other causes of initial failure to refer to the coroner included deaths where the

initial admission to hospital had been precipitated by an accident or fall, but cases were identified across the spectrum of indications to refer to a coroner *(see Table 3)*.

3.10. It is difficult to estimate the extent to which inquests can be expected to increase in number after implementation, because the pilot sites were not designed to represent a balanced cross- section of deaths throughout England and Wales and there are numerous of other factors that influence the proposition of deaths subject to inquest over time. A recent example is the Chief Coroner's guidance that all cases where the deceased was subject to a 'Deprivation of Liberty Safeguarding Order' must be investigated by inquest. However, an analysis of the available information suggests that the increase is likely to be 5 per cent at most. It is certainly much smaller than the variation in inquest rates currently seen as a result of variations in practice between different coroners.

3.11. Medical Examiners in Gloucester and Sheffield have also been closely involved in providing medical advice to the local coroner, including working with the coroner on how such cases might be handled. Both Senior Coroners strongly support the concept that medical examiners are important sources of advice and encouraged their involvement.

Table 3 Reasons for referral of a death to the coroner

(Please note that the criteria are currently under review by the Ministry of Justice)

The cause of death is unknown
The death was unnatural (as detailed below):
The death may have been caused by violence, trauma or physical injury
The death may have been caused by poisoning
The death may be a result of intentional self-harm
The death may be a result of neglect or failure of care
The death may be related to a medical procedure or treatment
The death may be due to an injury or disease received in the course of employment
Other unnatural causes of death
The death occurred whilst the deceased was in custody or state detention
The death involves any suspicion of criminal activity

Avoiding unnecessary referral to the coroner

3.12. Despite the increase in referrals that result in inquests, the total number of deaths referred to the coroner remained static or showed a slight fall. This was a result of a reduction in inappropriate referrals to the coroner. Most of these were deaths where the certifying doctor was convinced the death was due to natural causes but was less certain of the precise cause and hence the doctor was unsure how to complete the MCCD.

Providing a non-coronial route to certify deaths that are clearly due to natural causes but where a doctor able to sign an MCCD is not available.

3.13. When the legislation is implemented in full, coroners will be empowered to refer deaths for certification by a medical examiner, if the coroner believes that death is due to natural causes but a doctor qualified to sign an MCCD is not otherwise available. This process can be expected to reduce further the number of unnecessary coronial investigations and post-mortem examinations, but the magnitude of the effect has not

yet been quantified because full implementation of the legislation must first occur. It is also anticipated that this will facilitate timely funeral arrangements for those where urgent release is desired.

Improving the accuracy of certification of causes of death

3.14. The pilots recorded the certifying doctor's initial proposed cause of death and the cause of death that was finally agreed. In the very few cases where a certifying doctor and a medical examiner cannot agree a cause of death, the case would be referred to the coroner on the grounds that the cause of death could not be ascertained with sufficient confidence. Medical examiners do not tell certifying doctors what to write: instead they advise on the best wording to explain sufficiently the chain of causation of cause of death. For example, it is common for a doctor to propose the cause of death as simply 'pneumonia' without appreciating that the underlying cause of this was the immobility caused by a stroke. On that basis we argue that differences between the originally proposed cause of death and the certified cause of death represent an improvement in accuracy of death certification.

3.15. The very low standard to which most MCCDs are completed has been amply documented in the published literature over many years, with no evidence of recent improvement.(8-13) Consequently we were not surprised to find that some change in the wording of the MCCD was agreed in the majority of cases, reaching 83 per cent in an audit at the Gloucester pilot site. In the same audit, 33 per cent of cases required major changes to the MCCD, indicating a clear failure of understanding of death certification by the attending doctor and in 8 per cent of cases there was a failure by the attending doctor to understand the law and/or the indications for referral to the coroner.

3.16. However, changes in the wording of an MCCD do not necessarily have an impact on how the cause of death is ultimately coded by the Office for National Statistics (ONS). This was addressed by a parallel study by the ONS of 5,112 deaths, which found a change in their coding of the cause of death in 22 per cent of deaths scrutinised by a medical examiner. In 12 per cent of deaths the change was sufficiently large to cause the death to be coded in a different chapter of the ICD10 code book.(14) Some changes in the apparent incidence of diseases affecting individual organ systems were substantial; for example, a 14 per cent increase in deaths recorded as being primarily due to 'Diseases of the nervous system' and a 16 per cent decrease in deaths attributed to 'Diseases of the genitourinary system', although the numbers of deaths in these categories was small and reproducibility in a larger study is therefore not guaranteed. Deaths due to cancer (neoplasm) increased by 1 per cent. The results of this case study indicate that medical examiner scrutiny is very likely to affect trends in causes of death reported in mortality statistics. This is likely to have significant implications for public health and the provision of healthcare services.

