

The Use of Cadavers in the Medical Education: Does it Inevitable? Particulare to Health Law Scope

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Introduction

Cadavers retain significant value within the realm of medicine, particularly in the context of anatomy laboratories, where they serve as crucial educational tools. Cadavers are of significant importance in facilitating the educational experience within the anatomy laboratory. Numerous research investigations have indicated that the decrease in anatomical knowledge is purportedly a contributing factor to the rise in “surgical errors” and subsequent surge in medicolegal litigation. Utilisation of cadavers for medical education and research should be conducted in a discerning, proficient, and optimal manner. At the fundamental level, individuals can access educational materials from sources such as prosection, plastination, or anatomy museums. The primary focus in higher education is placed on cadaveric dissection, particularly in relation to

the development of clinical skills relevant to surgical practise.¹

The importance of cadaver dissection in medical student learning is very necessary. The systematic review and meta-analysis examined the knowledge and attitudes towards ethical cadaver dissection among medical and health sciences students from 1997 to 2020, revealing that approximately two-thirds of participants demonstrated adequate knowledge (66.78%) and favorable attitudes (67.49%) towards the practice. The study highlighted the importance of creating a supportive dissection environment and preparing students emotionally, while also noting significant heterogeneity among the included studies and variations in attitudes based on geographic regions. Recommendations for future research were made to better understand global perspectives on cadaver dissection and its role in medical education.²

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The incorporation of cadavers in medical education is essential for teaching health-care workers, offering practical experience that improves comprehension of human anatomy and clinical competencies. This practice is regulated by multiple ethical, legal, and procedural frameworks to uphold respect for the deceased and adhere to health standards. The International Federation of Associations of Anatomists (IFAA) promotes the sole utilisation of voluntarily donated cadavers for anatomical instruction. Notwithstanding this, numerous medical schools continue to depend on unclaimed bodies owing to a deficiency of donated cadavers.³

The legal basis pertaining to cadavers will naturally vary depending on the specific jurisdiction of each country. Legal regulation and litigation surrounding deceased individuals and their cadaveric bodies encompass a wide range of issues, including traditional matters of property and ownership including lineage and rights to intellectual property. Additionally, there are emerging concerns pertaining to the physical and personal integrity of the deceased, as well as the preservation of their personality. However, the ethical concerns surrounding cadavers may not be readily apparent. In contrast, conducting more inquiry into ethical concerns within the context of the gross anatomy laboratory has the potential to significantly influence the development of future improvements in ethical education curricula. The study conducted by Nawras, et al⁴ reveals notable variations in the ethical considerations among medical students. These findings suggest that students' perspectives on the gross anatomy lab and ethical concerns in general are not uniform. The aforementioned notable distinctions have the potential to show in several domains of medical practise in a student's prospective career as a physician. In accordance with this rationale, placing a heightened focus on ethical teaching inside medical schools could potentially yield substantial effects on students that extend well beyond the realm of the gross anatomy laboratory.⁴

Health Law and The Use of Cadavers

The use of cadavers in medical education is governed by a complex interplay of health law, ethical guidelines, and institutional policies. Key legal considerations include:

Consent and Donor Rights

The principle of informed consent is central to the ethical use of cadavers. Donors must provide explicit consent for their bodies to be used for educational purposes. In many jurisdictions, this consent is obtained through body donation programs, which are regulated by state or national laws. For example, the Uniform Anatomical Gift Act (UAGA) in the United States provides a legal framework for organ and body donation. Health law mandates that medical institutions respect the wishes of donors and ensure that their remains are used solely for the intended educational or research purposes.⁵

Privacy and Confidentiality

Cadavers used in medical education are often accompanied by medical histories, which may include sensitive information. Health law requires that institutions protect the privacy and confidentiality of donors, even after death. The Health Insurance Portability and Accountability Act (HIPAA) in the U.S., for instance, extends privacy protections to deceased individuals for a period of 50 years post-mortem.⁵

Legal Status of Cadavers

The legal status of cadavers varies across jurisdictions. In most countries, cadavers are not considered "property" but are instead treated with dignity and respect. However, disputes can arise over the ownership and use of human remains, particularly in cases involving unclaimed bodies or historical specimens. Recent legal cases have highlighted the need for clear regulations to address these issues.⁶

Ethical Considerations and Institutional Oversight

Medical institutions are responsible for ensuring that cadaver use complies with ethical standards and legal requirements. Institutional review boards (IRBs) and anatomy oversight committees play a critical role in monitoring the procurement, storage, and use of cadavers. These bodies ensure that donors' rights are respected and that cadavers are used in a manner consistent with educational and scientific goals.⁶

Challenges and Controversies

Despite the clear benefits of cadaver use in medical education, several challenges persist. Many medical schools face a shortage of donated bodies, which can limit students' access to hands-on learning opportunities. Some cultures and religions have specific beliefs about the treatment of human remains, which may conflict with the use of cadavers in education. The use of cadavers raises ethical questions about the commodification of human bodies and the potential for exploitation, particularly in low-resource settings.⁷

