Teaching Models in an Ambulatory Training Program

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Ambulatory care training is increasingly important in internal medicine. Such training centers on the practice where residents and faculty see their patients; thus, features of the practice model influence what residents learn. A resident–faculty group practice affiliated with a division of general internal medicine has many advantages. In such a practice, learning centers on resident–patient interactions, around which a comprehensive teaching program must be built. Major features of such a program include the mentoring of residents by faculty who work with them longitudinally and the presence of a well-balanced structured curriculum addressing clinical and nonclinical topics related to patient care. Teaching residents to interact and communicate with patients is crucial; approaches include role-modeling by faculty, use of videotaping, and role-playing and other innovative methods. Feedback is integral to learning and helps shape the attitudes and values that permeate residents' practices. Key words: *ambulatory care; education; residents; interpersonal skills; teaching models.* J GEN INTERN MED 1990; 5(supplement):S15–S26.

INCREASED AMBULATORY TRAINING is now necessary for all internists. What internists do — manage problems such as hypertension, diabetes, and coronary artery disease — now occurs largely in the outpatient setting.[1-4] Equally important, a comprehensive, well-designed ambulatory training experience is needed to help residents become the physicians we envision — consummate, compassionate clinicians.[5-7]

Challenges facing medicine today require new attributes in physicians.[8, 9] In addition to careful history-taking, attention to detail, a fund of clinical knowledge, and the ability to care for hospitalized patients, today's internists need grounding in decision theory in order to weigh benefits and risks of new treatments, including those that alter risk factors in currently healthy people.[10-13] They need more knowledge of clinical epidemiology and natural history of diseases in order to know when to apply costly, powerful new technologies.[5, 8, 14, 15] They need special sensitivity to and understanding of medical ethics to help in deciding how to care for chronically and terminally ill patients.[16-19] Finally, our understanding of physicians' ability to communicate with patients, build rapport, elicit patients' perspectives, and provide support, education, counseling, and guidance is increasing,[20-22] and we expect internists to master these skills. For several reasons — not least that the faculty working in these areas have been attached mainly to the divisions of general medicine formed in the late 1970s and early 1980s[23] — much of what is listed above is now best learned in the ambulatory setting.

This paper deals with teaching models for ambulatory training programs. It discusses how, building on practices in ambulatory care, programs can teach items such as clinical skills, clinical reasoning, doctor–patient communication, ethics, and patient education and counseling, as well as promoting residents' growth as physicians. The dominant model to be presented — group practice associated with a division of general internal medicine — is discussed in detail. Although many of the 440 residency programs in internal medicine in the United States use other models for ambulatory care and training, the methods of providing care and teaching in group practice programs are highly evolved and applicable to other types of programs.

Medical training has two major aspects. First, it includes learning by doing. Largely, such learning encompasses knowledge and skills. But second, medical education must also help physicians develop the ability to solve problems, communicate with patients, understand patients' concerns and perspectives, and be teachers and role models. This aspect of medical education requires addressing values and attitudes as well. This paper explores ways to incorporate both aspects of medical education into ambulatory care and teaching programs.

THE DESIGN OF AN AMBULATORY TRAINING PROGRAM

First and foremost, establishing a program requires meticulous attention to every detail of the clinical practice and resident–faculty interactions. For each aspect, one must ask what residents will learn by doing things in a certain way. Many features should be considered. How will patient care be delivered? Who will the faculty be? How will faculty work together and with the residents? How will residents be selected and assigned to the program, and how will their learning be fostered?

The Group Practice

Most teaching practices in academic medical centers evolved from medical clinics that were organized to care for indigent patients. These clinics, which often were staffed by part-time, voluntary faculty, passed through intermediate stages in the 1960s and 70s before the currently dominant model, that of a faculty–resident group practice, arose. In the "old clinic," the resident usually saw patients without appointments while assigned to several months of a clinic

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rotation. In a newer model, the resident saw a given group of patients by appointment on clinic afternoons throughout the two or three years of training,[24] and full-time faculty attended clinic sessions. The current faculty–resident group-practice model has many variations but entails residents' seeing their patients with and alongside the faculty practicing in the setting.[25-27] Thus, faculty are partners and role models as well as teachers. When faculty members practice with the residents, amenities such as patients' access to care, record-keeping, promptness of care, retrieval of laboratory data, the appointment system, and secretarial and nursing support, which are important if residents are to take practice seriously and deliver high-quality care, tend to improve. The model also facilitates collaboration of residents and faculty in caring for patients.