3.17. An additional benefit of scrutiny by medical examiners was identified when the relatives took the MCCD to the Registrar to register the death. Rejection of the proposed cause of death by the registrar fell (or referral from the registrar to the coroner) from around 2 per cent to zero. Registrars and relatives have welcomed this improvement.

Collecting and reporting information on clinical governance issues identified during scrutiny

3.18. The pilots have not identified 'the next Harold Shipman'; we believe that this is because such criminals are very rare. However, the pilots have detected many unexpected significant events that have as a result been brought to the immediate attention of the

relevant authorities; for example, rare cases of unexpected hypoglycaemia in non-diabetic patients that justified investigation by the coroner and hospital. The pilots have allayed concerns that medical examiners might have difficulty in identifying unusual patterns of death. While not providing certainty, medical examiners have proved that they can initiate fruitful lines of inquiry on the basis of very few deaths. For example:

- Medical examiners have triggered investigations that identified problems with post-operative infections, faster than other audit procedures, based on surprisingly few cases (e.g. three cardiothoracic unit cases and four orthopaedic unit cases)
- Information of a similar nature from two different families within a short time raised concern that care at a nursing home might be inadequate. Medical examiner notification led to Safeguarding concerns and a coroner's investigation.

3.19. It will be possible to collect and analyse this information at a national level. The 2009 Act includes a requirement for medical examiners to comply with reasonable requests for information from the National Medical Examiner. A prototype 'Medical Examiners' database' has been written which can automate the provision of information on individual deaths and the institution responsible for their care when they die. A draft list of the items of information which the National Medical Examiner proposes to collect in this way about every death scrutinised is provided in Table 4. (The list is also intended to allow the National Medical Examiner to discharge the statutory duty of overseeing the quality of the work of medical examiners, including timeliness). This list could readily be amended in the light of further experience or needs. The potential for triangulation with outer sources of information on care quality is self-evident.

Table 4 Information on each death scrutinised which the National Medical Examiner currently proposes to collect.

Name of medical examiner's office
City
Unique case identification code (held only by the local office)
Was there a request for urgent scrutiny?
Date of death
Place of death
Burial, cremation or other?
Was an external examination completed?
Reason for omission of external examination, if applicable
Was a medical examiner's disposal form (ME2) signed?
Reason why ME2 not signed, if applicable
Did scrutiny change the proposed cause of death?
Were there any pressure sores? (If so state the grade)
Was the death referred to the coroner?
Was referral to the coroner justified by the external examination?
Was referral to the coroner justified by the discussion with the next of kin?
Was referral accepted by the coroner?
Was a discussion with the next of kin held?
If there was no discussion with the next of kin, what was the reason?

Did information from the next of kin alter the agreed cause of death?
Did the next of kin offer compliments about the care provided?
Did the next of kin make any complaints about nursing?
Did the next of kin make any complaints about doctors?
Did the next of kin make any complaints about cleaning?
Did the next of kin make any complaints about delays?
Did the next of kin make any complaints about any error in care?
Did the next of kin make any other complaints?
Nature of concerns expressed by the next of kin
Were clinical governance issues identified during scrutiny?
Action taken to correct clinical governance issues
Code number of healthcare institution responsible for care in the final illness
Time taken - verification of death to notification of ME office
Time taken - notification of ME office to notification of Coroner
Time taken - notification of ME office to receipt of MCCD
Time taken - notification of ME office to discussion with next of kin
Time taken - notification of ME office to signature on ME2 form

3.20. There has recently been considerable interest in using case notes review to identify 'avoidable deaths' in secondary care, as a route to identifying improvements and also as a measure of healthcare quality.(15, 16) That item is not included in Table 4, because although a study of 3875 deaths has confirmed that medical examiners are well placed to identify 'avoidable' deaths at a rate similar to others(16), we were not convinced that 'avoidable deaths' could be identified as a specific category with sufficient reproducibility to be useful if such a scheme is applied across the whole country.(17) However, if that proves not to be the case it would be very easy to add 'Deaths that might have been avoided if healthcare had been delivered differently' to the above list. Such deaths of course always justify referral to the coroner.

