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In the traditional view of the patient-physician relationship, physicians are obligated to act in the best medical interests of their individual patients and should not compromise their patients' care for the sake of third parties (persons outside this relationship). In truth, it is doubtful that physicians have ever fully upheld this uncompromising standard, and more recently some have advocated a balance between concern for the individual patient and concern for the greater good in contexts like clinical research and cost containment.[1,2,3] But the traditional, exclusively patient-centered ethic continues to exert a powerful hold on physicians' self-conceptions and patients' expectations, perhaps in part because the medical profession so far has failed to articulate an alternative principle to guide how physicians should weigh the claims of patients and third parties.

Although potential conflicts between patient and public interests have been explored in the literature on clinical research and cost containment,[1,2,3,4,5,6]less attention has been paid to similar conflicts in medical education.[7,8] Medical students and residents, as well as fully credentialed physicians learning new techniques, attain proficiency in skills by practicing them in the course of patient care. For example, any physician who routinely performs an invasive procedure such as lumbar puncture or central venous catheterization must have, at some point, performed it on a patient for the first time. Although everyone benefits from the skills cultivated by practicing on patients, few would wish to be that first patient. The *overall* care available to patients in teaching hospitals is in some cases generally superior to that available in nonteaching institutions,[9,10] in terms of greater access to cutting-edge interventions and the round-the-clock

availability of house staff. Nonetheless, when a trainee performs a procedure even though a more experienced clinician is also available, this decision is not guided solely by concern for the individual patient.

Like clinical research, medical education may expose patients to risks that are not offset by the prospect of benefits to those individual patients, but instead by the prospect of benefits to other individuals. Such conflicts in clinical research and cost containment reflect ethical dilemmas raised by the special circumstances of high-technology, 21st-century medicine. By contrast, the conflicts that arise in medical education are not specific to any time or place but instead are intrinsic to medicine as a learned profession and must be faced by every physician in the course of his or her training.

Risks and Deception

At present, these conflicts are largely hidden from patients. Trainees (in concert with educators) may disguise their status or the nature of their involvement in patients' care[11,12]—in part because of fear that patients will not consent to their participation but perhaps also because of private worries that practicing their still-unrefined skills on patients is not justified.

Gawande[13] expresses skepticism that the compromises inherent in medical education can be explicitly justified to patients. He reports that, as a surgical resident and the father of a child born with a congenital heart defect, he insisted on having his son followed in clinic by a faculty member rather than by a cardiology fellow, which led him to suggest that patients cannot be relied on to participate in medical education if presented with a choice and that experiential learning must therefore be "stolen" from patients without fully informed consent.

This conclusion should be avoided. It would be hopeless to try to train medical students

and residents to respect informed consent if, at the same time, the quality of their clinical training depended on continually violating it. In addition to its ethical and educational pitfalls, this approach may systematically expose medical trainees and academic medical centers to potential lawsuits alleging fraud, invasion of privacy, breach of confidentiality, and battery.[14,15,16] While patients typically prefer to have procedures performed by the most experienced hands available, patients may feel more strongly about not being deceived by their doctors.[17]

One way to avoid the problems raised by these conflicts in medical education is simply not to acknowledge them. But this does not make them go away, nor does it offer any real guidance on how medical students and residents should think about their relationships to the patients that they care for in the course of their training. Rather, it is important that the involvement of patients in medical education can be explicitly justified in terms that in principle can be addressed directly to patients.

Balancing Patient and Public Interests

If physicians really did refuse to ever compromise the welfare of their individual patients for the sake of third parties, trainees would not perform procedures if a more experienced physician were also available. But physicians would still need to learn how to perform procedures—they would only lose the ability to do so under supervision, within the controlled setting of a formal training program. Such a policy would not eliminate the risks associated with procedures performed by physicians who are still learning, but would only add to these risks by preventing physicians from acquiring the skills necessary for competent medical practice in a responsible way. Ultimately, if physicians adhered to the exclusively patient-centered ethic in contexts like medical education, all patients' quality of care would decrease.

Thus, no patient could reasonably want physicians to focus exclusively on the medical well-being of individual patients, without regard for third parties. After all, every person is a "third party" with respect to other people's patient-physician relationships, and in contexts such as medical education, conduct within these relationships can affect the quality of medical care across society as a whole. Of course, most individual patients might prefer that his or her own physician is exclusively concerned with his or her welfare, and that at the same time other people's physicians also keep his or her interests in mind when treating their patients. But it would be unreasonable to expect anybody else to accept such an arrangement or to think that the principles of medical ethics should make special exceptions for one individual's well-being but not for others.

