Practicing What We Preach? An Analysis of the Curriculum of Values in Medical Education

David T. Stern, MD, PhD

PURPOSE: Although medical students are expected to adopt and practice the ideals stated in the Hippocratic Oath, little is known about whether these values are actually taught during clinical training. The purpose of this study was to examine the "recommended curriculum" of medical values and compare it with values that are actually taught.

SUBJECTS AND METHODS: The recommended curriculum was identified through content analysis of curriculum documents and interviews with individuals responsible for teaching. The taught curriculum of values was identified through naturalistic observations and audio taping of inpatient internal medicine teams at an academic medical center.

RESULTS: The values most consistently recommended in the medical curriculum are honesty, accountability, compassion, the importance of public health, and self-policing. While accountability and caring were found frequently in the taught curriculum, self-policing and the importance of public health were emphasized less. Interprofessional respect and the importance of service were present in the recommended curriculum, but were taught as interprofessional disrespect and as the burden of service. The importance of industry (working hard) was not found in the recommended curriculum, but frequently identified in the taught curriculum.

CONCLUSION: This study indicates that one reason medical students are not learning the intended norms of the profession may be that the teachers are not consistently teaching the recommended values of the profession. Future research should concentrate on confirming these findings in other settings and on understanding why these values are not consistently taught. **Am J Med. 1998;104:569–575.** ©1998 by Excerpta Medica, Inc.

At medical school graduation ceremonies across the country, the central event is a pledge by these newest physicians to honor the Oath of Hippocrates. While versions of the oath vary, some parts are universally present: a commitment to patient care, compassion, and integrity and confidentiality (1). The Oath's timelessness as a touchstone of medical care rests in an emphasis on the values of an "ideal physician." There is no reference to the facts and skills that a doctor must know, only to the behaviors expected in the practice of medicine.

During the 4 years of medical school, but particularly in the clinical years, a student is expected to adopt and practice these norms, so that this graduation incantation becomes a statement of the obvious, rather than a pledge to follow in the future. Over the past 10 years, there have been a number of commissions and organizations that have emphasized the importance of developing professional values (2–5). The American Medical Association has identified such values in their "Principles of Medical Ethics" (6):

> As a member of this profession, a physician must recognize responsibility not only to patients but also to society, to other health professionals, and to self. The following Principles adopted by the American Medical Association are not laws but standards of conduct which define the essentials of honorable behavior for the physician (7).

In their program brochures and curriculum materials, medical schools identify and promote these and other values they expect student-physicians to adopt. This is the "recommended" curriculum for the development of professional values in a specific institution.

Despite these goals, there is no evidence that medical schools are effectively teaching these values. First-hand accounts of medical students (7–9) document the conclusions of sociologists in the 1950s (10,11) that the socialization of medical students, especially in the clinical years, may involve learning about values that are often in conflict with those recommended. Conrad (12) reviewed four first-hand accounts of medical school, and concluded that "the medical student's life of long hours, sleep deprivation, excessive responsibility, and dealing with unreflective and arrogant superiors inhibits the growth of compassion and empathy."

LeBaron (8) illustrates this point vividly:

> In biology you maim and kill in order to learn. Perhaps much of it is unavoidable. But what happens when medical students are trained first as biological scientists and only secondarily, almost as an afterthought, as physi-

From the Division of General Medicine, Department of Medicine, Ann Arbor VA Medical Center, University of Michigan, Ann Arbor, Michigan.

Presented at the 1997 Annual Meeting of the American Education Research Association, and the 1997 Annual Meeting of the Society of General Internal Medicine.

Supported in part by the Lyle C. Roll Fund for the Study of Humane Medicine.

Requests for reprints should be addressed to David T. Stern, MD, PhD, Ambulatory Care (11C), 2215 Fuller Road, Ann Arbor, Michigan 48105.

Manuscript submitted August 20, 1997 and accepted in revised form February 26, 1998.

©1998 by Excerpta Medica, Inc.
All rights reserved.

0002-9343/98/$19.00
PII S0002-9343(98)00109-0

> cians? How easy is it for them to discard their point of view when they finally reach out to take a human pulse?

