Articles

# Role Modeling in Medical Education

JAMES B. REULER, MD, *and* DAVID A. NARDONE, MD, *Portland, Oregon*

**Role models play an important part in determining how medical trainees mature professionally. Demonstrating clinical skills at the bedside is the most distinctive characteristic of an effective role model. We discuss how role modeling affects professional identity and career choice and offer several suggestions for improving medical education, including the need for leaders to change the educational climate and culture. If implemented, these changes would enhance our ability to provide medical students with positive role models.**

(Reuler JB, Nardone DA: Role modeling in medical education. West J Med 1994; 160:335-337)

American medicine and medical education are increasingly criticized for failing to meet the primary health care needs of patients and society. One cause of this shortcoming may be a relative lack of positive faculty models for students and residents. Although recent literature supports the importance of role models in medical education,[1,2] many physicians who teach do not seem to know how to effectively carry out this facet of their responsibilities. We briefly describe role modeling and its place in academic medicine.

## Defining Role Models

Distinction should be made between mentors and role models. Mentors are older persons in an organization who take younger colleagues under their wings and encourage and support their careers. The mentor and protégé relationship is more continuous and complex than that of a role model. Mentors serve as friends and career guides promoting research and other academic activities, as information sources about expectations and strategies for advancement, and as intellectual guides providing collaboration on projects.[3] A mentor is an important transition figure who helps advance a protégé's personal growth and professional development, providing vision while helping the protégé to develop his or her own vision.[4]

A role model teaches primarily by example and helps to shape professional identity and commitment through promoting observation and comparison. Unlike mentors, role models may have only brief contact with physicians in training and do not so much deliberately mold students as inspire by their own conduct. Professional achievement, personality, power, influence, lifestyle, and values may all determine the influence a teacher has on a student.

Studies of outstanding clinical teachers reveal that those who interact skillfully with patients, providing supervision and demonstrating expertise at the bedside were more likely to receive high ratings from medical students.[5] In a study of an inpatient medical service, students judged attending physicians more on their clinical abilities as generalists than as subspecialists.[6] Other positive factors include self-criticism, assuming responsibility, recognizing limitations, humility, respect, and sensitivity for patients and trainees, and a wholesome sense of humor.[7,8]

## Role Models in Medicine

Why is it important to discuss role models in medicine? Beyond the practical need to meet the call for more primary care physicians lies the ethical question of whether the issue of medical student abuse ought to be formally addressed.[9] This increasingly recognized phenomenon often involves negative comments about a trainee's career choice and thus sows self-doubt and confusion among students who may wonder, in the face of their own mistreatment by instructors, whether humanitarian impulses have a place in medicine.

Role models also play a substantial part in determining how students handle the transition from college graduate to practicing physician; how, in other words, they become socialized into the world of medicine. Each year of medical training raises new challenges, beginning with the need to feel comfortable talking and listening to patients, progressing to touching them, and ultimately to accepting responsibility for life-and-death decisions. At a time when the scientific mission of academic medicine seems to outweigh its commitment to the needs of individual patients and society as a whole, physicians who teach have the potential to rectify this imbalance by setting an example for students.

Not everyone agrees on the influence of role models. People differ in the degree to which modeling guides their behavior, determined in part by characteristics of the models and attributes of the trainees.[10] As more women and older students enter medical school,[11] it is legitimate to ask if faculties as they exist now can understand the needs of medical students and residents. Studies suggest

From the Medical Service, Ambulatory Care Program, Department of Veterans Affairs Medical Center, and the Division of General Medicine, Oregon Health Sciences University School of Medicine, Portland.

