Journal of Indonesian Forensic and Legal Medicine
Vol.1, No.2, Agustus 2019, Hal. 82-91
ISSN : 2656-2391

The Forensic Autopsy Record: A Type of Medical Record or Not?

Putri Dianita Ika Meilia[1*)], Herkutanto[2]

[1]Forensic Medicine and Mortuary Installation, RSUP Persahabatan, Jakarta, Indonesia

[2]Department of Forensic and Legal Medicine, Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia

[*)] Corresponding author: E-mail: antalya22ftf@gmail.com

ABSTRAK

Patologi forensik adalah bagian dari kedokteran yang memiliki keunikan dibandingkan bidang kedokteran lainnya. Salah satunya adalah bahwa hasil pemeriksaan patologi forensik tidak didokumentasikan dalam rekam medis tetapi dalam laporan obduksi. Di Indonesia, masalah penyelenggaraan laporan obduksi belum diatur secara rinci. Makalah ini merupakan telaah literatur tentang regulasi dan seluk-beluk laporan obduksi, yang dilanjutkan dengan diskusi tentang apakah laporan obduksi dapat dianggap sebagai rekam medis atau tidak.

Melalui telaah literatur, kami mendapatkan bahwa ada beberapa pedoman mengenai penyelenggaraan laporan obduksi, a.l. di Amerika Serikat dan Eropa. Namun, Indonesia belum memiliki pedoman serupa. Ada beberapa masalah etika dan mediko-legal terkait laporan obduksi yang harus diatur karena laporan obduksi tidak dapat dianggap sebagai rekam medis. PDFI dapat berperan penting dalam mengembangkan pedoman mengenai laporan obduksi, yang dapat diadopsi oleh institusi kedokteran forensik di Indonesia untuk menghindari masalah etika dan mediko-legal.

Kata kunci: laporan obduksi, rekam medis, aturan penyelenggaraan berkas

ABSTRACT

Forensic pathology is a part of (forensic) medicine that has unique features compared to other medical specialties. One of them is that the results of forensic pathological examinations are not documented in medical records but in forensic autopsy records (FARs). Despite the existence of regulations regarding medical records and the performance of (forensic) autopsies, FARs themselves are rarely mentioned in detail. This paper aims at reviewing current issues regarding FARs and discussing whether FARs can be considered as a type of medical record or not.

Our literature review yields that there exist guidelines regarding the management of FARs, e.g. in the USA and Europe. Indonesia, however, lacks similar guidelines. There are several ethical and medico-legal issues present regarding FARs, which should be addressed, as FARs cannot be considered as a type of MRs. PDFI can play an important role in developing guidelines regarding FARs, which should be adopted by Indonesian forensic medical centres to avoid ethical and medico-legal pitfalls.

Keywords: forensic autopsy record, obduction report, medical record, record retention schedule

INTRODUCTION

Medical records (MRs) are an integral part of medical practice. A proper medical record can be invaluable in establishing a diagnosis, designing and implementing an appropriate therapy plan, and observing the development of a patient's condition (Leiner *et al.*, 2003). Medical records that are complete, accurate, and made in a timely manner can also have additional functions, such as for managerial purposes, audits, and even as a defense in a malpractice lawsuit (Roach *et al.*, 2006). Therefore, there are clear regulations governing the structure, content, management (e.g. storage and disposal), as well as legal and ethical issues of medical records.

Forensic pathology is a part of forensic medicine that concerns itself not with (living) patients but with deceased individuals (Pinheiro, 2006; Saukko and Knight, 2016). Despite its long history and its shared principles with clinical medicine in general, it has certain features that make it unique compared to other medical specialties. One of those features is that the results of forensic pathological examinations are generally not documented in medical records. Instead, forensic pathologists use what is commonly known as a forensic autopsy record (FAR) or an obduction report (Indonesian = *laporan obduksi*, *formulir pemeriksaan jenazah*). There are countless variations in the "in-house style" of the structure and content of FARs, with many institutions using the same format of FARs for generations of forensic pathologists.

There are several issues regarding FARs that have not been addressed, especially in Indonesia. Firstly, FARs should be considered as more than just drafts of the final autopsy reports to be submitted to the requesting party. Instead, they contain all information obtained during the autopsy, whether it has a direct bearing on the case or not. As such, unlike drafts, they should not be destroyed directly after the final autopsy report has been produced, as they can be used as the objective basis to form a second opinion, should one be required. Secondly, FARs can be subpoenaed as evidence in court because they contain raw data from the autopsy and hence can serve as evidence of the examination procedure to corroborate the expert opinion evidence.