Fox (13) reflected about the striking difference between what medical schools intend to teach, and what students appear to learn from medical education. Each "blue-ribbon panel" on medical education has "rediscovered principles and qualities of good physicianhood and medical care, [and has exhibited] the same concern over the degree to which these conceptions are being honored more in the breach than in practice." Indeed, medical training has been said to teach individualism, efficiency, competitiveness, and deception, which are in direct conflict with the values of an "ideal physician" (14). Thus, there is discordance between what medical educators intend to teach and those values learned by students.

If the recommended curriculum explicitly states the desire to teach ideal norms, yet students learn values that researchers have documented as conflicting with these ideals, what accounts for this dichotomy? Are teachers of medicine teaching values not consistent with the ideal, or are students simply not learning the values we intend to teach? While not explicitly teaching counter-norms, medical educators could be teaching such values implicitly, through a "hidden curriculum" (15–17), through the structure of the curriculum (18,19) or the structure of the school (20,21). The purpose of this study was to examine the "recommended curriculum" of medical values and compare it with the "taught curriculum" found in clinical medical education using a sample of eight specific values. These examples will be used to identify whether a discordance between these curricula could help explain the dichotomy between the expectations and results of values education in medical training.

METHODS

Site Selection

For reasons of access and convenience, this study was limited to a single institution's teaching of values, and more specifically, the teaching of values in clinical medical education. Due to potential differences in values between specialties, the site of study was restricted to the values recommended and taught in internal medicine, during the clinical years of medical school and three years of residency training. The site was further limited to the inpatient general medicine services, since this is where medical students and residents in internal medicine currently spend the majority of their time.

Data Collection

Recommended curriculum (global). The recommended curriculum is comprised of that "which is recommended by individual scholars, professional associations, and reform commissions" (22). For the purposes of this study, this definition is further refined by dividing it into global recommendations (those made by individuals or institutions intended for all medical schools and hospitals) and local recommendations (those made at the local institution under investigation.) The global recommendations are derived from graduation oaths (n = 3) (23), commission reports (n = 4) (2–5), and recommendations from the American Medical Association (6), the American Board of Internal Medicine (24,25), and the national Residency Review Committee (n = 1) (26).

Recommended curriculum (local). The local recommendations are derived from the University of Michigan medical school goals statement (n = 1), an advertising brochure for the department of medicine (n = 1) (27), handbooks for students (n = 2) and residents (n = 3), guidelines for teachers in internal medicine (n = 2), and interviews with selected individuals responsible for teaching internal medicine (n = 4).

Taught curriculum. The taught curriculum of values was identified by using naturalistic observations of patient-care teams in the hospital. These teams were composed of an attending physician, a senior resident, two interns, and two to six medical students. During 6 months, eight teams were observed for 3 hours each day for 10 days. Observations were distributed evenly so that a representative sample of times, days of the week, call schedules, and times of the month were obtained. Observations alternated between the two teaching hospitals of the University of Michigan: the University Hospital and the Ann Arbor Veterans Affairs Medical Center.

After obtaining informed consent, one of three observers (one physician and two nonphysicians) followed a team throughout their daily activities, keeping both audiotapes and written field notes of all observations. The teams were aware that we were studying the teaching and learning of medicine, but were unaware that we were focusing on the teaching of values.

In the weeks between observations, audiotapes were reviewed, and excerpts containing values teaching were identified and transcribed. A "values excerpt" was defined as a fragment of conversation (more than a single word) in which an individual expresses ideals, customs, norms, or institutional characteristics of internal medicine, medicine in general, or the hospital environment. The process of selecting these excerpts from the flow of narrative was found to be a highly reliable process (inter-rater reliability >95%, kappa 0.54 to 0.71). Transcripts were made anonymous by changing all names to fictitious ones.

Table 1. Recommended Curriculum of Values: Global

	Oaths for Physicians			General Recommendations for Physicians					Recommendations for Internists[†]		
Value	Hippocrates	Geneva	AMSA	GPEP	Commonwealth	RWJ	MACY	AMA	ABIM-1	RRC	ABIM-2
Honesty	x	x	x	x		x	x	x	x	x	x
Accountability	x	x	x	x			x	x		x	x
Compassion				x			x	x	x	x	x
Service		x	x	x	x						x
Industry											
Interprofessional respect	x	x								x	x
Public health			x	x			x	x		x	x
Self-policing		x	x			x		x		x	x

An "x" indicates that the value is mentioned.
[†] ABIM-1 refers to reference 24, ABIM-2 refers to reference 25.
AMSA = American Medical Student Association; GPEP = General and Professional Education of the Physician; AMA = American Medical Association; ABIM = American Board of Internal Medicine; RRC = Residency Review Committee.

