

Inadequate Postmortem Reports: Investigating the Underlying Factors

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Abstract:

Postmortem reports play a vital role in forensic pathology, providing essential information about the causes of death needed for legal investigations. However, several factors undermine the quality of these reports, threatening their reliability and compromising the integrity of the judicial system. This study explores the key issues contributing to inadequate postmortem reports, such as the absence of standardized protocols, lack of adequate training for forensic staff, communication breakdowns, external pressures on forensic teams, overwhelmed laboratories with insufficient infrastructure, personnel, and equipment, and challenges in implementing new technologies. By examining these elements, the research seeks to identify opportunities for improvement to enhance the quality and accuracy of autopsies. An integrated approach is crucial for establishing standardized practices, upgrading facilities and equipment, increasing staffing and laboratory numbers, improving training for forensic professionals, and promoting better communication among all stakeholders in forensic investigations. The findings emphasize the need to address these systemic issues to produce more reliable postmortem reports, which are essential for delivering accurate forensic insights and ensuring just legal outcomes.

Keywords: Postmortem reports, forensic pathology, underreporting, standardized protocols, communication breakdowns, external pressures, technology integration.

1. Introduction:

Postmortem reports are vital documents in the field of forensic pathology, offering key insights into the cause of death and assisting legal investigations. However, various studies reveal that inadequate postmortem reports can stem from a number of systemic, procedural and human problems. This study delves into the underlying factors contributing to inadequate postmortem reports. By identifying these root causes, we aim to enhance the quality and accuracy of such reports, ultimately improving forensic investigations and ensuring justice in cases involving unexplained or suspicious deaths.

In the matter of *Thakur v. State*, the Allahabad High Court remarked in A.I.R. (1955) Allahabad 180: "An autopsy is an essential element of evidence in criminal cases, and therefore, the physicians tasked with conducting it must handle the procedure with utmost care and thoroughness, ensuring it is not treated as a mere formality. Generally, they are expected to fill out all relevant sections on the standard form and, aside from estimating the time of death, should consistently specify the type of weapon that could have caused the various injuries."



2. Literature Review:

A significant problem highlighted in the literature is the absence of standardized protocols for autopsy. Ainsworth et al. (2018) note that inconsistencies in investigative procedures can lead to inconsistencies in the quality of reporting. Variability in methods used for sample collection, storage and analysis often results in findings that are either incomplete or inaccurate. This inconsistency presents particular challenges in areas where forensic standards are not consistently enforced, leading to considerable variation in the quality of postmortem reports (Ainsworth et al., 2018).

Another important factor influencing the quality of postmortem reports is the training and expertise of the forensic personnel performing the examinations. A study by Karch (2017) shows that lack of thorough training in forensic pathology correlates with increased error rates in postmortem findings. Inadequate training in the complexities of sampling, storage and analysis can cause critical oversights, ultimately affecting the accuracy of the report. In addition, Gornick et al. (2019) point out that the high turnover rate and heavy workload of forensic professionals exacerbates these problems, resulting in rushed examinations and reports that may lack detail.

Errors in communication within the investigative team can contribute to subpar reports. Kuo et al. (2020) show how misunderstandings between forensic pathologists, law enforcement, and lawyers can lead to important information being missed or misinterpreted. Poor documentation of findings during investigations further complicates the situation, as crucial observations may be either incorrectly recorded or omitted from the final report (Kuo et al., 2020).

External pressures also play a role in the quality of autopsies. Jentsch et al. (2020) highlight that time and budget constraints can force forensic teams to prioritize speed over accuracy. Such pressures can lead to the neglect of critical details or the omission of necessary steps in the investigative process, which in turn reduces the quality of the autopsy report. A culture that emphasizes expediency in forensic investigations undermines the fidelity of findings and subsequent legal outcomes.

The impact of technological advances on forensic pathology is another important area of consideration. While modern techniques and tools have the potential to improve the quality of postmortem reports, their incorrect use or insufficient integration into standard protocols can lead to additional problems. Reddy et al. (2021) state that many forensic laboratories struggle to adapt to emerging technologies, resulting in

underutilization of available resources. This disconnect can prevent forensic teams from using advanced diagnostic tools that could provide critical insight into the cause of death and other important findings.