Despite the existence of regulations and standard operational procedures (SOPs) regarding medical records and about the performance of (forensic) autopsies, the FAR itself is rarely mentioned in detail. Are regulations about medical records also applicable to FARs? Can FARs even be compared to medical records? What is the SOP for filling, storing, and disposing of FARs? How should we maintain their confidentiality? And what other legal and ethical issues are related to FARs? Those are some of the questions that have until now largely remained unanswered (and usually not given much thought to), especially in Indonesia.

This paper aims at reviewing current issues regarding FARs and discussing whether FARs can be considered as a type of medical record or not.

METHODS

The literature review was conducted by searching electronic databases of PubMed, EMBASE, ClinicalKey, MEDLINE, Wiley Online, BMJ, as well as Google Search and Google Scholar for articles up to April 2019. The search terms were as follows: "(forensic autopsy OR obduction) AND (record OR report OR form OR protocol OR proforma)", "(forensic autopsy OR obduction) AND (performance OR procedure) AND (standard OR law OR regulation)", and "medical record AND (forensic autopsy OR visum et repertum)". We used various spelling variations of the English and Indonesian versions of the search terms and their derivatives. Due to its exploratory nature, no limits were placed on the search. Several searches were conducted to ensure that all the relevant articles were identified. The search results were sorted by relevance. All titles and abstracts from the initial search results were screened and reviewed. The full texts of

all relevant articles were reviewed individually. Snowballing by checking the reference lists of relevant articles were also performed.

RESULTS AND DISCUSSION

The initial search yielded 927 results, but only 49 items were deemed as relevant based on the title and abstract (if available) screening process. The items consist of journal articles, books, conference proceedings, laws/regulations, and guidelines/manuals. Most items were in English, although some were in Indonesian, German, and Dutch.

Definition

FARs are formal, legal documents prepared subsequent to an autopsy in accordance with a pre-defined protocol, that are used to memorialize the cause (and manner, if applicable) of death. They can be considered business records (i.e. records produced from regular working activities) or as public/official records (Ginsberg, 2013). A unique aspect that differentiates the FAR from other business or official records (e.g. police records, eye-witness statements, etc.) is that they are produced by highly trained forensic (medical) specialists who are neutral/impartial and work separately from law enforcement agencies (Capra and Tartakovsky, 2014).

History of FARs

The earliest predecessors of the modern FAR could be found in China around 1000 AD. Those records contained the post-mortem examination results of all suspicious deaths, which included the personal characteristics of the deceased, wounds, and the cause of death (Hua, Cameron and Tao, 1987). Then, in 13th century Italy, the earliest known report of a forensic autopsy was produced upon request from the town magistrate of Bologna. The earliest known book on how to produce medico-legal reports was written by Ambroise Paré, in France (1575) (Madea, 2017).

Existing Regulations/Guidelines

In the Forensic Autopsy Manual for Forensic Pathologists (United Nations Office on Drugs and Crime, 2015), one aspect of management and administration is the control of records (e.g. access and removal). It also includes suggested contents of an autopsy report.

The Code of Practice and Performance Standards for Forensic Pathology in England, Wales and Northern Ireland outline the standards of record-keeping in accordance with the Criminal Procedures and Investigation Act 1996 (Home Office *et al.*, 2012). Examples of the standards include that FARs must be kept in a secure storage facility and that if recordings are used, in addition to paper forms, the original media and their transcriptions must be stored as well. Because there are no standards for the layout and format of FARs in the Code of Practice, however, there is a variety of "in-house styles" (Forensic Science Regulator Forensic Pathology Specialist Group, 2017).

In the USA, the National Association of Medical Examiners (NAME) in its Inspection and Accreditation Checklist outlines the standards for reports and record keeping (National Association of Medical Examiners, 2014, 2016b), i.a. whether a medical examiner's office has a written and implemented policy or SOP regarding reports and record keeping, whether the record storage space is secure with controlled access, and whether written narrative autopsy reports are prepared in every autopsy. Furthermore, in their Forensic Autopsy Performance Standards, NAME also sets standards for the content and format of the FAR (National Association of Medical Examiners, 2016a). Some of the regulations vary from state to state (some states have none). For example, in Florida, all case file notes (paper forms, audio-visual documentation, laboratory

results, etc.) must be retained for at least 30 years, or in a case of an unidentified body, until the body has been identified (Adams, 2008).