Textual Analysis

Documents (whether written texts, transcriptions of observations, or interviews) were analyzed for the values they contained. Values "labels" were initially allowed to emerge from the data itself, then compared with those from the literature. The final list of 38 values reflects a combination of both sources. Each values excerpt was then reanalyzed to determine which values were present. A subset of these values interpretations has been validated (28). For clarity and conciseness, only eight of the 38 values are presented in this analysis. These eight values were selected for presentation either because they were the most frequently recommended or the most frequently taught.

RESULTS

The Recommended Curriculum: Global

Each document was read and analyzed for references to the values expected of physicians. A tabulation of the global recommended curriculum can be found in Table 1. The first three columns represent three commonly used templates for the oath given to medical students upon graduation (23). The following example, from the Oath of Hippocrates, is interpreted as promoting confidentiality:

> What I may see or hear in the course of the treatment or even outside of the treatment in regard to the life of men, which on no account one must spread abroad, I will keep to myself holding such things shameful to be spoken about. (Lowes, 1995:12)

The next five columns represent the recommendations of five groups (2–6) charged with the task of identifying the values expected of future physicians. For example, the Report of the General and Professional Education of the Physician in 1984 summarized the recommendations of their working group on personal qualities, values, and attitudes:

> The panel's deliberations are rooted in the question of whether or not common attributes should characterize all physicians. Our answer is affirmative. We believe that every physician should be caring, compassionate, and dedicated to patients—to keeping them well and to helping them when they are ill. Each should be committed to work, to learning, to rationality, to science, and to serving the greater society. Ethical sensitivity and moral integrity, combined with equanimity, humility, and self-knowledge, are qualities of all physicians.

The final columns are specific to internal medicine, referring to publications by the American Board of Internal Medicine (24,25) that identify the professional values expected of all residents enrolled in internal medicine training programs, or a Residency Review Committee document (26) that details the written requirements of the Accreditation Committee for Graduate Medical Education. This body reviews each program at least every 5 years, and has authority to renew or withdraw accreditation. In their 1994 statement of professional ethical behavior, they identify 11 values that are expected to be emphasized during residency training.

The most consistent recommendation across this global curriculum is for teaching the value of honesty or integrity, which is found in 10 of the 11 documents analyzed. The 1995 American Board of Internal Medicine document, *Project Professionalism* (24), states: "Honor and integrity are the consistent regard for the highest

standards of behavior and the refusal to violate one's personal and professional codes."

The next most common finding was a statement of accountability or responsibility to patients, identified in eight of the documents, as in the American Medical Student Association (23) oath: "My responsibility is to promote the health of the community and persons I serve. The health of you, my patient, will be my first commitment."

While these were the most common themes, others were quite prevalent: care and compassion for patients, the importance of continuing education, commitment to public health, and to vigilant self-policing of other medical professionals.

Recommended Curriculum: Local

Table 2 outlines the locally recommended curriculum of values for both medical students and residents at the University of Michigan. The first five columns represent the curriculum as described for medical students and the subsequent columns represent the curriculum for residents in internal medicine. The first column is an analysis of the goals statement of the University of Michigan Medical School, published in its advertising brochures, curricular descriptions, and handbooks. This statement of goals also appears as the first page in the handbook for 3rd-year medical students (and 4th-year medical students). The next column represents the guide for teaching medical students on inpatient internal medicine rotations, distributed to attending physicians during the week before they begin supervising students and residents on the hospital services. The director for medical student teaching on inpatient medicine services was interviewed, and an analysis of his taped and transcribed interview is listed next (listed as faculty-1).