Extent of Health Law in Cadaver

Indonesia is a nation that upholds the principles of the rule of law. The utilisation of cadavers as an educational tool within the medical domain encompasses many legal considerations. Law No. 17 of 2023 serves as a valuable point of reference for the provisions encompassing rules pertaining to medical education. The regulations for the utilisation of cadavers are shown in pertaining to items of Law no. 17 of 2023 concerning the utilisation of cadaver. Chapter 126 state (1) A person is declared dead as intended in chapter 125 paragraph (3) if they fulfilled : a. diagnostic criteria for clinical/conventional death or permanent cessation of function of the circulatory heart system; or b. Diagnostic criteria for brain stem death/brain death. (2) Further provisions regarding death diagnosis criteria are regulated by Government Regulation. In Chapter 157 declared (1) For the purposes of law enforcement and population administration, efforts must be made to determine the cause of death and identity of every person who dies. (2) In order to determine the cause of a person's death as intended in paragraph (1), a death audit may be carried out, including a verbal autopsy, clinical post-mortem, forensic post-mortem, and/or laboratory examination and post-death virtual autopsy. (3) The implementation of clinical post-mortems, forensic post-mortems, and/or laboratory examinations and virtual post-death autopsies as referred to in paragraph (2) must be carried out with the consent of the family. (4) In order to determine identity as intended in paragraph (1), efforts must be made to identify corpses in accordance with standards. (5) Implementation of efforts to determine the cause of death as intended in paragraph (1) can be combined with research, education and training, including anatomical post-mortem and/or clinical

post-mortem. Chapter 158: Post-mortem operations by medical personnel must be carried out in accordance with religious norms, socio-cultural norms, moral norms and professional ethics.

In addition to the aforementioned points, there are several other legal considerations that demonstrate the legislation's control over the utilisation of unidentifiable cadavers within the realm of medical education practicums. Chapter no 18 Minister of Health Regulation Number 37 of 2014 state Determination of Death and Utilization of Donor Organs regulates the use of corpses that are unknown or not cared for by their families and the use of organs, tissue and/or cells from corpses that are unknown or not cared for by their families. Furthermore, Minister of Health Regulation Number 37 of 2014 state several points. First, determination of Death and Use of Donor Organs. Secondary, the regulations regarding the legal legality of the use of unidentified cadavers in the context of medical science education practicums and their formation were ordered by the Health Law which was in force at that time, namely Law no. 9 of 1960 concerning Principles of Health.

The preceding reasoning can be construed as suggesting that there is a certain degree of vertical legal alignment in relation to the permissibility of utilising unidentifiable cadavers for the purpose of medical education practicum. This implies that the restrictions governing the utilisation of unidentified cadavers for educational purposes in the field of medical science are derived from regulations of a higher level of authority. The regulations mentioned, Minister of Health Regulation Number 37 of 2014 and Government Regulation Number 18 of 1981, are derived from the legal framework provided by Law Number 36 of 2009, which pertains to health matters and is in accordance with the 1945 Constitution of the Republic of Indonesia. These regulations specifically address the determination of death, the utilisation of donor organs, clinical post-mortems, anatomical post-mortems, and the transplantation of body instruments and/or tissues.⁸ The information is presented in Table 2. In addition to this, the most recent rules outlined in Table 1 of Law no. 17 of 2023 serve to reinforce the evidentiary basis supporting the necessity of employing cadavers as educational resources.

The previously mentioned constraints can be construed as indicating that regulations pertaining to the lawful use of unidentified cadavers for medical education practicums are

governed by legislative regulations in Indonesia. The strength of the argument lies in its ability to effectively articulate the legal justification for utilising unidentified cadavers in medical science education practicum, as stipulated in Minister of Health Regulation Number 37 of 2014 on Determination. The topic of discussion pertains to the utilisation of donor organs in the context of mortality, specifically in relation to the regulatory framework established by Government Regulation Number 18 of 1981, which addresses clinical post-mortems, anatomical post-mortems, and the transplantation of body instruments and/or tissues. Additionally, the matter is informed by the provisions outlined in Law Number 36 of 2009, which pertains to health, as well as the Constitution of the Republic of Indonesia of 1945. This has been determined that Article 120 paragraph (4) of Law Number 36 of 2009 concerning Health stipulates that the regulations pertaining to anatomical post-mortems are to be established through ministerial regulations. However, as of now, no ministerial regulations specifically addressing anatomical post-mortems have been enacted. Consequently, the current guidance for anatomical post-mortems remains governed by Government Regulation Number 18 of 1981, which covers both clinical post-mortems and anatomical post-mortems, as well as the transplantation of human body instruments and/or tissue. Law number 36 of 2009 pertaining to Health fails to establish a distinction between health workers and medical personnel, employing the term “health workers” instead. However, Constitutional Court Decision number 82/PUU-XIII/2015, which challenges Law number 36 of 2014 regarding Health, asserts that doctors should not be classified as part of the health workforce.⁹

Conclusion

Cadaver involvement remains a crucial component within the field of medicine. It has become imperative to approach this matter from a multifaceted perspective, rather than solely relying on the identification of unidentified bodies for educational purposes. The need is imperative to establish a robust legal framework that encompasses educational endeavours, particularly those involving the utilisation of instructional resources. The legal issues regarding to the utilisation of cadavers comprise several key aspects, namely the principles of reverence for the human body, confidentiality, informed permission,

the balance between educational purposes and potential exploitation, as well as the attitudes exhibited by medical students. Adhering to ethical norms is of utmost importance while engaging in the treatment of donated human remains, and it is imperative to provide medical students with comprehensive education regarding the ethical considerations associated with the utilisation of cadavers.

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