Interactions with the next of kin

3.21. At the start of the pilots, concern was expressed that recently bereaved relatives might resent the intrusion of a medical examiner contacting them and asking questions. Exactly the opposite has proved to be the case. The vast majority of those contacted are grateful to be offered the opportunity to ask questions and to voice concerns, even when they have none. Many take the opportunity to compliment the quality of care that had been given; this is always fed back to the appropriate members of staff. These conversations make it obvious that the problems with care quality at the Mid Staffordshire hospital would have been detected much earlier if an independent medical examiner had been available to listen to the complaints.

3.22. Relatives are also keen to have an authoritative explanation of what the words on the MCCD actually mean; the medical terminology is often obscure to them and suspicions can be aroused if the wording of the MCCD cannot be seen to relate to their understanding of the terminal illness. Bereavement support groups involved in the pilots are unequivocally in favour of the reforms.

3.23. In an audit of 7927 sequential discussions with families in the Sheffield pilot office, in 6404 cases (81 per cent) the relatives had no concerns about the quality of care or cause of death. In 1330 cases (17 per cent) the relatives had questions or concerns that were satisfactorily discussed with the ME office, concluding with either an answer or explanation to the question or query, reassurance that an event or concern did not contribute to death, or redirection of the concerns (typically lack of communication, nursing attitudes, lack of facilities) to the relevant department, consultant or Patient Liaison service. 193 (3 per cent) of the families spoken to had concerns that justified a discussion between the medical examiner and the coroner.

3.24. Medical examiners are often able to discuss and 'defuse' potential complaints. A causal link cannot be proven, but it is of interest that the major hospital in the Sheffield area has seen a substantial fall in its medical litigation costs during the period of the medical examiner pilot there.(18).

Educating health service staff about death certification

Impact on the relatives: Cases from the pilots

What used to happen:

'Mr Smith' was 80 years old when he suffered a spontaneous bleed into his brain. He was taking blood pressure lowering medicines but had no other medical problems. His condition deteriorated soon after hospital admission and the cause of death was simply written as being due to intracerebral haemorrhage.

When Mr Smith's wife went to register the death, the Registrar would have told her this cause of death could not be accepted because 'intracerebral haemorrhage' is a condition that might have been caused by a blow to the head; so referral to the coroner would be needed. Mrs Smith would have to leave without registration until the coroner's officer had made enquiries at the hospital.

What happened in the pilot:

Mr Smith's case was discussed with the medical examiner and the natural circumstances of death established. After listening to the attending doctor's proposed cause of death, the medical examiner recommended that the cause of death was given as 'Spontaneous intracerebral haemorrhage', due to hypertension. This was then discussed with Mrs Smith, who confirmed she understood the cause after explanation of the terms and that she had no concerns. Mr Smith's death was registered smoothly without the need for coroner referral.

What used to happen:

A 64 year old man died of cancer of the larynx. Right at the end of his life, it was discovered that he was HIV positive. People who are HIV positive are known to be at increased risk of some cancers, including cancer of the larynx. The cause of death was proposed as disseminated carcinoma of larynx with HIV infection as a contributory factor. This would have caused considerable grief for the relatives because, until this point, they had not been informed that the patient was HIV positive. (This was the deceased's request and the circumstances were such that transmission of HIV to the relatives was regarded as very unlikely). Furthermore, including this statement on the death certificate meant that the deceased's HIV status could have become public knowledge.

What happened in the pilot:

Almost immediately after the death, the case was discussed with the Medical Examiner. The Medical Examiner explained that "HIV infection" is not required on the death certificate, not least because a link had not been established in this specific case. Comparable risk factors are known for many forms of cancer, but these are rarely included on the death certificate. So in this case, there was no need to mention "HIV infection", as the death was clearly due to cancer of the larynx and the HIV infection had not caused any symptoms of AIDS. The distress of the relatives was avoided.