Three individuals primarily responsible for resident teaching were also interviewed: The chairman of the department of medicine, the residency program director, and the co-director for ethics (listed as faculty-2, faculty-3, and faculty-4, not necessarily in that order.) Six written documents of the curriculum for residents were analyzed: the House Officer Association contract, the brochure for recruitment of residents to the department of medicine, the written ethics curriculum, the chief resident's policy and procedures manual, the house officer's policy and procedures manual, and the instructions for attending physicians for teaching residents on inpatient internal medicine services.

The Taught Curriculum

The taught curriculum of values was identified through 194 hours of observing internal medicine teams during their daily work. One hundred eighty-two values excerpts were identified from these audiotapes. Attending physicians were present for 45% of all values teaching episodes. The frequency with which each of eight values was identified is shown in Table 3. For example, the following excerpt was interpreted as containing the teaching of the value of integrity.

> Setting: A general medicine attending (A) and a medical student (MS) are discussing a patient they do not believe "belongs" on the liver transplant list. They feel he has too many other contraindications, particularly cardiac problems, that preclude his obtaining the liver transplant. The patient expects to get a transplant, and the attending and student are discussing whose role it is to break the bad news.
>
> A: It would be nice to get [the cardiology fellow] to say that he's not a candidate. I mean I sort of broke that to him today, you know, and he didn't seem too torn up about it . . .
>
> MS: He was asking me what our specialty was, as far as the transplant goes. I told him that, uh, the decision is finally made by transplant surgeons usually, but they have input from cardiologists and internal medicine docs, so that may, inadvertently—he's set on having a transplant—I may, inadvertently, have decreased our authority . . .
>
> A: No, you told the truth and I think that's reasonable. When all else fails, the truth is good.

Curriculum Comparison: The Recommended and the Taught

The local curriculum for medical students matches well with the global curriculum (see Table 4). Honesty, accountability, and self-policing appear as three of the most emphasized characteristics. Compassion and public health are stated in the medical school goals statement, and reiterated verbatim in the 3rd- and 4th-year handbooks.

For residents, the local emphasis on the values of accountability and compassion are consistent with the global recommendations. Of the remaining differences between the global and local recommendations, those of honesty, service, and interprofessional behavior are most striking. While honesty is the most frequently identified value in the global recommendations, it was only mentioned in three of the nine sources for resident values.

The concept of service derives from the detailed descriptions of the duties of residents in the policy and procedures manuals and in the administrative interviews. There are strict rules about when a resident is to be on duty (on call) and how they are to serve patients and the hospital. There are individual comments directed specifically toward "moonlighting," the practice of taking a part-time job to earn extra money while training as a resident. This practice is discouraged (but not prohibited), particularly if it interferes with the resident's ability

Table 2. Recommended Curriculum of Values: Local

Value	Medical Student Recommendations					Internal Medicine Resident Recommendations								
	Goals	3HB	4HB	MGIM	F1	F2	F3	F4	HOA	BR	ETH	CR	HO	RGIM
Honesty	x	x	x	x	x	x		x			x			
Accountability		x	x	x	x		x				x		x	x
Compassion	x	x	x				x	x			x		x	x
Service						x	x					x	x	
Industry						x			x					
Interprofessional respect	x	x	x				x	x	x	x			x	x
Public health	x	x	x					x			x			
Self-policing	x	x	x	x				x			x			

Goals = University of Michigan goals statement; 3HB = Handbook for 3rd year medical students; 4HB = Handbook for 4th year medical students; MGIM = Attending guide for teaching internal medicine to medical students; F1–4 = Faculty 1–4; HOA = House Officer Association Contract; BR = Brochure for resident recruiting; ETH = Written ethics curriculum; CR = Chief residents' policies and procedures manual; HO = House officer's policies and procedures manual; RGIM = Attending guide for teaching internal medicine to residents.

to provide continuous care at the University-designated training sites, or if it interferes with the educational nature of the residency. "Service," as a value, appears much more important at the local than the global level.

The concept of appropriate interprofessional behavior stands out among the recommendations for residents as the most commonly mentioned value. While it is also found in the goals statement of the medical school, it takes on added emphasis in the residency years. One of the educational administrators commented about the types of values he thought were being taught, of which he did not approve: "Other values that are being communicated that I don't like; sometimes I see people picking away at different members of the team, the sub-specialists undermine the generalists, the generalists undermine the subspecialists, that I don't particularly like."

