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TEACHING WITHOUT HARMING THE LIVING: PERFORMING MINIMALLY INVASIVE PROCEDURES ON THE NEWLY DEAD

KENNETH V. ISERSON *

The medical profession has intrinsic obligations not only to individual patients, but to society as a whole. These obligations include not only relieving suffering and, when possible, diagnosing and curing illnesses and injuries, but also doing no harm in the process.

Medicine is both an art that one must learn and a science that one must master. The science is a constantly changing target, with fits and starts, false leads, occasional breakthroughs, and an ever-accelerating pace of knowledge generation. The art consists of experience-based methods of interacting successfully with patients, diagnosing and treating illnesses, and performing procedures. "Life is short, and the Art long," wrote Hippocrates, the father of Western medicine, more than two millennia ago.1 Ideally, one obtains this experience quickly and efficiently, while making as few mistakes as possible in the process. A mastery of both medical science and skills is a fundamental part of the ethics of medicine, as Albert Jonsen wrote: "[I]t is [the standard to which all physicians must be held] - the goal of medical education and the expectation of the public."2

This paper discusses the necessary methods to learning some of the important lifesaving procedures common to medical and pre-hospital (Emergency Medical System/EMS) practice. The most common of these procedures is endotracheal intubation, and the paper will primarily focus on that procedure and the various methods clinicians use to learn and remain proficient in it. The primary method discussed will be that of practicing and teaching minimally invasive procedures on the newly dead. While admittedly a disturbing topic, the crucial point in this discussion is that the practice of this technique is necessary to the training of medical professionals, and occurs with a minimal risk of harm to the newly dead patient. Thus, this method best serves both the educational needs of the medical profession and the expectations of the public.

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1. FAMILIAR MEDICAL QUOTATIONS 292-93 (Maurice B. Strauss ed., 1968) [hereinafter Strauss].
The paper will first discuss the medical profession’s obligations to society and some of the essential skills practitioners must learn to save lives. It will then attempt to answer the following questions:

1. Is it ethically and legally permissible to practice and teach non-invasive and minimally invasive procedures on the newly dead emergency department (ED) or intensive care unit (ICU) patient?

2. Are there suitable alternatives to the use of the newly dead to educate and enhance clinical lifesaving skills?

3. Is the consent of relatives required?

4. Would the public lose trust in the medical profession if such practices were widely known?

5. Even if postmortem procedures are legally and ethically permissible, should physicians in EDs and ICUs allow or even encourage them?

MEDICINE’S SOCIETAL OBLIGATIONS

Good ethics begin with good information—in policy development as well as in clinical consultations. In regard to discussing postmortem practice and teaching, we need to understand both the setting in which clinicians use lifesaving skills, such as intubation, and how those skills are taught.

For centuries, the medical profession’s goals have been “To cure sometimes, to relieve often, to comfort always.” Emergency clinicians, both in the hospital and the EMS, strive to provide lifesaving medical care to all those in need. Clinicians in other settings, who have additional information about their patients, strive to deliver those lifesaving interventions that will benefit their patients and that the patients or their surrogates desire. This means that emergency department physicians are routinely called upon to perform lifesaving procedures in the absence of a complete medical history or knowledge of the patient’s wishes.

In critical situations, the immediate goal is to stabilize the patients. As anyone who has taken a first-aid class knows, the rule for assessing critically ill or injured patients is to first stabilize the airway, and then to assist breathing (ventilation), if necessary. Therefore, one of the vital techniques needed by all clinicians involved with the evaluation and treatment of critical patients is the ability to place a tube into the trachea to secure the airway and to provide a method

3. Strauss, supra note 1, at 410 (phrase originally cited as Guerir quelquefois, soulager souvent, consoler toujours, a folk saying dating from the fifteenth century or earlier).

for ventilating the patient. This is most often accomplished by placing the tube through the mouth (orotracheal intubation), but can also be done through the nose (nasotracheal intubation), or via cutting into the neck (cricothyrotomy or tracheotomy).  

