

What to do with the skeleton in your cupboard?

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Your family is preparing for Christmas. While searching through the cupboard for decorations, you discover an old box. It contains human bones, prompting a battery of questions from the children: Is that a real person? Who? Why are they here? What will happen to them? You have few answers.

In this editorial we call for an end to the use of human bones for educational purposes and urge authorities to develop and disseminate legal and ethical pathways for the dignified disposal of remaining “skeletons in the cupboard.”

The issue

For hundreds of years, grave robbing and body snatching supplied human remains for anatomy students.¹ Into the 20th century, medical students were encouraged to acquire human “bone sets”, often sourced from developing countries. India was a major source, until export bans commenced in 1985 over concerns of grave robbing.² However, there is evidence of a persistent illegal trade in human remains.²

Buying and selling of human bones is prohibited in many jurisdictions.³ This is not widely appreciated and bone sales, including via on-line platforms, continues.⁴

Centuries of organised medical education has resulted in many human skeletons in private possession, probably thousands in the UK alone. These skeletons can circulate in the community indefinitely, sometimes passed down in families. This raises important legal and ethical issues.^{5 6}

Ethical and legal principles

Respect for humans is founded on the ethical principle of respect for autonomy, which asserts that a person should have the right to make decisions for themselves. This extends to how their body is disposed of or used after death. Grave robbing,

unauthorised taking, processing and sale of bones without consent are breaches of this principle.

The principle of justice aims to fairly balance competing claims: in this case, the societal benefit (health practitioner education) with a person's autonomy. Previously, human bones were considered superior to artificial bones. However, with increasing sophistication of 3D printing and associated technologies, high-quality alternatives⁷⁻¹⁰ now exist, making the societal benefit argument moot. This renders the continued holding and circulation of bones for educational purposes difficult to justify. Similar concerns have been raised with regard to the display of human remains in museums¹¹ and popular exhibits.¹²

What should be done?

Educational use of human bones is ethically acceptable, provided the person provide explicit valid consent and donate their remains to a university or similar institution.

Coordinated programmes for managing the legacy of human bone use in education are long overdue. Important aspects include research to understand the extent of the problem, identification of appropriate solutions, and navigation of barriers to implementation.

In the UK, the Medical Defence Union provides advice regarding disposal of privately-held human skeletons, including incineration or burial, gifting to medical schools or gifting to medical students.¹³

Human bones should be treated to respect the dignity of persons. Bones should not be obtained without valid consent for teaching aids in universities or similar settings,

or to be held for private study. Addressing this requires leadership by health authorities and professions; solutions will require awareness campaigns about the relevant legal and ethical issues, and consideration of possible sanctions for noncompliance.

The disposal of existing collections of human bones is not straightforward and is subject to considerable jurisdictional variation. Unauthorised burial or disposal in rubbish risks triggering an unnecessary homicide investigation.^{5 6} Potentially, surrendering bones to authorities could risk criminal prosecution. If this is the preferred method in a jurisdiction, an amnesty should be strongly considered.

Other options for disposal include burial or cremation. This usually requires permission from relevant authorities, along with procedures to establish the name of the person and identify their origin.¹⁴ However, this information is impossible to provide. The fact that the bones are unidentified also presents a barrier to disposing of remains in a culturally and/or religiously appropriate manner. Further, even if burial were possible, the costs would be borne by the 'owner' and may be an additional barrier.

To address this problem effectively, health authorities need to review legislation and develop a sensible, ethical and jurisdictionally feasible process for disposal of educational human bone-sets. Then, specific information for doctors or their surviving relatives should be made freely available and widely publicised. Finally, the medical profession and health authorities should initiate a campaign to encourage doctors to dispose of privately held human remains.

What about the skeleton in my cupboard?

Sale, mistreatment or casual disposal of human bones is clearly inappropriate. As legal processes vary between regions, we recommend that you seek advice from local authorities such as a coroner's office or university. In the UK, a respectful cremation, or donation to a university health science faculty, are probably appropriate. Within universities, a mark remembering those from whom they were taken should be added to any display, to express respect for those who have been used in medical education.

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