Meanwhile, in Europe, the European Council of Legal Medicine (ECLM) outlines the standards of reports and record keeping in their guidelines of accreditation of forensic pathology services in Europe (Mangin *et al.*, 2015). Those standards include, i.a., whether there are written and implemented policy or SOPs covering reports and record keeping, whether the record storage space is secure with controlled access, and whether records are kept in an orderly fashion for easy retrieval of data. They also dictate that the service/institution acts as the guardian of the records. As such, the service/institution retain, care for, control, and have custody over the records.

Individual countries in Europe have also developed their own guidelines. For instance, in Germany, the German Association of Forensic Medicine (*Deutsche Gesellschaft für Rechtsmedizin*), has published guidelines regarding the performance of the forensic autopsy, which also include standards of the FAR ("*Obduktionsprotokoll"* in German) (Deutsche Gesellschaft für Rechtsmedizin, 2017). The standards regulate the structure and content of the FAR, and that the forensic pathologist has to ensure its correctness and completeness before signing it. Furthermore, in Switzerland, the Swiss Principles and Rules for Medico-legal Autopsy set out quite detailed standards for the FAR (they use the term "autopsy protocol"). Some of the standards include that the FARs should be dictated during or immediately after the autopsy, clear and legible (even to lay-persons), and stored in a permanent form (i.e. paper form, even if electronic storage is also used) (Burkhardt *et al.*, 2007). In the Netherlands, the autopsy records of clinical autopsies are equal to medical records and are subject to the medical confidentiality act ('Wet op de beroepen in de individuele gezondheidszorg [Individual Healthcare Professions Act]', 1993). The FAR, on the other hand, is a legal document owned by the governmental authorities. FARs are provided to the investigating prosecutor and the police team. In the Netherlands Forensic Institute (NFI), the forensic medical department has its own archive, which can only be accessed by authorized persons. In this archive, FARs and any other pertinent medical information are stored securely.

In Australia, according to the Forensic Pathology Code of Practice and Performance Standards (NSW Health Pathology, 2012), FARs (called "pathologists' records" in the Code) are official records that could be used in court as evidence of the autopsy procedure. Thereby, FARs and all their associated records (e.g. tape recordings and their transcriptions) must be adequately made, indexed, and securely archived.

Examples from other countries include China, South Africa, and Qatar. In China, it is common practice that after a post-mortem examination, the pathologist should record his findings in a written report, but there are no clear regulations (Hua, Cameron and Tao, 1987). On the other hand, South Africa has clear regulations. According to the Inquests Act, any FAR may only be released to the investigating officer of the South African Police Service (Government of South Africa, 1959). Furthermore, the Forensic Pathology Service of each province is obligated to provide medico-legal reports, store and archive relevant documents (physically and electronically), and protect FARs from unauthorised access (South African Department of Health, 2003). Similarly, in Qatar, all FARs (and all documentation relating to medico-legal work for that matter) are controlled by the police (Bhootra, 2006).

Meanwhile, in Indonesia, there are clear regulations regarding the final autopsy report (*visum et repertum* in Indonesian). The first and foremost is that it should follow a pre-defined format because it will be used as evidence in court. Furthermore, a copy of the autopsy report should be archived for at least 20 – 30 years (Afandi, 2017). FARs themselves are, however, not mentioned.

Medico-legal Issues

Ownership and access

As with medical records, the institution should act as the guardian, and owner, of the FAR files (both paper and electronic) (National Association of Medical Examiners, 2014; Mangin *et al.*, 2015). Therefore, it is the duty of the institution to ensure the safety and security of the files, *i.a.* that they can only be accessed and used by authorised personnel. In the event of suspected unauthorised access and/or improper release of information contained in a FAR, a thorough investigation (internal/external) should be conducted (Victorian Ombudsman, 2011).

Record retention

The main principle is to design record retention schedules to manage records by organised disposal because records can be destroyed when (1) a fixed time interval has passed, (2) they are converted into another type of record, (3) they become obsolete or no longer serve a purpose (Adams, 2008). The State of New York and the District of Columbia provide examples of record-keeping, retention, and disposal schedules for a variety of death records, including FARs (District of Columbia Office of the Chief Medical Examiner, 2010; New York State Education Department, 2019). Some states in the USA prescribe that FARs must be kept at least for the entire career of the medical examiner/forensic pathologist.