As has been true since ancient times, physicians are tasked with passing on the skills and knowledge to the next generation to ensure that there are adequate personnel who are proficient in lifesaving medical procedures. The profession must also ensure that the current generation of practitioners remains proficient in these procedures. Who are these practitioners? In the past, they were primarily physicians, residents and medical students, with an occasional nurse anesthetist. Today, we are also responsible for educating paramedics and respiratory therapists in this skill. Paramedics are EMS personnel with advanced skills, including airway management and drug administration. They often intubate medical and trauma patients to save their lives before the patient arrives at the hospital. This has the paradoxical effect of decreasing the number of patients available to be intubated in hospital emergency departments, experiences that would otherwise help physicians to retain their skills and trainees to hone theirs. In many locales, clinicians are also responsible for training respiratory therapists in intubation, since they may be called upon to intubate patients, either as part of an aeromedical transport team or in smaller hospitals when no one else is available to do so.

The ultimate goal is for those responsible to be prepared to intubate the next critical patient they encounter. Endotracheal intubation, for example, is not a skill that can be partially learned; no one will be pleased if the clinician can only perform it 90% of the time or only after ten minutes or more of fumbling. In a social atmosphere justifiably obsessed with reducing medical errors, it behooves us to look at the ways to avoid any missteps in performing lifesaving procedures, such as intubation or others listed in Table 1. Even non-clinicians can imagine the dread of failing to pass a tube into the trachea of a dying child, or having to reach for the scalpel to cut a surgical airway when their skills at intubation have failed.

In each case, proficiency requires not only the cognitive knowledge of how to perform the procedure, its indications and its risks, but also experience in performing it under varying circumstances, with differing stress levels, and with anatomically distinct patients. In essence, practitioners become and stay proficient at these procedures with experience, experience, and more experience. Only by practicing on actual patients can practitioners establish and maintain this proficiency.

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5. STEDMAN'S MEDICAL DICTIONARY 918 (27th ed. 2000).
Table 1: Essential Lifesaving Medical Skills

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<tr>
<th>Procedure</th>
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<tr>
<td>Abdominal paracentesis</td>
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<td>Central IV line placement</td>
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<td>Cervical traction</td>
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<td>Orotracheal intubation</td>
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<td>Needle cricothyrotomy</td>
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<td>Needle thoracostomy</td>
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<tr>
<td>Percutaneous peritoneal lavage</td>
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<td>Pericardiocentesis</td>
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1. IS IT ETHICALLY AND LEGALLY PERMISSIBLE TO PRACTICE AND TEACH NON-INVASIVE AND MINIMALLY INVASIVE PROCEDURES ON THE NEWLY DEAD EMERGENCY DEPARTMENT OR ICU PATIENT?

What does practicing and teaching on the newly dead involve, for example in the emergency department? If resuscitation procedures have failed and a patient dies, members of the team who were involved with the patient may spend a few minutes learning or practicing procedures that leave little (e.g., a needle puncture) or no mark (e.g., intubation) on the patient. The procedures are done under the supervision of a clinician experienced in the procedures and, as with classes in anatomical dissection, they are done with respect for the person who, until recently, occupied the body. Rarely is anyone asked for permission to perform these procedures.

Many generations of physicians have learned and practiced lifesaving procedures in this manner. Bioethical perspectives on the use of the newly dead bodies to practice these medical techniques were recently discussed by this author, arguing that the logic and necessity of the practice heavily outweighs possible ethical concerns. Yet today, the practice continues with decreasing frequency, largely due to negative external pressures from hospital administrations and bioethicists.

What is "dead"?

Since this paper discusses procedures on the dead, an important first step is to answer the question: When is a person dead? The answer is that, throughout the world, a person is dead when a physician says so. Death, however, is a definition that can be expanded or contracted, depending upon societal perspective.