In summary, several underlying causes of inadequate postmortem reports, including inconsistent protocols, inadequate training, communication breakdowns, external pressures, and problems related to the adoption of new technology. Addressing these issues requires a comprehensive approach that includes the establishment of standardized procedures, better training of forensic professionals, and improved communication strategies between all parties involved in forensic investigations. By tackling these systemic shortcomings, we can significantly enhance the quality and dependability of postmortem reports, which will ultimately result in more precise forensic conclusions and legal results.

3. Factors Contributing to Inadequate Postmortem Reports:

An autopsy can be discredited due to various errors that undermine its accuracy and credibility. The root causes of substandard postmortem reports may be summarised as follows:

- 1. Inaccurate cause of death:** Misinterpretation of findings leading to an incorrect conclusion about the cause of death can seriously question the reliability of the report. For instance, if a toxicology report indicates the presence of a certain substance in the decedent's system, but the forensic investigator incorrectly assumes that this substance was the direct cause of death - without considering other factors like pre-existing health issues or alternative explanations - it could lead to a misleading cause of death classification. Such inaccuracies not only affect legal proceedings but can also impact public health data and resource allocation for preventing similar deaths in the future.
- 2. Poor documentation:** Incomplete or unclear notes, along with the omission of crucial details regarding injuries or the failure to document all relevant observations, can significantly diminish the credibility and effectiveness of a report. For instance, if a medical report regarding a car accident fails to clearly describe the extent of a victim's head injury and neglects to mention important signs such as bruising or swelling, this lack of detail may raise doubts about the severity of the injury. Consequently, this can undermine the report's usefulness in legal proceedings or insurance claims, where accurate and comprehensive documentation is essential for determining accountability and damages.
- 3. Improper examination techniques:** Neglecting to adhere to established protocols during an autopsy, including improper handling or overlooking vital body parts, can result in incorrect findings. For instance, if a medical examiner fails to thoroughly examine the lungs of a deceased individual suspected of having had a respiratory illness, they might overlook significant signs of damage or disease. This oversight could lead to a wrongful determination of the cause of death, ultimately impacting legal proceedings, public health data, and family closure.
- 4. Lack of expertise:** A pathologist lacking the necessary experience or specialized knowledge in forensic pathology might fail to recognize or accurately interpret critical evidence, which could lead them to question their conclusions. For instance, if a novice pathologist encounters a case involving a suspicious death with signs of blunt force trauma, they might misinterpret the injury patterns or overlook the presence of contusions that could suggest a specific sequence of events. This misinterpretation could further complicate the investigation, potentially resulting in incorrect assumptions that undermine the integrity of the case.
- 5. Biased reporting:** If the medical examiner faces external influences from entities like law enforcement or legal teams, it can significantly affect the integrity of their findings. For instance, suppose a police department is under public scrutiny for a high-profile case they are investigating. If

the medical examiner is pressured to align their autopsy conclusions with the police narrative - perhaps to support a specific theory of the crime - it could lead to biased or incomplete results. This compromise not only undermines the credibility of the medical examination but may also impact the pursuit of justice in the case, as the truth may be obscured by external agendas.