Reprints not available.

that women may attach more importance than men to an interested role model and that they respond more to teachers who integrate professional and personal responsibilities.[12] The influence a role model has depends not only on observation, but also on the degree of similarity perceived by the student, raising the issue of what effect the preponderance of men among faculty members has on women students.[13]

Questions exist about the effect role models have on developing values. One investigator found that technical skills and knowledge were emphasized much more than values and that students and faculty differed in their values and attitudes.[14] An Israeli study found that teachers exerted little influence on students' values, concluding that models may merely reinforce views held at the start of training.[15]

What role do models play in the choice of a career? In the 1988 Association of American Medical Colleges (AAMC) graduation questionnaire, students deciding on internal medicine were most attracted by the intellectual and diagnostic challenge it presented, whereas those entering other specialties cited patients, work hours, and role models as being more important.[16] Are students going into internal medicine disillusioned with the residents, faculty, and practicing physicians who served as role models for them? The 1990 AAMC survey highlighted this issue, stating that students stayed away from internal medicine mainly because of the types of patients—elderly, chronically ill, terminally ill, self-abusing—and the perception that medical residents and internists are dissatisfied.[17] A recent study at our medical school (Oregon Health Sciences University, Portland) found a moderate effect of role modeling on specialty choice.[18] Of students selecting internal medicine, 70% identified a faculty member who had a positive influence on their choice; of those entering pediatrics and family medicine, 12% named a member of the faculty and 56% a community physician. Of those deciding on emergency medicine or anesthesiology, however, 33% identified an internist with whom they had an interaction so negative they decided to avoid a career in internal medicine. Of these negative role models, 60% were residents and 40% were faculty members.

## Future Directions

As we look to the future, how should we think about role modeling? First, as others have noted, medical education is no longer the major activity of American medical schools.[19] Despite findings in the General Professional Education of the Physician report that general education continues to decline,[1] most medical schools still have not taken steps to correct deficiencies. To address this problem, we must reframe institutional goals, making education of students once again the highest priority of medical schools. This will require changing the basic culture of academic medical centers and restructuring financial resources. Leaders of institutions must clearly articulate the rationale for such change.

Excellence in clinical care must assume a higher place in our values.Too often there is a small, seemingly random chance that a medical student will be assigned to an effective and positive role model. Senior faculty practitioners should be organized into cadres of role models and be given incentives to invest the time and effort needed to fulfill this part of their duties. We can recognize teaching excellence in clinical medicine as a valued academic function by restructuring promotion and tenure guidelines.[20] In some institutions, this may be best accomplished by developing a two-track system, one in which faculty members are financially supported and evaluated based on research productivity and grants and a second that rewards effective teaching, investment in clinical activities, and curriculum development.

Those in leadership positions must acknowledge that role models may be negative as well as positive. If faculty development and personal counseling do not alter the conduct of those perceived to be negative role models, then that privilege should be withdrawn, other duties assigned, and financial support reconfigured.

We need to rethink where and how clinical medicine is taught. Is a hospital affiliated with an academic medical center the most appropriate atmosphere in which to train physicians? Professional growth, particularly at the student level, should include exposure to a mix of patients and problems typical of a community, not of the narrow focus of faculty practicing in a tertiary medical center. Highlighting medicine as a social good and acting with this in mind may help provide students with a stronger and more relevant foundation for practice. We should also strive to create a less stressful environment for residents in an effort to encourage them to serve as positive role models.[21]

Medical schools must respond to the needs of an increasingly diverse group of trainees by appointing clinical teachers more representative of the student body.[22-24] They should be given leadership positions and assisted in obtaining academic promotions. It must be recognized that the predominance of white men on the faculty of many medical schools may contribute to the stress that many female or minority medical students and residents feel.

Teachers of medicine should reaffirm the enormous influence role models have on education.[1,25] Positive role models pass on perspectives that may have broad and long-term effects for both patients and physicians.[25] We must be constantly aware that our behavior and attitudes influence students at all levels and that only through concerted effort, demonstrated at the bedside,[26] can we change their behavior and attitudes.