These considerations suggest that, in seeking an alternative principle, an important consideration is whether and how it would be reasonable for all individual patients to want their physicians to weigh the interests of patients and third parties, taking into account that all are patients (from the perspective of the individual patient-physician relationships) *and* third parties (from the perspective of other such relationships). This perspective is an application of the Kantian ideal of living according to principles that the individual could also will that other people should live by.[18,19] But this ethical thinking has intuitive appeal even before philosophical argument. When parents teach morality to children and adolescents, for instance, it is natural to invite them to imagine what the world would be like if everyone behaved (or misbehaved) in some way.

There are good reasons for wanting physicians to be especially concerned with their patients' welfare, in ways that go beyond the humane concern they have for everyone else. Patients follow physicians' advice because of the belief that such advice is given for that

individual patient's benefit rather than for the benefit of strangers. Patients confide in physicians because individual patients expect physicians to keep information confidential even when (or especially when) others might profit from it. This trust has great therapeutic value and would not be possible if physicians did not give high priority to the interests of their patients. But even though physicians should give high priority to their patients' welfare, they should not give *absolute* priority. In some cases, physicians should be willing to accept compromises in the care of their patients for the sake of third parties—in particular, as in clinical research and medical education, when such compromises are necessary to sustain competent medical practice as a whole.[3]

What Can Reasonably Be Asked of Patients?

If all patients were to refuse to participate in medical education out of concern for their own health, the health of all patients would be much worse-served. Therefore, there is a shared interest and responsibility in maintaining the quality of medical care, which depends on the involvement of patients in medical education.

Some evidence suggests that medical educators and trainees have, to this point, done a poor job of honestly presenting these tradeoffs and their necessity to patients.[11,12,20,21,22] Much as with clinical research, empirical studies of patients' reasons for participating in medical education reveal a mixture of self-interested and altruistic motives,[17,20,23] and trainees appear to underestimate the extent to which patients are altruistically motivated.[23] One study suggests that a patient is more willing to consent to a student performing procedures on him or her when that patient has already established a relationship and rapport with the specific student.[24] Patients might be more motivated by the thought of contributing to a particular trainee's education than

by the thought of contributing to medical education in the abstract.

Alternatively, one concern is that proclaiming a duty to participate in medical education might imply that patients do not have the right to withhold consent from procedures by trainees, thereby compromising patients' rights to bodily integrity.[25] On the contrary, patients' duties to participate in medical education might be compared to duties of charity, which allow for considerable individual discretion about how and when those duties are discharged. There are many patient and physician characteristics that could prompt a patient's legitimate refusal to participate in a specific circumstance. Some patients (for instance, those with histories of sexual abuse) might refuse intimate examinations by students while being willing to undergo medical procedures. A particular trainee's or attending physician's self-assured manner might put off one patient, while putting a different patient entirely at ease. Some parents might allow residents and fellows to perform inpatient procedures on their child, while still insisting that the child is cared for by an attending physician in clinic. Although patients should bear a reasonable share of the burdens of medical education, this does not require them to accede to every request.

Proposals

Some practical measures to address these problems include general issues of mitigating risk and improving communication. The risks associated with medical education can be mitigated beforehand by better preparing trainees before actual procedures by using rubber models, trained patients, cadavers, and computer simulations. Such risks can also be mitigated during procedures with appropriate supervision, and also by ensuring the availability of equipment to reduce complications, such as standardized procedure kits and ultrasound devices for line placement.

Improving communication is crucial for ensuring meaningful informed consent; it also enhances patients' satisfaction and their sense of participation in the educational process.[17] Patients and trainees must share the attitude that trainees are full-fledged members of the medical team, who share responsibility for patient care as well as their own learning. In outpatient clinics, attending physicians should take the opportunity to discuss the place of trainees with patients and to request permission for the trainee's participation at the beginning of the encounter. Such discussions are not always possible on inpatient services, especially when patients are admitted overnight or when multiple patients are admitted simultaneously. In these circumstances, attending physicians should make efforts near the time of admission to explain to patients their role in the medical team and their ultimate personal responsibility for the care that patients receive under their supervision.