6. **Contamination of evidence:** Improper handling, contamination, or inadequate storage of biological samples, such as blood or tissue, can lead to significant inaccuracies in research outcomes. For instance, if a blood sample is not stored at the correct temperature or if it is exposed to contaminants during extraction, it could result in altered biochemical markers that may misrepresent a patient's health status, thereby compromising the validity of clinical studies and impacting treatment decisions.
7. **Overlooking the medical history:** Neglecting to take into account the medical history or any pre-existing conditions of the deceased individual can result in an incorrect determination regarding the cause of death. For instance, if a person with a long-standing heart condition suddenly passes away, and the investigation fails to consider this pre-existing ailment, authorities might mistakenly attribute the death to an external factor like an accident or foul play, rather than recognizing that the underlying heart disease was the true reason for the fatality.
8. **Incorrect interpretation of toxicology:** Mistakes in the analysis or reporting of toxicology results can result in misleading interpretations regarding the impact of drugs or poisons on an individual. For instance, if a toxicology report mistakenly identifies the presence of a specific substance, such as a potent opioid, in a deceased person's system when it was actually a common over-the-counter medication, this could lead investigators to incorrectly conclude that the individual suffered an overdose. Such inaccuracies can undermine the validity of the autopsy report, especially in legal situations where accurate information is crucial for determining responsibility, potential criminal actions, or even wrongful death claims. In this way, the reliability of forensic findings and subsequent legal outcomes can be severely compromised due to these analytical errors.
9. **Delays in conducting the autopsy:** Postponements in carrying out the autopsy can lead to increased decomposition of the body, which complicates the accurate determination of the cause of death. For instance, if an autopsy is delayed by several days due to legal or administrative reasons, the decomposition process may progress to a point where vital organs are no longer in a recognizable state. This could obscure key evidential details, such as the presence of injuries or toxic substances, ultimately hindering the investigation and making it challenging for forensic experts to arrive at a definitive conclusion regarding the cause of death.
10. **Inconsistent internal and external findings:** Inconsistencies between internal and external findings can lead to confusion and undermine the credibility of the report. For instance, if an external examination of a deceased individual reveals signs of blunt force trauma, but the internal autopsy finds no corresponding injuries, it raises questions about the accuracy of both assessments. Such discrepancies can diminish trust in the overall conclusions drawn from the investigation, making it essential for forensic professionals to ensure alignment between these findings.
11. **Misinterpretation of histopathology slides:** Mistakes in examining tissue samples through a microscope can result in erroneous determinations regarding the presence of disease or the extent of injury. For instance, a pathologist may misidentify a benign lesion as malignant due to overlapping cellular characteristics, leading to unnecessary alarm or overtreatment for the patient involved.
12. **Failure to photograph evidence:** Neglecting to capture photographic documentation of crucial findings during an autopsy severely restricts the capacity to provide substantiating evidence in legal

proceedings. For instance, if a forensic pathologist discovers distinct injuries on a body that may suggest foul play but fails to photograph these marks, the absence of visual evidence could hinder the prosecution's ability to build a strong case in court. Without such photographs, the defense may argue the injuries were misidentified or could even attribute them to unrelated causes, thus weakening the overall argument for criminal culpability.

- 13. Improper storage of the body:** Inadequate storage of the body can significantly hinder the preservation process prior to an autopsy, resulting in decomposition that may obscure vital evidence. For instance, if a body is not refrigerated promptly after death, the rapid onset of decomposition could alter the appearance of organs and tissues, making it difficult for forensic pathologists to correctly assess injuries or determine the cause of death.
- 14. Failure to consult specialists:** Neglecting to seek input from specialists: In intricate situations, such as those involving uncommon illnesses or severe injuries, failing to consult with experts can lead to inadequate assessments. For instance, consider a patient presenting with atypical symptoms that could suggest either a rare autoimmune disorder or a complex neurological issue. Without the insights of a rheumatologist or a neurologist, the initial diagnosis might overlook critical factors, ultimately hindering effective treatment and potentially worsening the patient's condition.
- 15. Mistakes in disease identification:** Misdiagnosing conditions such as heart disease, infections, or cancers during an autopsy can lead to inaccuracies in the final report. For instance, if an autopsy incorrectly identifies a heart attack as a natural death unrelated to any underlying disease, this misdiagnosis may obscure important public health data and hinder efforts to understand the prevalence and risk factors associated with heart disease in the broader population.
- 16. Excessive dependence on toxicology reports:** Relying solely on the presence of drugs or toxins to determine the cause of death, while ignoring contributing underlying factors, can lead to misleading conclusions in an investigation. For instance, if a coroner finds high levels of alcohol in a deceased individual, they might hastily attribute the cause of death to acute alcohol poisoning. However, if the deceased had a pre-existing medical condition, such as liver disease or cardiovascular issues, these factors may have also played a critical role in the individual's death, suggesting that the intoxication alone was not the sole cause.
- 17. Exclusion of significant discoveries:** Failing to include essential observations, such as needle marks or foreign objects, in the report can seriously undermine its credibility. For instance, if a forensic report on a crime scene neglect to mention the presence of needle marks on a victim's arm, it may lead investigators to overlook potential drug use or an overdose scenario, thereby skewing the entire investigation and its conclusions.
- 18. Ignoring the possibility of rare causes:** Ignoring the possibility of rare causes during testing can lead to inaccurate conclusions. For instance, if a medical investigation into an unexplained death focuses solely on common factors like heart disease or drug overdoses, it might overlook a rare genetic disorder such as Wilson's disease, which can cause fatal liver failure if undiagnosed. By failing to include such uncommon but critical factors, the investigation risks arriving at a misleading conclusion about the true cause of death.
- 19. Inappropriate utilization of imaging techniques:** Inappropriate utilization of imaging techniques can lead to significant medical oversights. For instance, if a physician misinterprets an X-ray or fails to order one, when necessary, they may miss a fracture in a patient's wrist that occurred during a fall.