There are three categories that may fit into the definition of "dead." The first, about which there is little doubt, is the "clearly dead." These are people whose heart stopped for some reason and could not be or was not restarted (or transplanted/had an artificial heart-device implanted). It can sometimes be difficult to determine, especially without using an electrocardiogram (ECG) or ultrasound, whether the heart is beating, albeit very slowly, especially after the ingestion of some drugs or hypothermia (extremely low body temperature). Mistakes in the determination of death before the early twentieth century led to great consternation, minimal scientific advances, the development of specific funerary practices, and some great literature (e.g., Shakespeare's Romeo and Juliet, Poe's Premature Burial). Although they receive little education on determining death, modern physicians rarely err in making this diagnosis, since they have both the ECG and the ultrasound at their disposal.

A relatively recent addition to the "clearly dead" category is that of death by brain criteria. This expanded definition of death (the heart functions as long as the person is on the ventilator) was designed both to provide a much-needed source for organ donation and to help physicians know when to remove patients with no hope of recovery from ventilators in intensive care units. Since their bodies are eligible for organ donation, this group is not used for postmortem practice or teaching.

The next group of patients, perhaps 10,000 of which exist in the United States at any one time, are those in persistent vegetative states. They are generally unable to interact with their environment as they lack function in their cerebral cortex (the part of the brain that makes a "person"), although their eyes rove and they have brainstem-mediated sleep-wake cycles, which make them seem to be functioning. These are people who have been described as "having the lights on, but no one is home." Some cannot even exist without a ventilator and most cannot swallow enough to survive. They have been called the "eerily dead," and indeed, some people advocate including this group in the definition of death.

10. Id. at 42-46.
11. Id. at 31-39.
12. Id. at 19-24.
13. Id. at 24-25.
opposition, such as in Florida’s Schiavo case,\textsuperscript{14} has blocked this group’s inclusion in the “clearly dead” category. This group is also not used for postmortem practice and teaching, since they are in long-term care facilities when they die.\textsuperscript{15}

The last group is the “nearly dead.” These are people undergoing resuscitative procedures. Significant for this discussion, this group of patients: (1) is having the procedures performed because they have a chance of being restored to life, and (2) is being charged (or their third-party payer is being charged) for all time and procedures involved in the attempted resuscitation. Membership in this group is short-lived. Within minutes to a couple of hours, they will move into the “living” or the “clearly dead” category. (Whether they will be part of the “eerily dead” category generally takes months to determine.) The key point is that the physician in charge makes the decision about when to “call a code,” thus putting the person into the “clearly dead” group.

\textit{Why is there so much fuss about this?}

While no one doubts the need for clinically competent clinicians to perform lifesaving procedures, there has been significant concern that the rights of the decedent and the survivors are not being respected by these postmortem practices. Apart from demonstrating disrespect for the decedent, critics charge that manipulating the body in any way may hinder a medical examiner’s efforts at uncovering the cause of death.\textsuperscript{16}

No one questions that we should respect the dead. Such respect remains the mark of a civilized society. Respect is due because the newly dead corpse symbolizes both the recently deceased person and humanity as a whole. Yet, to what extent must we pay homage to the symbol? Respecting the dead by denying physicians the skills to keep the living from joining them is, as Joel Feinberg says, “a poor sort of ‘respect’ to show a sacred symbol.”\textsuperscript{17} A crucial question is whether the needs of the living, in the person of the next patient requiring the health professional’s critical lifesaving skills, should be sacrificed to the memory of the dead. Feinberg argues that, while an important human symbol, the body should not be protected “at the expense of the vital human interests of a real person.”\textsuperscript{18}

\textsuperscript{14} See Bush v. Schiavo, 885 So. 2d 321, 324-28 (Fla. 2004), cert. denied, 2005 WL 126535 (holding a Florida state law unconstitutional that allowed the governor to order reinstatement of a feeding tube into a woman who was in a permanent or persistent vegetative state).

\textsuperscript{15} Id. at 325. In December 2004, Florida Governor Jeb Bush asked that the United States Supreme Court review the case. Terry Aguayo, National Briefing – South: Florida: Court Asked to Rule on Feeding Tube, N.Y. TIMES, December 2, 2004, at A4.

\textsuperscript{16} ISERSON, supra note 7, at 124.