Because of this history, many ambulatory teaching programs are affiliated with teaching hospitals. Sometimes, however, teaching has been moved into the community. For example, at Harvard, primary care residents train with faculty at Harvard Community Health Plan, a large community-based health maintenance organization.[28] In family medicine, outpatient training usually occurs in model family practice units in the community.[29] A residency program in pediatrics includes month-long teaching modules in day-care centers, public health departments, police departments, and other community sites, so that residents can better understand normal as well as abnormal child development and make better use of community resources.[29]

A resident–faculty group practice affiliated with a teaching hospital has major advantages. Centralizing care in one institution encourages residents to participate actively when their patients are hospitalized, seen for emergencies, or referred to other providers. Over time, a coherent, comprehensive teaching program, drawing on the strengths of the institution and its faculty and on the relationship that develops between residents and faculty in the practice, can be built around the outpatient practice. Furthermore, upgrading the clinics provides indigent patients with excellent medical care focused on their needs, and residents need to see patients from a mixture of socioeconomic backgrounds in order to have a well-balanced training program. Residents become personally committed to providing care to these patients in this model, and they can remain involved for several years or more.

Residents also learn interpersonal and management skills by working in the practice. The widely used team approach, in which the practice is divided into small units, can foster this learning. The typical team —which includes residents, staff physicians, a nurse practitioner or other nurse, a social worker, a nutritionist, and secretaries and nurse's aides — meets regularly (preferably with coffee and pastries) to discuss issues related to managing the unit and to solve problems. Patients perceive their care to be delivered more personally when the practice is divided into small units; they find it more efficient and satisfying to relate to one secretary, nurse practitioner or other nurse, and nurse's aide. Presence of a nurse practitioner or physician's assistant on the team compensates for residents' being unavailable at times. Existence of the team facilitates residents' working with social workers, nutritionists, and others who provide support for dealing with clinical problems. A theoretical understanding of working with others in small units, provided by conferences or a series of seminars on management skills (see below), supplements this experience of the residents.

The Faculty Group

Building the faculty group around the practice achieves various goals. If all faculty members — whether present for one, two, or several or more half-day sessions per week — share the practice site, all become invested in making the practice and teaching program work and in working together. This sets a good example for residents and insures that residents take seriously and respect patient-care efforts by faculty. Faculty who are teachers of outpatient medicine can appropriately form such a practice whether or not a fully organized division of general internal medicine exists at the institution. A well-balanced faculty group includes most importantly clinician–educators who see patients and teach regularly. It may also include faculty members engaged chiefly in research, usually in areas such as clinical epidemiology, health policy, and patient–doctor communication. These faculty may practice less often but should be part of the practice. Other roles of generalist faculty often include educating housestaff and medical students, administering fellowship programs in general medicine, running emergency and walk-in clinics and employee health clinics, and administering ambulatory care programs in the hospital. A well-balanced faculty group provides ambulatory care and teaching, contributes to leadership in the department of medicine, hospital, and medical school, and does productive research, although one individual cannot easily contribute heavily in all three areas.

The Residents

Primary care residencies were initiated in the early 1970s for applicants interested in primary care careers.[30] These programs have expanded, and some, including the General Internal Medicine Program at Brown University and Rhode Island Hospital, now have more residents than the accompanying traditional residency does.[29]

As noted above, compelling arguments exist for providing substantial ambulatory care training to all internal medicine residents. This is now done at Brigham and Women's Hospital.[5] Our experience suggest that during their three years of residency, residents should be assigned to at least three or four one-month

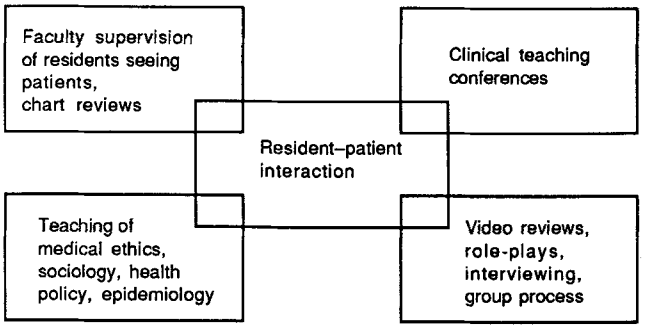

FIGURE 1. Aspects of a teaching program in ambulatory care.