3.25. Our observations have confirmed published reports that death certification is usually done very badly. The pilots have also demonstrated the futility of recommending that death certification should always be supervised by consultants; causes of death proposed by consultant staff were very frequently inappropriate, sometimes dramatically so. The pilots were not designed to measure the extent to which local doctors improved their skills in certifying death, but in Sheffield it was found that there has been a decrease in the number of causes of death initially proposed by certifying doctors that needed to be amended. In 2011 approximately 51 per cent of proposed causes were altered, whereas in 2014 this had dropped to 23 per cent, suggesting that there has been a long term educational effect in formulating causes of death and requirement for coroner referral.

Other benefits and problems, not initially anticipated

3.26. Coroners value advice from a medical examiner trained and experienced in coronial law on the medical aspects of cases referred to them.

3.27. Medical examiners foster the culture of openness and the duty of candour. Doctors feel supported in raising concerns to the ME, knowing they are protected by the independent advice and action of the medical examiner. Doctors also know that problems will be detected by the process of scrutiny so they accept that a full and open discussion and appropriate referral to the coroner is inevitable.

3.28. Medical examiners can provide useful statistical information not only on a national basis, as discussed above, but also locally. A request to the ONS to provide data is cumbersome and expensive. The pilots have accommodated local requests ranging from morbidity and mortality committees requesting outcomes of certification and investigation, to researchers interested in patterns and trends (such as local deaths related to alcohol, thromboembolism or autoimmune hepatitis). The purpose-built medical examiner's database facilitates this.

The cost of the reforms

3.29. Financial analysis has shown the cost of this process to be moderate; it is anticipated that the service in England will cost around £80 to £100 per death scrutinised (not including the cost of collection of any fee for scrutiny, should a fee be levied), which is considerably less than the £184 that families currently pay for the 'cremation forms' – an antiquated system which singularly failed to detect the crimes of Harold Shipman. If we regard it as important to identify harm to patients and to record causes of death as accurately as possible, it is surely remarkable that deaths that will be followed by burial are currently subjected to no scrutiny whatsoever; and that even for deaths that are to be followed by cremation, the so-called additional safeguards currently require neither a review of the medical records nor a conversation with the next of kin.

3.30. At present, approximately 75 per cent of deaths in England and Wales are followed by cremation. Implementation of a medical examiner system will allow the abolition of the cremation forms and associated fees. So overall, the public will be paying less and getting a much better service. Implementation will also abolish the unjustified anachronism that a fee must be paid by those who choose cremation, but not by those who choose burial.

Conclusions

3.31. The death certification reforms in the Coroners and Justice Act 2009 have been subjected to unusually extensive testing in the pilot sites. Subject to minor modifications of process, the pilots have shown that the new service can be delivered and that it generates all the benefits expected.

3.32. There are two areas where the pilots have shown particularly welcome results.

3.33. The first is the independent provision of information relevant to clinical governance. The importance of this was amply recognised in the Francis Inquiry into Mid-Staffordshire,(3) which took evidence from the lead medical examiner in Sheffield (AKF) when the pilot there was already well established. Similarly, the inquiry into maternal and perinatal deaths at Morecambe Bay encouraged implementation of the reforms as a tool to identify problems in care quality more quickly. (4) Very recently there has been renewed interest in identifying 'avoidable deaths' in NHS hospitals, as a learning tool and also as a measure of the quality of care.(15) We firmly believe that the medical examiners in the pilots are already delivering this service. They are doing so in a timely way, referring avoidable deaths for investigation by the coroner immediately after death, rather than several months later when coronial investigation will be more difficult and when an unexpected referral to the coroner is likely to cause considerable additional distress to the grieving relatives. They also deliver an abundance of information at other levels, down to the views of relatives on the cleanliness of institutions and the attitudes of staff. The route of data collection is independent of the care provider and can be analysed nationally as well as being used locally. The relevance of this approach to recent media reports of inadequate standards of care in nursing homes as well as in hospitals is obvious.

3.34. The second area where the results have been particularly welcome is the response of the bereaved relatives. We did not set out systematically to collect information on this, beyond the number and nature of complaints about the service. Complaints have been few, but compliments numerous. It is very clear that when someone dies, the relatives often feel that the healthcare system 'switches off' and moves its attention swiftly to caring for those still alive. This is understandable but inappropriate.

3.35. Families who have just suffered bereavement deserve explanations and answers to their questions from an authoritative and independent source. They also deserve to have their voices heard by the system. Medical examiners deliver both.