### REFERENCES

1. Barondess JA: The GPEP [General Professional Education of the Physician] report: III. Faculty involvement (Editorial). Ann Intern Med 1985; 103:454-455

2. Resident Services Committee, Association of Program Directors in Internal Medicine: Stress and impairment during residency training: Strategies for reduction, identification, and management. Ann Intern Med 1988; 109:154-161

3. Sands RG, Parson LA, Duane J: Faculty mentoring faculty in a public university. J Higher Educ 1991; 62:174-193

4. Schapira MM, Kalet A, Schwartz MD, Gerrity MS: Mentorship in general internal medicine: Investment in our future. J Gen Intern Med 1992; 7:248-251

5. Irby DM, Ramsey PG, Gillmore GM, Schaad D: Characteristics of effective clinical teachers of ambulatory care medicine. Acad Med 1991; 66:54-55

6. Mattern WD, Weinholtz D, Friedman CP: The attending physician as teacher. N Engl J Med 1983; 308:1129-1132

7. Irby DM: Clinical teacher effectiveness in medicine. J Med Educ 1978; 53:808-815

8. Barnes RH: 'You have a good sense of humor. You should be a doctor.' Pharos 1991 Fall, pp 27-29

9. Baldwin DC Jr, Daugherty SR, Eckenfels EJ: Student perceptions of mistreatment and harassment during medical school—A survey of ten United States schools. West J Med 1991; 155:140-145

10. Bandura A: Social Learning Theory. Englewood Cliffs, NJ, Prentice-Hall, Inc, 1977

11. Bickel J: Women in medical education—A status report. N Engl J Med 1988; 319:1579-1584

12. Gilbert LA, Gallessich JM, Evans SL: Sex of faculty role models and students' self-perceptions of competency. Sex Roles 1983; 9:597-607

13. Gilbert LA: Dimensions of same-gender student-faculty role-model relationships. Sex Roles 1985; 12:111-123

14. Caplovitz D: Student-Faculty Relations in Medical School—A Study of Profession Socialization. New York, NY, Arno Press, 1980

15. Shuval JT, Adler I: The role of models in professional socialization. Soc Sci Med 1980; 14A:5-14

16. Babbott D, Levey GS, Weaver SO, Killian CD: Medical student attitudes about internal medicine: A study of US medical school seniors in 1988. Ann Intern Med 1991; 114:16-22

17. Schwartz MD, Linzer M, Babbott D, Divine GW, Broadhead E: Medical student interest in internal medicine—Initial report of the Society of General Internal Medicine Interest Group survey on factors influencing career choice in internal medicine. Ann Intern Med 1991; 114:6-15

18. Hickam DH, Markin CJ, Elliot DL: Influence of faculty role models on medical students' career choices (Abstr). Clin Res 1992; 40:599A

19. Abrahamson S: The state of American medical education. Teach Learn Med 1990; 2:120-125

20. Greganti MA: Where are the clinical role models? Arch Intern Med 1990; 150:259-261

21. Hartley C, Filarski K, Elliot D, Hickam D: Does role modeling relate to career choice? (Abstr). Clin Res 1993; 41:567A

22. Levinson W, Tolle SW, Lewis C: Women in academic medicine—Combining career and family. N Engl J Med 1989; 321:1511-1517

23. Levinson W, Kaufman K, Clark B, Tolle SW: Mentors and role models for women in academic medicine. West J Med 1991; 154:423-426

24. American College of Physicians: Promotion and tenure of women and minorities on medical school faculties. Ann Intern Med 1991; 114:63-68

25. Irby DM: Clinical teaching and the clinical teacher. J Med Educ 1986; 61(part 2):35-45

26. Linfors EW, Neelon FA: The case for bedside rounds. N Engl J Med 1980; 303:1230-1233

* * *

## MY MOTHER READING, GOING BLIND

Leaning toward the light like a tree
my mother holds an armful of crows
that fly up from the page to perch
on her hands, rove across her
rounded shoulders. She doesn't wince
when a bulging shadow scratches
her neck or when the corn-thief
cries deep in her ear.
With a magnifying glass, she examines
claws and feathers and beaks,
lingering over them.
When she's done and closes the book,
removing the thick glasses
that hide her eyes, the birds
vanish in a stream of smoke.
*Don't worry,* I can almost hear her say,
*I see what I want.* She turns,
her gaze falling over stacks of letters
and dusty photographs, blurry piles
scattered at her feet.

FRANCINE STERLE©
*Iron, Minnesota*