blocks of primary care training in addition to weekly continuity clinics. The blocks allow undistracted learning;[31, 32] residents' learning curves rise continually for at least three or four months.[33] Although the optimal amount of time for ambulatory training has not been established, many primary care residency programs include substantially more than three or four months of outpatient blocks (e.g., up to 14 months during three years of training[34]). Our program concentrates its ambulatory blocks in postgraduate year 2, whereas residency tracks specifically devoted to primary care training begin the blocks in postgraduate year 1.[29] Although we have not found ambulatory blocks in postgraduate year 1 to be essential, starting in postgraduate year 1 gives the faculty more access to residents early in training, which may promote more positive attitudes toward ambulatory care.

The Teaching Program

A difficulty in ambulatory medical education is that of supervising residents as closely as on an inpatient service, where fewer patients are seen and every patient is evaluated by several people. Many outpatients see only the resident, although the resident often "presents" the case retrospectively to an attending physician. Time in such a setting can amount to little more than moonlighting unless a comprehensive, structured teaching program (Figure 1) is built around the patient-care experience.

Ambulatory case conferences and chart reviews also differ fundamentally from traditional inpatient attending rounds. The latter are built around single cases; the attending helps students and residents relate the history, physical examination, and laboratory tests to pathophysiology and establish a diagnosis and plan for treatment. In contrast, the case conferences or chart reviews that follow ambulatory patient-care sessions usually involve discussing many cases, the evaluations of which often have not been completed. Discussion often focuses on problems at hand; for example, faculty might ask what issues residents need help with, pose questions for them to read about and report back on, or poll the group of residents for opinions on how to manage a patient's problem.

Because in the ambulatory setting time for teaching is limited, and case presentations occur when available information is limited, other components of the teaching assume major importance. Effort should be made to ensure that learning encompasses all aspects of care. Emphasis should be placed on critical reasoning that draws on pathophysiology, clinical epidemiology, knowledge of cost-effective patient management, and interpersonal relationship-forming skills.

Two aspects of ambulatory teaching may, however, more than compensate for its deficits. First, the relationship between residents and faculty is longitudinal, allowing mentoring to occur. Second, opportunity exists for a structured curriculum systematically covering all aspects of care. Thus, presenting cases from charts can and should be one of various interrelated learning activities, not the centerpiece of teaching, as attending rounds often are in the inpatient setting.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:00 am	Teaching conference	Journal club	Teaching conference	Teaching conference by residents	Presentation of cases to faculty
9:00 am	Seeing patients	Seeing patients	Seeing patients	Seeing patients	Seeing patients
11:30 am	Review of cases	Review of cases	Review of cases	Review of cases	Review of cases
12:30 pm	LUNCH				
1:30 pm	Dermatology clinical session	Seeing patients	Gynecology clinical session	Teaching of doctor–patient communication skills	Orthopedics clinical session
4:30 pm		Review of cases			
5:00 pm					

FIGURE 2. Typical weekly schedule of an internal medicine resident during a one-month block of primary care.

The curriculum may include: 1) daily teaching conferences systematically covering the most important clinical problems of outpatients; 2) regular supervision and mentoring of residents by faculty; 3) sessions to review residents' cases; 4) opportunities for residents to work with specialists in fields such as dermatology, orthopedics, and gynecology, which graduates of internal medicine residency programs have consistently identified as receiving too little emphasis[35, 36]; 5)work with medical subspecialists; 6) learning of interviewing, communication and patient education skills, along with study of psychosocial issues important to patient care; and 7) teaching in nonclinical areas relevant to medical practice (e.g., medical ethics and sociology, quantitative skills, clinical decision making, medicolegal issues, teaching technique, use of computers, and practice management), which recent graduates also have identified as underemphasized.[34, 36] Figure 2 shows how the work week for residents can be structured to include a teaching program.