References

1. Dame Janet Smith. The Shipman Inquiry, Third Report: Death certification and the investigation of deaths by coroners. London: 2003. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/273227/5854.pdf.
2. Coroners and Justice Act, (2009). Available from: http://www.legislation.gov.uk/ukpga/2009/25/contents.
3. Francis R. Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry. Volume 2: Analysis of evidence and lessons learned (part 2, Chapter 13) 2013. Available from: http://webarchive.nationalarchives.gov.uk/20150407084003/http://www.midstaffspublicinquiry.com/sites/default/files/report/Volume%202.pdf
4. Kirkup B. Report of the Morecambe Bay Investigation. 2015. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/408480/47487_MBI_Accessible_v0.1.pdf.
5. Furness P, on behalf of a multidisciplinary group established by the Academy of Medical Royal Colleges. A curriculum for the post-CCT training of medical examiners (of the cause of death). Parts 1 and 2. 2008. Available from: http://www.rcpath.org/committees/committees/medical-examiners-committee/medical-examiners-committee.htm.
6. e-Learning for Health; lead author Alan Fletcher. Medical Examiner: an e-learning resource supporting the new Government reforms of the systems for death certification and coroners practice. Available from: http://www.e-lfh.org.uk/programmes/medical-examiner/.
7. Furness P. Coroners and medical examiners: mutualism, commensalism or parasitism? Med Leg J. 2012; 80(Pt 3):86-101. Available from: http://www.ncbi.nlm.nih.gov/pubmed/23024193.
8. Fernando D, Oxley JD, Nottingham J. Death certification: do consultant pathologists do it better? J Clin Pathol. 2012; 65(10):949-51. Available from: http://www.ncbi.nlm.nih.gov/pubmed/22774219.
9. James DS, Bull AD. Information on death certificates: cause for concern? J Clin Pathol. 1996; 49(3):213-6. Available from: http://www.ncbi.nlm.nih.gov/pubmed/8675731.
10. Morton L, Omar R, Carroll S, Beirne M, Halliday D, Taylor KM. Incomplete and inaccurate death certification--the impact on research. J Public Health Med. 2000; 22(2):133-7. Available from: http://www.ncbi.nlm.nih.gov/pubmed/10912549.
11. Roulson J, Benbow EW, Hasleton PS. Discrepancies between clinical and autopsy diagnosis and the value of post mortem histology; a meta-analysis and review. Histopathology. 2005; 47(6):551-9. Available from: http://www.ncbi.nlm.nih.gov/pubmed/16324191.
12. Slater DN. Certifying the cause of death: an audit of wording inaccuracies. J Clin Pathol. 1993; 46(3):232-4. Available from: http://www.ncbi.nlm.nih.gov/pubmed/8463416.
13. Swift B, West K. Death certification: an audit of practice entering the 21st century. J Clin Pathol. 2002; 55(4):275-9. Available from: http://www.ncbi.nlm.nih.gov/pubmed/11919211.
14. Office for National Statistics. Death Certification Reform: A Case Study on the Potential Impact on Mortality Statistics, England and Wales. Statistical bulletin [Internet]. 2012. Available from: http://www.ons.gov.uk/ons/rel/subnational-health2/death-certification-reform---a-case-study-on-the-potential-impact-on-mortality-statistics/england-and-wales/stb-deathcertification.html
15. Jeremy Hunt orders yearly study of 'avoidable' hospital deaths. . BBC News website: BBC; 2015; Available from: http://www.bbc.co.uk/news/health-31226148.

16. Hogan H, Healey F, Neale G, Thomson R, Vincent C, Black N. Preventable deaths due to problems in care in English acute hospitals: a retrospective case record review study. BMJ Qual Saf. 2012; 21(9):737-45. Available from: http://www.ncbi.nlm.nih.gov/pubmed/22927487.
17. Hogan H, Healey F, Neale G, Thomson R, Vincent C, Black N. Relationship between preventable hospital deaths and other measures of safety: an exploratory study. Int J Qual Health Care. 2014; 26(3):298-307. Available from: http://www.ncbi.nlm.nih.gov/pubmed/24781497.
18. Sheffield hospital trusts pay £7m less over negligence claims. The Star, Sheffield. 4th November 2014. Available from: http://www.thestar.co.uk/news/health/local-health/sheffield-hospital-trusts-pay-7m-less-over-negligence-claims-1-6932272.