SURGICAL ETHICS CHALLENGES

James W. Jones, MD, PhD, MHA, Section Editor

Ethics of re-hearsing procedures on a corpse

James W. Jones, MD, PhD, MHA, and **Laurence B. McCullough, PhD,** *Houston, Tex*

You are the attending surgeon of a homeless pedestrian who sustained multiple injuries when struck by a car. He died soon after being brought to the emergency department. It is late in the evening. A first-year resident and a medical student have been helping with the failed attempt at resuscitation. The emergency department is empty, except for your case. A central line kit lies on the bed, opened but not used. The junior resident asks your permission for herself and the student to practice the technique of subclavian cauterization and tracheal intubation on the fresh cadaver to get a "feel" for the procedures. There is no medical simulation for these procedures at your medical center. The best ethical response is:

A. Tell them to go ahead and practice.
B. They can only practice intubation because it leaves no external wounds.
C. You should supervise them yourself to assure educational benefit.
D. They should wait until you get permission from the medical examiner.
E. The present case is not appropriate for educational purposes.

Information's pretty thin stuff unless mixed with experience.

Clarence Shepard Day, Jr

William Osler, a giant in establishing modern clinical medicine, described the twofold need for knowledge and experience in medical education. However, Osler's "going to sea" analogy compares the need for knowledge as without books one would "sail uncharted seas," while, studying without patients, thereby not accumulating experience, students would "not go to sea at all." Students and residents are taught procedures from the doing; reading about how to do a procedure is a meager substitute for doing a procedure. Doing procedures are candy to surgery residents; the more complex the procedure, the more it is coveted.

There is a fundamental difference between knowing something and knowing how to do something. Physicians performing procedures must do both, but the surgeon's real value lies in responsible doing. One component of responsible doing is knowledgeable doing, the attainment of which requires appropriately supervised learning. Another component is respectful doing, which includes showing due regard for the bodies of patients, alive and dead, and obtaining consent when it is ethically required to do so. This second component is essential for reliable professional formation during training.

Nowhere in medicine is experience so important as in surgery. Many surgical outcomes worsen when surgeons' caseloads fall below certain levels.[1] This is especially true in cardiovascular procedures.[2] Surgeons go to great efforts to reduce harmful effects of learning curves, especially learning curves of trainees. The coin of the realm in surgery is knowledgeable, respectful experience.

Practicing procedures on the fresh corpse would provide hands-on experience without the danger of injuring a living patient. The newly dead would provide the best simulator possible, with feedback from return of blood on entry into the subclavian vein, and the feel of once living tissue persists for some time. Also, fewer ethical problems are associated with practicing on the newly dead than with practicing on the nearly dead during resuscitations.[3] Having left the operating room many years ago to tell a patient's family the patient had expired, only to be caught by a resident reporting a revitalization, one of us (J.W.J.) learned to question the wisdom of assumptions that nearly dead is always truly dead.

Legally, permission is required for possession of human remains and their transportation. Admittedly, sometime before a century ago standards were loose and grave robbers had their day, but by the mid-1800s, every medical school was required to have donation of a cadaver by a legal agent before it was used for teaching or research. The attending physician is invested with no legal or moral rights regarding the disposition of the deceased's remains.

From the Center for Medical Ethics and Health Policy, Baylor College of Medicine.

Competition of interest: none.

Correspondence: James W. Jones, MD, PhD, MHA, 31 La Costa Dr, Montgomery, TX 77356 (e-mail: jwjones@bcm.tmc.edu).

The editors and reviewers of this article have no relevant financial relationships to disclose per the JVS policy that requires reviewers to decline review of any manuscript for which they may have a competition of interest.

0741-5214/$36.00

doi:10.1016/j.jvs.2011.07.033

Notwithstanding, there is an argument for practicing procedures on fresh cadavers. A dead person, however, is no longer a person and does not retain premortem autonomy. In fact, death is the end of personhood and of the associated rights. The dead have no autonomy; there is no need for something that cannot be applied. Even the religious argument that the person exists as spirit is hollow: a spirit has no need of the material world or rights therein. Bertrand Russell, arguably the smartest atheist ever, makes the point bluntly by declaring that saying a person exists after dying is like saying a cricket club exists after all its members have passed on. The dead cannot be harmed, so what's the ethical fuss?