Such preliminary conversations can facilitate (but do substitute for [7,21]) more specific informed consent when procedures are medically indicated. Teaching hospitals should also consider systems-level changes to facilitate informed consent, such as adding text to pre-printed consent forms when trainees are involved in procedures, which may serve as the beginning of more detailed conversations. Although such efforts cannot eliminate the risks involved in medical education, they can foster more open and, ultimately, more satisfying relationships between patients and trainees.

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[1] Ubel PA, Arnold PM. The unbearable rightness of bedside rationing: Physician duties in a climate of cost containment. *Archives of Internal Medicine* 1995;155:1837-1842.
[2] Bloche MG. Clinical loyalties and the social purposes of medicine. *JAMA* 1999; 281:268-274.
[3] Chiong W. The real problem with equipoise. *American Jounral of Bioethics* 2006;6:37-47.

[4] Fried C. *Medical Experimentation: Personal Integrity and Social Policy*. New York, NY: American Elsevier Publishing; 1974.
[5] Freedman, B. Equipoise and the ethics of clinical research. *New England Journal of Medicine* 1987; 317:141-145.
[6] Angell M. The doctor as double agent. *Kennedy Institute of Ethics Journal* 1993;3:279-286.
[7] Jagsi R, Lehmann LS. The ethics of medical education. *BMJ* 2004;329:332-334.
[8] Wendler DS, Shah S. How can medical training and informed consent be reconciled with volume-outcome data? *Journal of Clinical Ethics* 2006;17:149-157.
[9] Dimick JB, Cowan JA, Colettie LM, Upchurch GR. Hospital teaching status and outcomes of complex surgical procedures in the United States. *Archives of Surgery* 2004;139:137-141.
[10] Kupersmith J. Quality of care in teaching hospitals: A literature review. *Academic Medicine* 2005;80:458-466.
[11] Silver-Isenstadt A, Ubel PA. Erosion in medical students' attitudes about telling patients they are students. *Journal of General Internal Medicine* 1999;14:481-487.
[12] Ubel PA, Jepson C, Silver-Isenstadt A. Don't ask, don't tell: A change in medical student attitudes after obstetrics/gynecology clerkships toward seeking consent for pelvic examinations on an anesthetized patient. *American Journal of Obstetrics and Gynecology* 2003;188:575-579.
[13] Gawande A. Education of a knife. In *Complications: A Young Surgeon's Note on an Imperfect Science*. New York, NY: Metropolitan Books; 2002: 11-34.
[14] Kapp MB. Legal implications of clinical supervision of medical students and residents. *Journal of Medical Education* 1983;58:293-299.
[15] Helms LB, Helms CM. Forty years of litigation involving residents and their training: II. Malpractice issues. *Academic Medicine* 1991;66:718-725.
[16] Kocher MS. Ghost surgery: The ethical and legal implications of who does the operations. *Journal of Bone & Joint Surgery (Am.)* 2002;84:148-150.
[17] Lynöe N, Sandlund M, Westberg M, Duchek M. Informed consent in clinical training – patient experiences and motives for participating. *Medical Education* 1998;32:465-471.
[18] Kant I. *Groundwork of the Metaphysic of Morals*. Paton HJ, trans. New York, NY: Harper Torchbooks; 1964 [1785]: 80-107.
[19] Scanlon TM. *What We Owe Each Other*. Cambridge, MA: Harvard University Press; 1998: 189-247.
[20] Nicum R, Karoo R. Expectations and opinions of pregnant women about medical students being involved in care at the time of delivery. *Medical Education* 1998;32:320-324.
[21] Santen SA, Hemphill RR, Prough EE, Perlowski AA. Do patients understand their physician's level of training? A survey of emergency department patients. *Academic Medicine* 2004;79:139-143.
[22] Santen SA, Hemphill RR, McDonald MF, Jo CO. Patients' willingness to allow residents to learn to practice medical procedures. *Academic Medicine* 2004;79:144-147.
[23] Magrane D, Gannon J, Miller CT. Student doctors and women in labor: Attitudes and expectations. *Obstetrics and Gynecology* 1996;88:298-302.
[24] Santen SA, Hemphill RR, Spanier CM, Fletcher ND. 'Sorry, it's my first time!' Will patients consent to medical students learning procedures? *Medical Education* 2005;39:365-369.
[25] Waterbury JT. Refuting patients' obligations to clinical training: A critical analysis of the arguments for an obligation of patients to participate in the clinical education of medical students. *Medical Education* 2001;35:286-294.