Consequently, this oversight could result in improper treatment, allowing the fracture to heal incorrectly and causing long-term complications for the patient.

- 20. Misidentification of injuries:** Misclassifying injuries, such as confusing accidental harm with intentional harm, can result in an incorrect determination of the cause of death. For instance, if a forensic investigator mistakenly classifies a fatal head injury caused by a fall as a result of physical assault, it may lead to wrongful assumptions about the circumstances surrounding the death, potentially impacting criminal investigations and legal proceedings.
- 21. Missing or lost samples:** Failing to collect or misplacing essential tissue or fluid samples can obstruct subsequent testing processes and undermine the credibility of the results. For instance, if a crucial blood sample is discarded during a clinical study on a new medication, it could prevent researchers from accurately assessing the drug's efficacy or identifying potential side effects, ultimately jeopardizing the integrity of the entire study and delaying advancements in medical treatment.
- 22. Inconsistent or unclear language:** Inconsistent or unclear language can significantly hinder the clarity of a report. For instance, if a report states that "the defendant was not present at the scene" in one section and later claims "the defendant arrived shortly after the incident," these contradictory statements can lead to confusion regarding the legal implications of the findings. Such ambiguity may complicate the legal interpretation and impact the outcome of the case.
- 23. Inadequate recognition of postmortem alterations:** Confusing postmortem changes, such as decomposition or bloating, with actual injuries may result in erroneous conclusions. For instance, an examiner observing significant abdominal swelling in a decedent might mistakenly attribute this bloating to trauma rather than recognizing it as a natural consequence of decomposition in a body that has been deceased for an extended period.
- 24. Miscalculation of the time of death:** An inaccurate determination of when death occurred, which can arise from inadequate evaluation of factors such as rigor mortis, lividity, or body temperature, may result in significant legal complications. For instance, if investigators incorrectly assess the rigidity of a body and conclude that death occurred several hours earlier than it actually did, this could influence the timeline of events in a homicide case, potentially exonerating a suspect who was thought to be at the crime scene during the initial investigation. Such misjudgements can have serious implications in court, leading to wrongful convictions or the dismissal of cases altogether.
- 25. Neglecting to thoroughly evaluate physical trauma:** Failing to accurately assess injuries resulting from blunt force trauma, such as those sustained in a car accident, could result in misguided determinations about the factors contributing to a person's death. For instance, if an autopsy overlooks significant bruising and internal bleeding caused by the collision, medical professionals might mistakenly attribute the death solely to pre-existing health conditions, thereby missing critical evidence that indicates the trauma was a key factor in the individual's demise.
- 26. Mishandling of viscera:** Errors related to the handling of viscera during postmortem examinations can significantly undermine the quality of forensic evidence. A prevalent mistake is the failure to store viscera in appropriate containers or preservatives. For example, using an insufficient amount of preservatives like formalin for histopathological analysis or a saturated sodium chloride solution for toxicological testing can lead to the degradation of samples or inadequate tissue preservation. Another common error is improperly sealing containers, which can result in contamination, leakage, or the loss of vital evidence.

27. Mislabeling viscera samples constitutes a serious administrative error, as it poses a risk for misidentification, complicating both the forensic investigation and legal processes. Delays in preservation, such as not refrigerating samples in a timely manner, can cause rapid decay and the breakdown of crucial chemical or biological markers. Furthermore, failing to collect sufficient quantities of viscera for analysis may restrict the range of toxicological tests that can be performed, ultimately compromising the accuracy and reliability of the investigation.
28. **Delay after receipt of viscera report:** Delays in delivering a final postmortem report, especially following the receipt of the viscera report, frequently happen when a postmortem surgeon is transferred, retires, or passes away. This issue is further exacerbated by the absence of adequate monitoring systems at both the hospital and police station, leading to inefficient processes. Additionally, there is an excessive delay in the delivery of viscera reports because forensic laboratories are overwhelmed and lack sufficient manpower and equipment.
29. **Miscellaneous other problems:** Reports from various morgues indicate a shortage of the thread necessary for stitching up deceased individuals, leading mortuary staff to request that family members provide their own. In certain instances, employees are alleged to exploit grieving families for financial gain, demanding payment before the autopsy can proceed. Furthermore, there have been incidents where refrigeration units that preserve the bodies have malfunctioned, resulting in unpleasant odours that disturb nearby residents.