Summary

Outlined above is a design for internal medicine residency training in ambulatory care. The training centers on patient care in a group practice shared by faculty and housestaff. Excellent, single-class care is delivered to all patients. Residents spend undistracted blocks of time in the program, during which attention is given to obtaining requisite knowledge, skills, values and attitudes, not just seeing patients independently in the ambulatory setting; however, the teaching program is built around residents' seeing patients. The purpose is to capitalize on opportunities for residents to learn in this setting by having them work closely with faculty and by providing a structured comprehensive curriculum. Components of the learning experience are discussed below.

COMPONENTS OF THE LEARNING EXPERIENCE

Learning while Seeing Patients in the Practice

As they see patients, residents develop habits that determine the clinical reasoning processes, ways of communicating with others, sensitivity to patients' concerns, thoroughness and reliability of examination, and test-ordering patterns that will characterize their practices. They do so under the particular conditions of outpatient settings: high patient autonomy, low certainty in decision making, greater emphasis on care and management than on diagnosis and treatment, and lower probability of serious disorders than in inpatient settings.[37] Like all doctors, in order to see enough patients in the allotted time, they must be selective in evaluating each patient. Yet patient encounters are at the heart of residents' learning. Residents must learn to recognize and treat common complaints, to evaluate and manage chronic illnesses, to incorporate health promotion and disease prevention into their practices, and to use diagnostic tests and consultants appropriately. They must learn about the community and cultural context of illness, as well as patients' explanatory models. And they must learn to educate patients about their illnesses and to counsel them about alcohol, cigarette smoking, sexuality, and other issues. Meanwhile, residents adopt styles that determine how after residency they will use their knowledge in problem solving, interact with others, and manage their practices.[38]

Residents' practices should be organized so that residents encounter enough patients to have broad experience but have time to think, relate to others, apply intricate skills, and explore patients' concerns. Thus, for a resident we schedule six or seven patients per half-day session. Before and after these sessions, we schedule teaching exercises that center on the patient–resident interaction. Examples include not only presentation of cases from the session but also weekly formal presentation of cases (including results of radiographic and laboratory studies) to faculty, monthly presentation of selected cases to an ethicist, and review of videotapes of residents' interactions with patients (see Figure 2). These case-based learning exercises stimulate residents to obtain and apply advanced knowledge and skills, and they help ensure that residents are constantly challenged to expand their cognitive and interpersonal abilities while they practice.

Learning from the Faculty

As they practice, residents learn from faculty in various ways. One way involves faculty members' checking and correcting residents' work. Can a resident distinguish a breast lump from a rib, recognize plantar warts, properly examine the hip joint, elicit patients' concerns and allay fears about side effects of medication? Such learning requires that faculty see patients with the residents. A second way that residents learn from faculty is by example. Residents readily perceive the attitudes of their teachers toward learning and patient care. Many of the attributes that students value most highly in teachers—enthusiasm for teaching, a student-centered approach, a humanistic orientation, the application of knowledge to problem solving, encouragement of students' active participation, and familiarity with the literature[38, 39]—are largely conveyed by the examples that one sets. The approach of the faculty to patients, especially with regard to physician–patient interaction and the provision of comprehensive care, is also conveyed by example. Faculty must be keenly aware that they set examples whenever they see a patient with a resident or discuss the approach to a problem.[37, 39-41]

Organizing the practice to provide close working relationships between residents and faculty is a formidable and important challenge. Obviously, it is here

that crucial three-way encounters of residents, faculty, and patients occur. The biopsychosocial model, if applied, must be applied here. Role-modeling elsewhere is undermined unless also done by faculty seeing patients with residents. But budgetary constraints exist, as faculty also are expected to see their own patients in the practice. Programs approach the problem of making teachers available in various ways. In one approach, a faculty member is relieved of patient-care duties while others practice. In a second approach, all faculty practice alongside the residents, but their schedules are cut back (e.g., from ten or twelve to six or seven patients per half-day session) to allow time for teaching. The former method has the advantage of guaranteed faculty availability but the disadvantage of inefficiency if for much of the time the faculty member is not seeing patients with residents. Practicing and teaching simultaneously, if the faculty person is not overwhelmed by doing so, can set a powerful example for the residents but risks unavailability of faculty at crucial moments when questions arise.