Interprofessional behaviors are addressed in a few of the global recommendations, but the depth and amount of interest in these behaviors increases in the move from the global to the local curriculum.

Comparing the values recommended with those taught, both accountability and compassion were both frequently recommended and frequently taught. Self-policing, the importance of public health, and integrity were less emphasized in the taught curriculum than in the recommended. Interprofessional respect and the importance of "service" were important in the recommended curriculum, but taught as interprofessional disrespect and as the burden of service. The importance of industry (working hard) was not found in the recommended curriculum, but was frequently identified in the taught curriculum.

Table 3. The Taught Curriculum

Value	Number of Excerpts Containing This Value (%)
Honesty	13 (7%)
Accountability	25 (14%)
Compassion	20 (11%)
Service	30 (16%)
Industry	21 (12%)
Interprofessional	48 (26%)
Public health	3 (2%)
Self-policing	3 (2%)

DISCUSSION

This textual analysis provides new insights into the teaching of values in medical education. Among the values most frequently recommended or taught, accountability and compassion are consistently present across the curriculum. Other values are recommended but not taught

Table 4. Curriculum Comparison

Value	Recommended			Taught
	Global	Local: Student	Local: Resident	
Honesty	++	++	+	+
Accountability	++	++	++	++
Compassion	++	+	++	++
Service	+	−	++	++*
Industry	−	−	+	++
Interprofessional	+	+	++	++*
Public health	++	+	+	−
Self-policing	++	++	+	−

++ = Strongly present in these documents; + = minimally present in these documents; − = mostly absent in these documents; * = present, but taught as the converse value (see text for full description).

(honesty, public health, self-policing), taught without recommendation (industry), or recommended and taught as the reverse (interprofessional disrespect and the burden, rather than the duty, of service). For curriculum analysts, this is a familiar refrain: Curricular recommendations are often modified "behind the classroom door" (29). Thus, one reason that medical students are not learning the intended norms of the profession is that they are not receiving a consistent message about the values they are expected to learn.

Why are some values recommended, but not taught? Honesty is a global recommendation, but was seldom mentioned at the resident level and rarely taught in clinical medical education. Is it less important than other recommended values? Is it only taught if there is a breach of honesty identified? Is honesty taken for granted at this level of training? This study does not provide an answer to these questions, but simply makes clear the infrequency of the teaching of this important value.

Why are some recommended values explicitly contradicted in clinical teaching? Teaching about the importance of positive interprofessional relationships and the importance of service takes in a direction that is opposite from the recommendations. It seems unlikely that teachers intended to be hostile to other professionals, or desired to complain about the burdens of medical service. Perhaps they either do not recognize the messages they are sending to students, or are frustrated by competing demands and do not intend to espouse such norms of behavior. Perhaps this discordance appears because teachers are unaware of the recommended curriculum, perhaps because they are too busy with other priorities, or perhaps because they think the teaching of values is less important than knowledge or skills.

It is entirely possible that the recommended values were taught in ways that could not be captured on tape, since it can be argued that everything that happens in the hospital environment is potentially educational. This study concentrated only on the taught curriculum through sentences, because their meaning is much less ambiguous than trying to interpret a movement of the hands or a burst of laughter. In addition, only the words people spoke were studied—not the silent washing of hands that could teach cleanliness nor that leaving a chart open on a counter could teach a student it is acceptable to breach patient confidentiality. There are structural elements of the curriculum that could teach such values, such as passwords used to access computerized data on patients; these elements were clearly absent in this study.

The teaching of professionalism is expected to be an equal partner in the triad of knowledge, skills, and values that medical schools intend to teach. The recommended curriculum of medical education clearly states these goals. Less well understood is whether these values are taught. It was encouraging to identify two of the most important values—accountability to patients and compassion—as not only recommended, but also frequently taught. More troubling is the finding that some recommended values are ignored, and some are contradicted in the course of clinical medical education. The challenge for the teachers of tomorrow's physicians is to develop a greater understanding ways to ensure that the values we intend to teach make it through the classroom and into the minds and hearts of our students.