\textsuperscript{17} Joel Feinberg, The Mistreatment of Dead Bodies, 15 HASTINGS CTR. REPORT 31-37 (1985).

\textsuperscript{18} Id. at 32.
An alternative way of viewing this situation is to see postmortem practice as the ultimate respect for the corpse. The clinicians who attempted to save a person’s life now will use that person’s shell to hone skills with which they will try to save their next critical patient. Anyone who has seen this practice knows that it is done with respect, even awe. If respect means paying homage, showing deference, and bestowing honor, this procedure is more respectful than many of the after-death rites in our society, such as the invasive and somewhat disgusting practice of embalming.19

That brings up an important question necessary for rationale policy development: What happens to corpses after they leave the emergency departments, intensive care units, or wards? As some bioethicists belatedly discovered after promoting a policy that required informed consent before practicing and teaching on cadavers could occur, cadavers do not idly lie around in busy hospital beds. Rather, nurses or in-house morticians quickly whisk them to the morgue so that valuable bed space can be opened.20 This often occurs before survivors can be notified, and in emergency departments, before survivors can even be identified. Perhaps the bioethicists should have asked; it’s the same in every hospital in the nation.

The primary technical objection to postmortem practice is that it might hinder a medicolegal investigation. Medical examiners generally control initial body disposition when death is sudden, unexpected, violent, or occurs in the operating room, or without having seen a physician in 48 hours.21 In fact, most deaths that occur in emergency departments and intensive care units do not warrant medicolegal investigation.

An analogous situation might be to imagine that you are traveling in a commercial airliner when the captain comes on and informs the passengers that both he and the copilot have neither flown nor been trained for the past six months. “Don’t worry,” he says. “It’s just like riding a bike.” Think about how reassured you would be. Flying a commercial jet is not like “riding a bike,” and neither is placing an endotracheal tube or a central venous catheter in a dying patient. In both circumstances, new and unexpected problems often occur, variations from the norm exist, and equipment changes over time. Unfortunately, unlike most commercial pilots, not all clinicians that need to perform these procedures had exhaustive training to make them even initially proficient. Yet their skill level will

19. ISERSON, supra note 7, at 120-21.
be what saves (or loses) lives. Those who excel at these procedures need to teach others and remain proficient themselves.

2. ARE THERE SUITABLE ALTERNATIVES TO THE USE OF THE NEWLY DEAD TO EDUCATE AND ENHANCE CLINICAL LIFESAVING SKILLS?

Any discussion of using corpses to practice and teach minimally or non-invasive lifesaving procedures must include an inquiry into the possibility of adequate alternative means to accomplish the same objectives. The alternatives fall into three categories: donated embalmed (or cooled) cadavers, animal models, and non-living models.

Donated corpses would be ideal, if they worked well. Unfortunately, at least for the most vital and widely needed lifesaving procedure, orotracheal intubation, they do not. Embalmed cadavers, especially those used for anatomical dissection, are amazingly stiff, due to the chemicals infused to preserve them. Likewise, relatively fresh, cooled cadavers (the only other generally available method to preserve cadavers until use) rapidly lose moisture and are very stiff. Stiff tissues in the oropharynx make practicing the procedure unrewarding as a teaching tool and often impossible, since trainees can rarely even open the cadaver's mouth, let alone move the tongue with a laryngoscope to visualize the vocal cords—the key step in the procedure.

A common alternative to using the newly dead to practice and teach these procedures is the use of animals, often dogs or pigs. However, these are poor models since they only minimally represent human anatomy and do not approximate the actual difficulty of many procedures. Using these animals also raises questions for animal rights activists, and has become problematic, if not dangerous, for some medical centers.22

Even more common is the use of mannequins. While some sophisticated mannequins give trainees at least a rudimentary intubation experience, most are barely adequate at representing the human form. Virtual-reality models may make the question of practicing or teaching any medical procedure using either living or dead bodies moot in twenty years, but adequate models do not now exist in most locations. The better, newer models are so expensive that only some major medical centers have them.23