The ethical fuss originates elsewhere. Trainees can be harmed in their professional formation by acting in ways that show disrespect for fresh cadavers, just as they can be harmed by disrespectful behaviors toward cadavers in the gross anatomy laboratory in the first year of medical school. Practicing procedures on the newly dead without authorization teaches trainees to put their own self-interest first, rather than their obligations to patient's families, thus undermining proper professional formation as fiduciaries. This is disrespectful of dead patients and therefore not benign in the context of professional formation.

There is a possibility of collateral harm. The dead's nonexistence causes changes of the living, termed "Cambridge changes."[4] "Moreover, Cambridge changes also involve beliefs, hopes, fears and expectations." A wife becomes a widow and has expectations and beliefs about how the deceased's body should be treated. Thus, the obligation to respect a moral agent's wishes passes to the next of kin.

And no training or research, invasive or not, should be started using the deceased's body or fluids without next of kin's permission after informed consent for that usage.[5] The informed consent process should be sufficiently detailed so that next of kin understand what they are being asked to authorize and include identification of the trainees and their supervisor.

Finally, medical education can be harmed. Medical educators should be committed to the professional formation of trainees. Lack of consent for training on the newly dead does indeed threaten the moral integrity of medical education.

Option B is the least appropriate choice, twice over because B smacks of deceitful intent in addition to lack of permission. Whether the procedure leaves external marks has no ethical relevance. The requirements for permission are essentially the same whether or not epithelial surfaces are penetrated. Thus, there is good ethical reasoning for prohibiting the unconsented practice of endotracheal intubation, and a number of European medical societies have outlawed the practice.[6] Undertaking such a practice without pedagogically required supervision violates the intellectual integrity of medical education.

Without proper supervision, the educational value of two inexperienced trainees practicing procedures is minimal.[3] Supervision or lack of it should be mentioned in the informed consent process to obtain permission when relatives are available. Option C should be a given, to only partially remedy the egregious failings of options A and B, but is not a choice of how to proceed.

The medical examiner's authority is strictly limited to decisions necessary to determine the cause of death; aside from forensic procedures, pathologists are without interest, expertise, or authority. After autopsies or other testing are completed, governmental social service determines the disposition of unclaimed bodies. Because no relatives can be located initially does not mean that they won't appear later. Option D is ruled out.

Practicing procedures, even minor ones, on recently deceased corpses was standard practice in busy public teaching hospitals but has gradually waned as simulators have developed. The deceased will likely require a postmortem examination, and there is a small chance that the added trauma of subclavian cauterization and tracheal intubation could complicate the determination of cause of death. Most importantly, there is no permission, and having no immediate source does not entirely satisfy the ethical requirement for permission. Option E is the wise choice. Having nothing to stop an action, in the dark side of human nature, is a historical invitation to cross moral boundaries by weak-minded individuals and nations alike, casting, at times, doubt upon the fundamental goodness of human nature.

REFERENCES

1. Jones JW, McCullough LB. Caseload outcome credentialing: taking from the have-nots. J Vasc Surg 2007;45:214-6.
2. Birkmeyer JD, Stukel TA, Siewers AE, Goodney PP, Wennberg DE, Lucas FL. Surgeon volume and operative mortality in the United States. N Engl J Med 2003;349:2117-27.
3. Berger JT, Rosner F, Cassell EJ. Ethics of practicing medical procedures on newly dead and nearly dead patients. J Gen Intern Med 2002;17:774-8.
4. Tomasini F. Is post-mortem harm possible? Understanding death harm and grief. Bioethics 2009;23:441-9.
5. Jones JW, McCullough LB, Richman BW. Training on newly deceased patients. Surgery 2004;135:108-9.
6. Ardagh M. May we practise endotracheal intubation on the newly dead? J Med Ethics 1997;23:289-94.