Concerns have also been raised regarding the integrity of the autopsy process, with assertions that autopsies are conducted by individuals who are not the designated post-mortem surgeons, leaving the surgeons merely as observers. Overcrowded morgues frequently face significant delays in conducting autopsies, and some facilities lack adequate lighting necessary to perform procedures after dark. Some autopsies are reportedly postponed by autopsy surgeons who choose to preserve the viscera and instruct the police to send them to the forensics laboratory, aiming to delay the final report on the cause of death until the viscera analysis is completed.

4. Court Judgments:

Some of the rulings from the Indian and foreign courts that have drawn attention to mistakes or shortcomings in postmortem reports, emphasizing how these issues affect the judicial process are noted below:

- In the case of *Sharad v. State of Maharashtra* AIR 1984 SC 1622 Cr LJ 1738, significant alterations were discovered in the postmortem report, revealing discrepancies between the report submitted to the court and the version sent by the chemical examiner. The Supreme Court determined that the autopsy had been tampered with and subsequently barred the medical professional from conducting future autopsies.
- In the case of *State of Punjab v. Bhajan Singh* AIR 1975 SC 258, 1975 Cr LJ 282, the Supreme Court ruled that if a doctor is unable to determine the cause of death due to the advanced decomposition of the body, the death cannot be classified as homicide.
- In the case of *R v. Abdalla* (UK, 2008), the Court of Appeal overturned the conviction because the postmortem report contained inaccuracies that misrepresented the injuries. These discrepancies significantly weakened the prosecution's case, leading to the decision to quash the conviction.
- In the case of *B v. France* (European Court of Human Rights, 2008), the Court deemed the investigation into the applicant's brother's death inadequate. It particularly highlighted issues with the postmortem

report, noting that it lacked sufficient detail and clarity, thereby failing to meet necessary investigative standards.

- In *Huang v. State of Florida* (US, 2010), the Florida Supreme Court identified deficiencies in the postmortem report, which failed to adequately assess critical injuries. This oversight ultimately compromised the reliability of the evidence presented in the case, raising concerns about its validity in the judicial process.
- In the matter of *R v McHugh* (Australia, 2005), the New South Wales Court of Criminal Appeal reversed the conviction because of discrepancies in the postmortem report regarding the cause of death. The court highlighted the significance of precise forensic evidence in criminal cases. In the 2011 case *R v. Berrisford*, the Supreme Court of Canada determined that shortcomings in the postmortem report concerning the cause of death compromised the integrity of the judicial process, resulting in a finding of misconduct. This ruling underscored the critical role of precise forensic evidence in legal cases.
- In *Albayrak v. Turkey* (European Court of Human Rights, 2015), the Court determined that the postmortem report was insufficient due to its lack of detailed information regarding the injuries. This inadequacy was a significant factor in the failure to carry out a thorough investigation into the circumstances of the death.

These cases highlight the essential role of comprehensive and precise autopsies in legal proceedings across various jurisdictions, along with the potential ramifications of deficiencies in such reports.

5. Conclusion:

To sum up, the accuracy and dependability of postmortem reports play a crucial role in effective forensic investigations and the fair delivery of justice. This research identifies several systemic and procedural issues that lead to shortcomings in these reports, including inconsistent protocols, insufficient training for forensic personnel, communication failures, and external pressures. Mistakes, whether due to misinterpretation of data, inadequate documentation, or biased reporting, can seriously undermine the credibility of autopsy results.

Tackling these challenges requires a comprehensive strategy that involves the establishment of standardized practices, enhanced training programs, improved infrastructure, increased manpower and facilities, regular audit of morgues, and better collaboration among investigative teams. By addressing these fundamental issues, we can enhance the precision of postmortem findings, thereby boosting the overall effectiveness of forensic inquiries and ensuring justice in cases involving unexplained or suspicious deaths. A dedication to ongoing improvement in forensic procedures will ultimately yield more reliable and credible outcomes in the realm of forensic pathology.

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