So how do most clinicians learn their intubation skills? There are three methods, and all involve using living patients. Unlike the cadavers, these are live patients who can, and not infrequently are, harmed by the neophyte’s practice.24 The first method takes place in the operating room, where many clinicians learn and practice intubation on unsuspecting patients undergoing general anesthesia. Under the supervision of anesthesiologists or anesthetists, they intubate patients who are unaware that a novice is managing this most sensitive part of their operative experience. (Some operative consent forms now have legal jargon that, if read carefully, suggests that trainees may participate in some of these procedures.) These patients can, of course, be harmed. However, given their preoperative preparation, including not having eaten for many hours, the ability to preoxygenate the patients (avoiding brain injury if intubation is not executed immediately), optimal relaxation using drugs, and close supervision, this is a generally safe process.

The second method, usually employed by those honing, rather than initially learning, their skills, is to perform the procedure under supervision on patients needing intubation on an urgent or semi-urgent basis. Typically, junior residents will perform these critical procedures under the direct supervision of attending physicians or senior residents.

The third method, all too common in teaching hospitals, is to prolong the resuscitation process until everyone who needs to learn or practice has had a chance to perform a critical procedure.25 This process takes place after the team has determined that the person cannot be resuscitated, but before death is pronounced. Recall that a person is not dead until the physician in charge says so. Unfortunately, there can be adverse outcomes to practicing (e.g., repeating intubations unnecessarily, placing central intravenous lines, completing surgical exposure of vessels, etc.) on this still-living patient. First, the patient’s family or third-party payer must pay for any equipment used, and possibly even the unnecessary procedures.26 Worse, by this time the patient has invariably suffered severe brain, heart and other devastating systemic damage. So, when continued cardiopulmonary resuscitation during these practice sessions occasionally restarts the patient’s heart or restores the blood pressure to a measurable level, their dying process is prolonged, albeit usually only for a few hours or days—at an enormous expense in money and emotional turmoil for the patient’s survivors. This common scenario can only be considered abhorrent, given the availability of newly dead bodies that can no longer be harmed and that offer the same practical opportunities.

25. *Id.* at 92.
26. *Id.*
3. IS THE CONSENT OF RELATIVES REQUIRED?

The basis for requesting consent to practice or teach on the newly dead stems from the mistaken assumption that autonomy survives death, or that some "quasi-property" rights over the corpse given to next-of-kin allow them to disallow non-disfiguring practice and teaching. Neither is true.

Patient autonomy and the associated process of informed consent derives from the respect that individuals are shown by others. Corpses, however, are no longer individuals and thus cannot be the basis for either autonomy or informed consent; rather, they now simply symbolize the individual that is gone.27 As Joan Callahan said, maintaining that any harm or wrong can come to the dead is a "legal fiction."28 Extending autonomy to this situation also creates what could be called an "ethical fiction," an extension of an ethical principle far beyond its meaning or usefulness, and an artificial barrier. After a death, clinicians' focus switches from their former patient, since he or she is no longer living, to their next patient(s) - the dead person's survivors.29

Some cultures strictly disallow any manipulation of the dead. One such group often cited is Orthodox Jews (although Native Americans and other groups also have similar beliefs). Nevertheless, some view the societal benefits of manipulation as outweighing these traditional restrictions. For example, Israel's Chief Rabbinate recently ruled that practicing endotracheal intubation on the newly deceased is allowable, specifically because other identifiable persons will be saved.30 The "others" are the next patients in respiratory arrest or distress coming through the doors of the emergency department.31

The communitarian ethic successfully thrives and demonstrably serves society in other Western medical cultures.32 Yet some will not agree that Americans should be bound by a communitarian ethic, preferring to champion individuality, especially differences in religious and cultural beliefs that may not

31. James P. Orlowski et al., The Ethical Dilemma of Permitting the Teaching and Perfecting of Resuscitation Techniques on Recently Expired Patients, 1 J. CLINICAL ETHICS 201 (1990); James P. Orlowski et al., The Ethics of Using Newly Dead Patients for Teaching and Practicing Intubation Techniques, 319 NEW ENG. J. MED. 439, 439 (1988).
condone manipulation of the cadaver. Respect for religious beliefs remains a basic tenet that ties our nation together. In many cases, however, these religious traditions are malleable, based on the realistic needs of co-religionists. In other instances, cadaveric integrity is often (sometimes unknowingly) violated during the mutilating processes of "restoration" and embalming. A question we must answer as a society, then, is whether individuals can benefit from societal goods (such as resuscitation) and simultaneously not contribute to this good (by lending one's corpse to education in life-saving skills if the resuscitation is unsuccessful).