ACKNOWLEDGMENT

The author thanks the members of the Department of Internal Medicine, and the housestaff at the University of Michigan for their willingness and enthusiasm to participate in this research. Thanks also to Larry Cuban, Elliot Eisner, Kelley Skeff, Lee Shulman, Deb Odom Stern, and Jim Woolliscroft for their guidance and critique throughout this research effort.

REFERENCES

1. Maletz FW. The oath, the art, the caring. *Conn Med.* 1989;53:431–432.
2. Association of American Medical Colleges. *Physicians for the Twenty-first Century: The GPEP Report.* Washington, DC: The Panel on the General and Professional Education of the Physician and College Preparation for Medicine; 1984.
3. The Commonwealth Fund. *Prescription for Change.* New York: The Task Force on Academic Health Centers; 1985.
4. Marston RQ, Jones RM. *Medical Education in Transition.* Princeton, NJ: The Robert Wood Johnson Foundation; 1992.
5. Rogers D. Clinical education and the doctor of tomorrow: an agenda for action. In: *Clinical Education and the Doctor of Tomorrow.* Proceedings of the Josiah Macy, Jr., National Seminar on Medical Education. New York: The New York Academy of Medicine; 1989.
6. *Code of Ethics.* Chicago: American Medical Association; 1995.
7. Shem S. *House of God.* New York: Richard Merek; 1978.
8. LeBaron C. *Gentle Vengeance: An Account of the First Year at Harvard Medical School.* New York: Penguin; 1981.
9. Konner M. Becoming a doctor: a journey of initiation in medical school. New York: Viking; 1987.
10. Becker HS, Geer B, Hughes EC, Strauss AL. *Boys in White: Student Culture in Medical School.* Chicago: University of Chicago Press; 1961.
11. Merton RK, Reader GG, Kendall PL. *The Student Physician: Introductory Studies of the Sociology of Medical Education.* Cambridge, Mass: Harvard University Press; 1957.
12. Conrad P. Learning to doctor: reflections on recent accounts of the medical school years. *J Health Soc Behav.* 1988;29:323–332.
13. Fox R. Training in caring competence: the perennial problem in North American medical education. In: Hendrie HC, Lloyd C, eds. *Educating Competent and Humane Physicians.* Bloomington, Ind: Indiana University Press; 1990:199–216.
14. Bulger RJ. The impact of the educational system on the development of the modern Hippocrates. In: Hendrie HC, Lloyd C, eds. *Educating Competent and Humane Physicians.* Bloomington, Ind: Indiana University Press; 1990:83–93.

15. Jackson PW. The student's world. *Elementary School J.* 1966;66(7): 345–357.
16. Eisner E. *The Educational Imagination: On the Design and Evaluation of School Programs.* New York: Macmillan; 1985.
17. Hafferty FW, Franks R. The hidden curriculum, ethics teaching, and the structure of medical education. *Acad Med.* 1994;69:861–871.
18. Dreeben R. The unwritten curriculum and its relation to values. *J Curric Stud.* 1976;8(2):111–124.
19. Jackson PW. *Life in Classrooms.* San Francisco: Holt, Rinehart and Winston; 1968.
20. McNeil LM. Negotiating classroom knowledge: beyond achievement and socialization. *J Curric Stud.* 1981;13:313–328.
21. McNeil LM. *Contradictions of Control.* New York: Routledge & Kegan Paul; 1986.
22. Glatthorn A. *Curriculum Leadership.* Glenview, Ill: Scott, Foresman; 1987.
23. Lowes R. Swearing off the Oath. *New Physician.* 1995;44(3):12–16.
24. *Project Professionalism.* Philadelphia: American Board of Internal Medicine; 1995.
25. Stobo J, Blank L. Project professionalism: staying ahead of the wave. *Am J Med.* 1994;94:i–iii.
26. *Graduate Medical Education Directory, 1995–6.* Chicago: American Medical Association; 1995.
27. *Handbook for Prospective Residents.* Ann Arbor, Mich: University of Michigan, Department of Internal Medicine; 1995.
28. Stern DT. A method for assessing professional values in medical education. *Acad Med.* 1996;70:S37–S39.
29. Cuban L. How teachers taught: constancy and change in American classrooms, 1890–1980. 1st ed. *Res Teach Monogr Series.* 1984.