

Ethics of unclaimed bodies in cadaveric dissection in medical education

Issue:

Most US medical schools teach anatomy using cadaveric dissection, and depending on state laws and school policies, some use “unclaimed bodies” or the bodies of identified, deceased individuals who did not consent in writing to donation. This issue brief reviews the history of unclaimed bodies in medical education, current ethical concerns, and equity issues, and offers potential strategies for improving anatomy education practices.

Background:

Cadaveric dissection has [historically](#) been the principal way medical students learn anatomy. While many individuals consensually donate their bodies for medical school use after death, medical schools in many parts of the US also use unclaimed bodies. These deceased individuals have known identities but have not been claimed by next of kin for burial or cremation, often because families or friends [cannot afford to pay](#) for disposition of remains. Use of unclaimed bodies in medical schools was legalized in the 1800s, specifically as an attempt to [curb the practice of grave robbing](#), though some medical ethicists argue the consent violations and harms to impoverished individuals inherent in such practices created a [government-authorized version](#) of an equivalent practice.

Since 2012, the International Federation of Associations of Anatomists (IFAA) has advocated for [ethical guidelines requiring consent](#) for donation in writing, which would prevent the use of unclaimed bodies. The American Association for Anatomy (AAA) updated [similar guidelines](#) in 2019. Medical schools in the US that practice cadaver dissection [mostly](#) use donated bodies—but not exclusively. Although [New York](#) has banned the practice, dissection of bodies without informed consent is still legal in most US states, depending on one’s social status, often with language that withholds protections for a marginalized class of people. For example, [Ohio Section 1713.38](#) currently states, “The bodies of strangers or travelers, who die in any of the institutions named in section 1713.34 of the Revised Code, shall not be delivered for the purpose of dissection unless the stranger or traveler belongs to that class commonly known as tramps.” [Oregon Revised Statutes Section 97.170](#) similarly allows for unclaimed bodies in medical dissection, using the language of “indigent.” In a [2019 study](#) with responses from 89 medical schools in the US about 12.4 percent of schools reported use of unclaimed bodies, with an additional 6.7 percent reporting unawareness of body sourcing whether unclaimed or not. In 2023, one study found that unclaimed body dissection is [increasing](#) in at least some areas of the country, such as in Texas, where 42.9 percent of medical schools had direct or possible use of unclaimed bodies for medical education between 2017 and 2021.

One key area of anatomical education concern sometimes used to justify the use of unclaimed bodies is that of donated body shortages, [typically in local areas](#). This concern was recently confronted more broadly during the COVID-19 pandemic when students had [no access to cadavers](#). Alternatives to dissection include but are not limited to videos, live online resources, 3D models, 3D printing, augmented reality, and virtual reality simulations, each with their own pros and cons. Indeed, some ethical concerns are identical regarding the [sourcing of bodies](#) for scanned images. Dissection and alternative instructional modalities were found to be

[statistically equivalent](#) in one meta-analysis of student performance on knowledge examinations, and some medical schools have moved toward [eliminating cadaver use altogether](#). Findings also [suggest](#) that non-consensual exploitation reduces the willingness of populations to donate their bodies consensually. The use of unclaimed bodies may [threaten](#) patient trust.

There are several ethical concerns associated with the use of unclaimed bodies in medical education. The first, most general concern is lack of informed consent. Compounding this, by definition, unclaimed bodies come from vulnerable populations of people: functionally, those who are poor and/or have little-to-no social capital. Economic injustice is also connected to structural racism; marginalized racial/ethnic groups are [disproportionately impoverished](#), making the use of unclaimed bodies an issue of systemic racism, and one that was also associated with [slavery](#). The risk of moral injury for learners is also high. Of unclaimed bodies in the anatomy lab, one student [writes](#): “For me, it was the first lesson in the uncomfortable truth that people with less power and fewer advocates can be vulnerable to exploitation by the medical profession.”

Respectful handling of human remains is a key ethical issue, and one 2020 study [suggests](#) the ethical implications within teaching extend far beyond the immediate scenario: “the practice of human dissection presents an ideal opportunity for anatomists to project a case scenario before the students as to how a physician should adhere to the practice of ethics in professional life.” Thus, treating cadavers ethically is doubly important as the learner’s [“first patient.”](#)

Potential Strategies:

- Amplify and advocate for adherence to American Association for Anatomy (AAA) and International Federation of Association of Anatomists (IFAA) guidelines that only human bodies donated with written, informed consent should ever be used, directly or indirectly, for academic purposes
- Support and advocate for programs and strategies that assist with adhering to the wishes of the deceased for disposition of all remains, regardless of social class
- Continue to support and encourage ethical and consensual body donation
- Encourage increased use of alternative anatomical education tools such as augmented and virtual reality simulation, where appropriate and ethically sourced and implemented, for efficacy and equity
- Continue to monitor ongoing and new ethical developments in the field of anatomical education

Moving Forward:

The AMA has policies that address body donations, anatomy education, and ethics. For example, the AMA:

- supports the production and distribution of educational materials regarding the importance of tissue donation for the purposes of medical research and education ([H-460.887](#))
- offers ethical guidance on presumed consent models as follows: “Donations under presumed consent would be ethically appropriate only if it could be determined that individuals were aware of the presumption that they were willing to donate organs and if effective and easily accessible mechanisms for documenting and honoring refusals to donate had been established” ([6.1.4 Presumed Consent & Mandated Choice for Organs from Deceased Donors](#))
- advocates for and promotes racism-conscious, reparative, community engaged interventions at the health system, organized medical society, local, and federal levels which seek to identify, evaluate, and address the health, economic, and other consequences of structural racism in medicine ([H-65.943](#))

- advocates for additional funding for research in curriculum development, pedagogy, and outcomes to further assess the effectiveness of simulation and to implement effective approaches to the use of simulation in both teaching and assessment ([D-295.330](#))

AMA Resources:

- [Council on Medical Education](#)
- [Policy Finder](#)
- [Health Care Advocacy](#)
- [Center for Health Equity](#)
- [ChangeMedEd Initiative](#)