Legally, consent also seems to be a specious requirement, since many states, under the auspices of "presumed consent," do not require survivor consent for taking and using body parts, including corneas (eyes) and pituitary glands. According to Radhika Rao, writing in the Boston University Law Review, "such statutes effectively treat these organs as a communal form of property that escheats to the state upon the individual's death, for the benefit of the living."

In practice, requiring survivors' consent for postmortem practices is problematic for those charged with the job. Ideally, physicians should not see death as the enemy, but most still do, especially in cases of acute, unexpected deaths, which often occur in the emergency department. This makes any death uncomfortable, and the process of notifying survivors of such deaths is regarded as the most difficult job in medicine. Combined with the requirement to ask for organ and tissue donation and an autopsy, this additional request becomes an unreasonably difficult task. Most clinicians simply cannot add yet another and,

34. ISERSON, supra note 7, at 226-34, 241-48.
35. Id. at 120-21. Answering this complex societal question goes well beyond the scope of this paper or of medical practitioners alone.
37. Id. at 380-81. Rao continues:
   In the United States, such laws are limited to bodies under the authority of the coroner or medical examiner. Many European countries, however, adopt a more comprehensive approach, presuming that all dead bodies are a public resource and generally permitting the harvesting of organs unless the decedent expressly opted out by registering his or her refusal.
   Id. at n.77 (citing J. SWERDLOW, MATCHING NEEDS, SAVING LIVES: BUILDING A COMPREHENSIVE NETWORK FOR TRANSPLANTATION AND BIOMEDICAL RESEARCH 19 (1989)).
39. It is so difficult that many large institutions and organ procurement agencies have given separate, trained individuals the task of asking about organ and tissue donation, removing one onerous task from the physician. Talking About Organ Procurement When One of Your Patients Dies, ACP –
to the survivors, often bizarre request into this mixture. While it has been demonstrated that families in the emergency department will often respond positively to such requests, these successful requests were made, not by the clinician involved in the death notification, but by another physician specially trained in making such requests. Such an ideal situation is generally unfeasible.\textsuperscript{40} In addition, survivors often cannot be identified and contacted before the body is whisked to the morgue and the resuscitation team dispersed to other duties.\textsuperscript{41} The one situation where consent can often easily be obtained is in the neonatal intensive care unit, where clinicians may have interacted with the family for weeks, if not months, before the death.\textsuperscript{42}

Requiring clinicians to formally request permission before practicing these lifesaving skills guarantees that many of them will simply not ask and thus not practice, or will practice without asking, placing other bioethics policies at risk. Putting any barriers in the way of maintaining these skills does a disservice to all patients who will rely on these clinicians to save or maintain their lives.\textsuperscript{43}

\textbf{4. WOULD THE PUBLIC LOSE TRUST IN THE MEDICAL PROFESSION IF SUCH PRACTICES WERE WIDELY KNOWN?}

Vince and Larry, "talking" crash dummies, have repeatedly been shown in public service announcements advocating automobile safety.\textsuperscript{44} They represent not only their mechanical brothers, but also the cadavers used to test safety devices. A few years ago, Europeans were incensed when they found that Peugeot and Volkswagen were using cadavers in crash tests.\textsuperscript{45} The American media smelled

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\textsuperscript{40} Robert M. McNamara et al., \textit{Requesting Consent for an Invasive Procedure in Newly Deceased Adults}, 273 JAMA 310, 310-12 (1995).