In Indonesia, archives must also be kept in accordance with a pre-defined record retention schedule (*Jadwal Retensi Arsip* in Indonesian) ('Undang-undang Republik Indonesia Nomor 43 tahun 2009 tentang Kearsipan [Law of the Republic of Indonesia regarding Archives]', no date). Ideally, for all official government records and documents, the schedule has to be approved by the National Archives of the Republic of Indonesia. Currently, there are no record retention schedules concerning FARs. This can have medico-legal implications, e.g. in the event that a cold-case is being re-opened for trial while the original FAR of the case has already been destroyed. Therefore, it is necessary that record retention schedules be developed for FARs.

Confidentiality

Everything encountered during the autopsy should be documented in the FAR. This might include sensitive medical data that have no direct bearing on the case at hand (e.g. signs of HIV-infection in a victim of a motor vehicle accident). While relevant data (e.g. wounds, fractures, etc.) will be made available to legal fact-finders through the autopsy report, the confidentiality of non-pertinent medical data in the FAR must be ensured (Henky, 2017).

Because forensic autopsies are requested by the police (or, in the coroner's system, a magistrate), the forensic pathologist's duty of confidentiality is to the requesting party. Therefore, data contained in FARs can only be communicated to the requesting party and virtually no (medical) information obtained during the forensic autopsy can be released to the next-of-kin (Ong and Kaur, 1997).

FARs as documentary evidence

In Indonesia, the status of medical records and final autopsy reports (*visum et repertum)* as a form of documentary evidence (*alat bukti sah surat* in Indonesian) is indisputable (Sampurna, 2017). But what is the legal role of the original FARs and their associated case files? Can they also be considered as documentary evidence because they are made by experts using their expertise upon a formal request? Or as real evidence (*barang bukti* in Indonesian) because they contain information (raw data from the autopsy), that can be used to solve the case at hand (Dianti, 2011)? Should they be considered as evidence at all or just as personal notes of the forensic pathologist to aid his/her memory in writing the final autopsy report? We opine that FARs can be considered as

relevant material that could be produced in court as part of the evidence of procedure and as such, must be archived appropriately (NSW Health Pathology, 2012).

Use of FARs in research and epidemiology

With the continuous decline of the number of the hospital/clinical autopsy (Mcphee and Bottles, 1985; Loughrey, McCluggage and Toner, 2000; Grady, 2003; The Royal College of Pathologists of Australasia Autopsy Working Party, 2004; Burton and Underwood, 2007; Shojania and Burton, 2008), forensic autopsies are now by far the most common type of autopsies performed worldwide. Therefore, FARs contain a wealth of information for research purposes and epidemiologic surveillance (Chen, 1996; Hanzlick and Parrish, 1996; Sullivan, 1996; Hanzlick, 2006; Rauscher *et al.*, 2012; Kipsaina *et al.*, 2015). FARs could also be a valuable source of information for the vital statistics registry (Kementerian Dalam Negeri and Kementerian Kesehatan, 2010). There are, however, potential ethical and medico-legal issues about using FARs in medical research, e.g. who should give consent? The next-of-kin, the requesting party, or the chief administrator of the forensic medical institution? As of now, no clear guidelines can be found.

Audio-visual documentation

FARs are most commonly in the form of handwritten notes. In many developed countries, however, it is also common to use voice recording devices to record findings by dictating them concurrently during the autopsy to ensure all details are documented (Adams, 2009). Photographic devices are also commonly used to document findings, and their use is more and more encouraged, not just to aid memory but also as additional evidence. That audio-visual documentation must also be considered as part of the FAR, in addition to the handwritten notes and drawings. They can be stored separately in a dedicated storage system/server or kept individually together with the handwritten form (Ong and Milne, 2009). Therefore, the same principles of record-keeping, storage, and disposal should also be applicable to all audio-visual records.