\textsuperscript{41} ISERSON, \textit{supra} note 7, at 120.


\textsuperscript{43} Kenneth V. Iserson, \textit{Postmortem Procedures in the Emergency Department: Using the Recently Dead to Practise and Teach}, 19 J. MED. ETHICS 92, 97 (1993); ISERSON, \textit{supra} note 7, at 119-24.

\textsuperscript{44} U.S. DEP'T OF TRANS., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN. (NHTSA), \textit{HIGHWAY SAFETY NEEDS OF U.S. HISPANIC COMMUNITIES: ISSUES AND STRATEGIES} 104-06 (1995).

\textsuperscript{45} See German University Said to Use Corpse's in Auto Crash Tests, N.Y. TIMES, Nov. 24, 1993, at A8 (noting that "Germany's largest automobile club, ADAC, denounced tests with children's bodies. It said in a statement that such experiments were 'not acceptable from an ethical standpoint'’); Kevin Fedarko, \textit{Bodies of Evidence (Cadaver Use)}, TIME, Dec. 6, 1993, at 70 (acknowledging the outrage at the use of cadavers in crash-test experiments by both Germany's University of Heidelberg and the French carmaker Renault); Tyler Marshall, \textit{Auto Safety Crash Testing Ignites Furor; Germany: The Program Uses Human Bodies. U.S. Tests Using Cadavers at 3 Universities are Disclosed}, L.A. TIMES, Nov. 25, 1993, at A6 (discussing the denunciation of cadaver crash tests by the Roman Catholic

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blood. They tried to create public outrage by describing similar cadaver tests long-used by U.S. automakers. The public, informed that cadaver studies were saving lives by advancing innovations in automobile safety, showed no concern, implicitly agreeing with one of Vince and Larry's mottos: "Live with it."

Although Americans only reluctantly admit it, we exist in a community of others not too dissimilar to ourselves. We access the services this community provides and owe a duty to our co-communitarians to perpetuate and improve the best of these services. Dialing 911 to get emergency help is just such an outstanding community-provided service. Most of the time, those accessing the system go to the emergency department, are treated, and eventually go home. Some, however, die despite the best efforts of the emergency medical team. When this happens, those who have used their skills attempting to save the patient's life have a responsibility to the community to pass on these skills to other members of the team, to ensure that their own skills remain proficient, and to upgrade their skill levels. The patient implicitly agreed to this practice and teaching not only by using the services of emergency medical personnel, but also by living in our society, which provides everyone a right to this care.

Unlike other methods of entering into research or teaching protocols, temporarily becoming an emergency department teaching cadaver is one of our society's most egalitarian systems. No one knows who will be the next to exit life in the emergency department's resuscitation room, but it will likely be someone who is similar to both the last dead patient (from whom providers could learn how to do lifesaving procedures) and the next dying patient (for whom providers will use skills they learn from other cadavers). With a generalized policy of practice and teaching, neither rich nor poor, young nor old, black nor white will be over-represented among the educational cadavers — they will simply parallel the population seen in an emergency department by a particular group of providers.46

A new wrinkle emerged in the debate when, in 2002, the American Medical Association's Council for Ethical and Judicial Affairs came out against the practice if consent could not be obtained.47 Somewhat earlier, the British Medical Association and the Royal College of Nursing issued a joint statement that criticized intubation practice on the newly dead, while making an exception for cases of patients with severe injuries to the face, neck and upper trunk: "practising

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intubation on recently deceased patients who have suffered such injuries affords experience not obtainable in any other way." 48 These official positions suggest that clinicians need to practice on the dead only in rare cases; the rest of the time, by implication, live patients should be used.

5. EVEN IF POSTMORTEM PROCEDURES ARE LEGALLY AND ETHICALLY PERMISSIBLE, SHOULD PHYSICIANS IN EMERGENCY DEPARTMENTS AND INTENSIVE CARE UNITS ALLOW OR EVEN ENCOURAGE THEM?