Electronic FARs (e-FARs)

In addition to the conventional paper version, medical records can also be in the form of electronic files (Menteri Kesehatan Republik Indonesia, 2008). The use of electronic medical records (e-MRs) is increasingly popular due to some obvious advantages compared to paper files, such as the ease of access and storage, safety reasons, the ability to integrate a large amount of data, etc. (Leiner *et al.*, 2003; Hapsari, 2014). For the same reasons, FARs could also benefit tremendously from electronisation (Hanzlick, 1994). There are, however, currently, no detailed regulations concerning the use of e-FARs, including the storage and disposal of digital photographs of autopsy findings.

(Online) databases and big data issues

With the use of e-FARs, (online) databases are the next logical step. Web-based servers can be used to set up regional and even national databases of cases handled by forensic medical institutions. These databases can then be used as secondary data sources in forensic medical and epidemiological research (Hanzlick, 2006), especially for multicentric studies and studies using big data. They can also provide important information for public health policing and to improve patient safety (Fletcher, Coster and Goodacre, 2018). As with any online databases, safety issues such as authorised access and security of the data must, of course, be addressed.

FAR versus MR

In their book "Medical Records and the Law", Roach et al. only discuss the records of hospital/clinical autopsies, which should be treated as part of the (deceased) patient's overall medical record (Roach *et al.*, 2006). Other authors also opine that clinical autopsy reports are part of a patient's complete medical record because they contain the final/definitive diagnosis of the

patient's disease (Ong and Kaur, 1997; Hapsari, 2014). Therefore, the management of clinical autopsy reports generally follows the procedures for administering medical records.

On the other hand, FARs are not included in the definition of MRs. According to the Decree of the Indonesian Minister of Health Nr. 269/2008 regarding Medical Records, the MR is a document containing the identity of and any examinations, therapies, procedures, and other health care services rendered to the patient (Menteri Kesehatan Republik Indonesia, 2008). Pursuant to the Decree, FARs cannot be considered as medical records because (1) a forensic autopsy is not considered a type of health care service and (2) FARs do not contain medical information from a patient but rather from a (suspected) victim of crime. Consequently, all provisions (e.g. how to fill in, store, and dispose of medical records) in the decree do not apply to FARs.

Because FARs also contain an individual's personal dan medical data/information, however, FARs should be treated as confidential documents. So, even though FARs do not constitute medical records, the information contained in them must still be safeguarded and treated confidentially.

CONCLUSION

At present, there are no detailed guidelines regarding the management of FARs in Indonesia. There are several ethical and medico-legal issues that must be addressed, especially with the advent of e-FARs and online databases. The Indonesian Association of Forensic Medicine (PDFI) can play an essential role in this respect by developing guidelines or rules pertaining to the management of FARs, similar to the NAME or ECLM guidelines. These guidelines would serve as the standard of forensic pathology practice in Indonesia, which can then be adopted by the individual forensic medical institutions.

REFERENCES

Adams, V. I. (2008) *Guidelines for Reports by Autopsy Pathologists*. Tampa: Humana Press Inc.

Adams, V. I. (2009) 'Medicolegal Autopsy and Postmortem Toxicology', in Waters, B. L. (ed.) *Handbook of autopsy practice*. 4th edn. Totowa: Humana Press, Inc., pp. 125–136. doi: 10.1016/j.jflm.2010.02.013.

Afandi, D. (2017) *Visum et Repertum: Tata Laksana dan Teknik Pembuatan*. 2nd edn, *University of Riau Press*. 2nd edn. Pekanbaru: Fakultas Kedokteran Universitas Riau.

Bhootra, B. L. (2006) 'Forensic pathology services and autopsy law of Qatar', *Journal of Clinical Forensic Medicine*, 13(1), pp. 15–20. doi: 10.1016/j.jcfm.2005.07.001.

Burkhardt, S. *et al.* (2007) 'Swiss Principles and Rules for Medico-Legal Autopsy', pp. 1–7.

Burton, J. L. and Underwood, J. (2007) 'Clinical, educational, and epidemiological value of autopsy.', *Lancet*, 369(9571), pp. 1471–80. doi: 10.1016/S0140-6736(07)60376-6.

Capra, D. and Tartakovsky, J. (2014) 'Autopsy Reports and the Confrontation Clause: A Presumption of Admissibility', *Virginia Journal of Criminal Law*, 2(1), pp. 64–115.

Chen, K. (1996) 'The coroner's necropsy - an epidemiological treasure trove', *Journal of Clinical Pathology*, 49, pp. 698–699.