An ethical dilemma is one in which there appears to be no best option between two or more (usually uncomfortable and often poor) choices. Ethical theories may help resolve the dilemma. On the one hand, Kant's Categorical Imperative posits that the ends do not justify the means, suggesting that this practice should be disallowed. 49 However, the similarly applicable, teleological theory says that an action is right or wrong on the basis of the consequences or outcome. 50 Resolution derives from exploring the options in more detail, as has been done in this paper, and choosing the least objectionable option.

When faced with a moral dilemma, the worst possible action is confused inaction. We are now faced with a choice: whether to train medical personnel using practices that can actually hurt living ill and injured people, or to permit an admittedly distasteful, yet physically harmless method of teaching to continue on the newly dead.

We dare not make the mistake in medicine or in bioethics of confusing a good public image with real and practical benefits for all of society. At present, public relations fears are driving hospitals to ban this practice, at least without survivor consent. 51 It also did not help that a Canadian law professor, in an article that received widespread notice, outlined the route to criminally prosecute or sue United States and Canadian physicians for negligence in civil court for such activities. 52 Interestingly, he eschewed discussions of "the moral and legal status of the dead, whether the dead have legal rights, and if so, what duties are owed to

51. Paul Glader, Doctors Question Use of Dead or Dying Patients for Training, WALL ST. J., Nov. 12, 2002, at B1. As a typical example, immediately following the release of this article in which I was quoted as approving of the practice, the local newspaper picked up the story and my university hospital administration immediately banned the use of postmortem practice and teaching.
the dead." In arguing that physicians should discontinue this practice, he erroneously assumed that "these procedures cannot be performed [practiced and taught] on a person who is alive..." But, as I have discussed, practicing on the living is precisely what occurs, by default, when postmortem practice is eliminated. Arguments against the practice ignore the unintended consequences, in this case potentially harming living patients.

If we ban this practice we must be aware of the consequences. Until adequate models are widely available to medical trainees (probably virtual reality within two decades), they need adequate opportunities to train in performing essential lifesaving procedures. Otherwise, we run a risk similar to that of Western physicians before the mid-nineteenth century, who were required to know and were tested on anatomy, but were not allowed to acquire cadavers to do the necessary dissections. (In response, they robbed graves for the bodies, bought them from professional grave robbers, and occasionally used the services of corpse-on-demand killers such as Burke and Hare.)

This seems to push us squarely to the conclusion that those healthcare workers who need to learn or keep current in lifesaving medical skills to decrease their patient's morbidity and mortality not only may, but also must use the newly dead to practice and teach. Artificial barriers must not preclude this. For health professionals to lack needed lifesaving skills even once because they have not taken every opportunity to learn or stay current violates the most basic ethical principles. Beneficence, doing good for the next living patient, must be the clinician's guiding principle. If we legitimize postmortem practice, I will never again have to hear a colleague say, "If I had just been a little better at intubation, she would still be alive." As Vince and Larry, the mechanical men, say more simply, "The life we save may be your own."

53. Id. at 394.
54. Id. at 393.
55. Rob Norton, Unintended Consequences, in THE CONCISE ENCYCLOPEDIA OF ECONOMICS, http://www.econlib.org/library/Enc/UnintendedConsequences.html (last visited May 19, 2005) (noting, "The law of unintended consequences, often cited but rarely defined, is that actions of people—and especially of government—always have effects that are unanticipated or 'unintended.' Economists and other social scientists have heeded its power for centuries; for just as long, politicians and popular opinion have largely ignored it.").
57. ISERSON, supra note 7, at 402-25.
CONCLUSIONS

1. It is ethically and legally permissible to practice and teach minimally invasive and non-invasive lifesaving procedures on nearly dead emergency department and ICU patients.

2. Currently available alternatives are not acceptable.

3. Consent from relatives is neither morally nor legally necessary, and might contravene the wishes of the former patient.

4. Societal obligations on emergency and ICU clinicians dictate that they encourage the use of the newly dead to practice and teach minimally/non-invasive procedures.

5. Postmortem procedures are legally and ethically permissible, and physicians in emergency departments and intensive care units should allow and even encourage them.