Deutsche Gesellschaft für Rechtsmedizin (2017) 'Die rechtsmedizinische Leichenöffnung [The forensic autopsy]', *AWMF online*, pp. 1–16.

Dianti, F. (2011) *Apa Perbedaan Alat Bukti dengan Barang Bukti? [What is the Difference between Forms of Evidence and Real Evidence?]*, *Hukumonline.com*. Available at: https://www.hukumonline.com/klinik/detail/ulasan/lt4e8ec99e4d2ae/apa-perbedaan-alat-bukti-dengan-barang-bukti- (Accessed: 11 April 2019).

District of Columbia Office of the Chief Medical Examiner (2010) *Record Keeping and Retention*. Available at: https://ocme.dc.gov/sites/default/files/dc/sites/ocme/publication/attachments/RecordKeepingRetention11.pdf (Accessed: 30 April 2019).

Fletcher, A., Coster, J. and Goodacre, S. (2018) 'Impact of the new medical examiner role on patient safety', *BMJ*, 363.

Forensic Science Regulator Forensic Pathology Specialist Group (2017) 'Audit of the Work of Forensic Pathologists based in England, Wales, & Northern Ireland'.

Ginsberg, M. D. (2013) 'The Confrontation Clause and Forensic Autopsy Reports-A "Testimonial"', *Louisiana Law Review*, 74, pp. 119–171. doi: 10.3868/s050-004-015-0003-8.

Government of South Africa (1959) 'Inquests Act 58 of 1959'.

Grady, G. O. (2003) 'Death of the teaching autopsy', *British Medical Journal*, 327(7418), pp. 802–803. doi: 10.1136/bmj.327.7418.802.

Hanzlick, R. (1994) 'Survey of Medical Examiner Office Computerization', *The American Journal of Forensic Medicine and Pathology*, 15(2), pp. 110–117.

Hanzlick, R. (2006) 'Medical Examiners, Coroners, and Public Health-A Review and Update', *Archives of Pathology & Laboratory Medicine*, 130(September), pp. 1274–1282.

Hanzlick, R. and Parrish, R. G. (1996) 'The Role of Medical Examiners and Coroners in Public Health Surveillance and Epidemiologic Research', *Annual Review of Public Health*, 17, pp. 383–409.

Hapsari, C. M. (2014) *Kajian yuridis pemakaian rekam medis elektronik di rumah sakit*. Universitas Islam Indonesia.

Henky, H. (2017) 'Ethico-legal conflict in daily forensic medical practice: two examples from Indonesia', *Egyptian Journal of Forensic Sciences*. Egyptian Journal of Forensic Sciences, 7, pp. 17–19. doi: 10.1186/s41935-017-0021-y.

Home Office *et al.* (2012) 'Code of practice and performance standards for forensic pathology in England , Wales and Northern Ireland Home Office , The Forensic Science Regulator , Department of Justice and The Royal College of Pathologists', pp. 1–32.

Hua, P., Cameron, J. M. and Tao, J. J. (1987) 'Forensic Medicine in China : Its History to the Present', *Medicine, Science and the Law*, 27(1), pp. 1–12.

Kementerian Dalam Negeri and Kementerian Kesehatan (2010) 'Peraturan Bersama Menteri Dalam Negeri dan Menteri Kesehatan Nomor 15 tahun 2010-Nomor 162/MENKES/PB/2010 tentang Pelaporan Kematian dan Penyebab Kematian [Joint Decree of the Minister of Home Affairs and the Minister of Health regarding the Reporting of '.

Kipsaina, C. *et al.* (2015) 'Mortuary based injury surveillance for low-mid income countries: process evaluation of pilot studies', *Injury*. Elsevier Ltd, 46(8), pp. 1509–1514. doi: 10.1016/j.injury.2015.06.005.

Leiner, F. *et al.* (2003) *Medical Data Management-A Practical Guide*. Edited by K. J. Hannah and M. J. Ball. New York: Springer-Verlag.

Loughrey, M. B., McCluggage, W. G. and Toner, P. G. (2000) 'The declining autopsy rate and clinicians' attitudes.', *The Ulster medical journal*. Ulster Medical Society, 69(2), pp. 83–89.

Madea, B. (2017) 'History of Forensic Medicine - A brief introduction', in Madea, B. (ed.) *History of Forensic Medicine*. Berlin: Lehmanns Media, GmbH, pp. 3–27.

Mangin, P. *et al.* (2015) 'European Council of Legal Medicine (ECLM) accreditation of forensic pathology services in Europe', *International Journal of Legal Medicine*, 129(2), pp. 395–403. doi: 10.1007/s00414-014-1041-x.

Mcphee, S. J. and Bottles, K. (1985) 'Autopsy: Moribund Art or Vital Science?', *The American Journal of Medicine*, 78, pp. 107–113.

Menteri Kesehatan Republik Indonesia (2008) 'Peraturan Menteri Kesehatan Republik Indonesia Nomor 269/MENKES/PER/III/2008 tentang Rekam Medis [Decree of the Minister of Health of the Republic of Indonesia regarding Medical Records]'.

National Association of Medical Examiners (2014) 'NAME Inspection and Accreditation Checklist'.

National Association of Medical Examiners (2016a) 'Forensic Autopsy Performance Standards'. Walnut Shade: National Association of Medical Examiners, pp. 1–26. doi: 10.1201/9781439800652.

National Association of Medical Examiners (2016b) 'National Association of Medical Examiners Inspection and Accreditation Policies and Procedures', pp. 1–21.

New York State Education Department (2019) *Records Retention and Disposition Schedule CO-2, for use by counties*. Available at: www.archives.nysed.gov/records/retention_co-2_coroner (Accessed: 30 April 2019).

NSW Health Pathology, N. H. (2012) 'Forensic Pathology - Code of Practice and Performance Standards', (11), pp. 1–86.

Ong, B. B. and Kaur, S. (1997) 'Confidentiality and death', *The Malaysian journal of pathology*, 19(2), pp. 111–114.

Ong, B. B. and Milne, N. (2009) 'Quality assurance in forensic pathology.', *The Malaysian Journal of Pathology*, 31(1), pp. 17–22.

Pinheiro, João (2006) 'Introduction to Forensic Medicine and Pathology', in Schmitt, A., Cunha, E., and Pinheiro, J. (eds) *Forensic Anthropology and Medicine: Complementary Sciences from Recovery to Cause of Death*. Totowa: Humana Press Inc., pp. 13–38.

Rauscher, K. J. *et al.* (2012) 'Using Death Certificates and Medical Examiner Surveillance and Research: A Case Study', *Journal of Occupational and Environmental Hygiene*, 9(10), pp. 609–615. doi: 10.1080/15459624.2012.713764.

Roach, W. H. *et al.* (2006) *Medical Records and The Law*. 4th edn. Sudbury: Jones & Bartlett Publishers.

Sampurna, B. (2017) 'Alat Bukti Sah Surat: Penemuan, Pembuktian, dan Keterterimaan', in Afandi, D. et al. (eds) *Prosiding Pertemuan Ilmiah Tahunan PDFI 2017*. Pekanbaru: Fakultas Kedokteran Universitas Riau, pp. 62–67.

Saukko, P. and Knight, B. (2016) *Knight's Forensic Pathology*. 4th edn. Boca Raton: CRC Press.

Shojania, K. G. and Burton, E. C. (2008) 'The Vanishing Nonforensic Autopsy', *The New England Journal of Medicine*. the American Accounting Association, 358.9(Feb), pp. 873–875.

South African Department of Health (2003) *National Health Act (Act No. 61 of 2003)*. South Africa.

Sullivan, P. O. (1996) 'The coroner's necropsy in sudden death : an under-used source of epidemiological information', *Journal of Clinical Pathology*, 49, pp. 737–740.

The Royal College of Pathologists of Australasia Autopsy Working Party (2004) 'The decline of the hospital autopsy: a safety and quality issue for healthcare in Australia.', *The Medical journal of Australia*, 180(6), pp. 281–285.

'Undang-undang Republik Indonesia Nomor 43 tahun 2009 tentang Kearsipan [Law of the

Republic of Indonesia regarding Archives]' (no date).
United Nations Office on Drugs and Crime (2015) 'Forensic Autopsy Manual for Forensic Pathologists'. Ramallah: United Nations Office on Drugs and Crime, pp. 1–143.
Victorian Ombudsman (2011) 'Investigation into the improper release of autopsy information by a Victorian Institute of Forensic Medicine employee'. Melbourne: Victorian Ombudsman, pp. 1–29.
'Wet op de beroepen in de individuele gezondheidszorg [Individual Healthcare Professions Act]' (1993).