Although faculty in the outpatient setting may not have the luxury of spending entire mornings with residents, as they do on inpatient attending rounds, they have the important advantage of working longitudinally with the same resident or residents throughout the year. This allows programs to develop mentoring of individual residents by individual faculty members alongside whom they work. Such a system facilitates resident–faculty interaction around patient-management issues and also provides residents with role models and advisors. Having the faculty mentor admit the resident's patients to the hospital when necessary can facilitate having residents and faculty work jointly on providing comprehensive, continuous care.

Also, faculty members can spend less time as residents become more advanced. To influence residents maximally early in their training and help ensure quality of care, faculty should see patients with first-year residents and review their cases in detail. Later, as the residents gain more experience, they can function more independently.

Conferences

Table 1 lists examples of clinical topics in an ambulatory medicine curriculum. The most commonly encountered clinical problems in outpatient medicine have been identified[42-45] and can be systematically included. Table 2 lists examples of relevant nonclinical topics to include. The entire curriculum can be provided by giving each group of residents rotating through an ambulatory block the same sets of conferences, or parts can be provided by having all residents simultaneously take special blocks.

General internists usually present topics from a perspective emphasizing epidemiology, benefits versus risks of treatments, and the natural history of diseases. Subspecialists, however, tend to emphasize pathophysiology and the use of newer diagnostic tests and treatments. Having conferences presented sometimes by generalists, sometimes by subspecialists, and sometimes by both together can be useful.

Didactic conferences are important in ambulatory training, as they provide structure and academic rigor.

TABLE 1

Examples of Clinical Topics to Include in an Ambulatory Care Curriculum

General medicine topics: spells and syncope, community-acquired pneumonias, preoperative evaluation of the surgical patient, occupational medicine, clinical geriatrics problems, management of hypercholesterolemia, hypertension, urinary tract infections, etc.
Gynecology: contraceptive methods, vaginitis and cervicitis, pelvic inflammatory disease, etc.
Orthopedics/Rheumatology: regional joint examinations, joint pain, management of rheumatoid arthritis and degenerative joint disease, etc.
Ophthalmology: ophthalmologic emergencies, "the red eye," cataracts, glaucoma, etc.
Ear, nose and throat/respiratory disease: oral lesions, hoarseness, hemoptysis, pulmonary function testing, asthma, etc.
Neurology: dementia, seizures, headaches, vertigo, transient ischemic attacks, etc.
Dermatology: rashes, tumors, eczema, skin infections, etc.
Adolescent medicine
AIDS and HIV-related diseases
Psychosocial skills and topics, physician–patient interaction: (via review of residents' videotapes), dealing with difficult patients, somatization and somatiform disorders, patient education, alcohol and drug abuse, etc.

TABLE 2

Examples of Non-clinical Topics to Include in an Ambulatory Care Curriculum

Basic quantitative methods: sensitivity, specificity, and predictive values; Bayes' theorem; decision analysis; cost–effectiveness and cost–benefit analyses; screening, incidence, prevalence, and lead time bias
Epidemiological methods: retrospective, case control, and prospective studies, randomized controlled trials, evaluation of diagnostic tests, evaluation of new therapies
Teaching skills: setting an agenda, giving feedback, role-playing
Medical economics: the economic framework for understanding health policy, DRGs, HMOs, IPAs and PPOs
Medical ethics: conflict between physicians' and patients' values and requests, respecting patients' autonomy, obtaining informed consent, do-not-resuscitate decisions, truth-telling, facing our mistakes
Leadership and management: analysis of roles, self-awareness, group leadership, dealing with conflict, developing a vision, ensuring commitment, winning trust, hospital and group practice structures, leadership strategies

We begin the day with a conference, so that our group meets together and achieves commonality and a sense of purpose before seeing patients (see Figure 2). Competency-based curricula can be used to insure that residents master a given base of knowledge and skills before graduating.[46] Learning objectives can be defined that are feasible to achieve. The objectives should be unequivocal (e.g., specify that the resident "recite," "solve," or "construct," not simply "know about," something[47]); if possible, they should refer to behaviors that are observable and measurable. Such goals or objectives aid in designing, directing, and evaluating a program, and they help to establish prerequisites for entrance. However, they tend to "gather dust" unless residents participate actively in defining and redefining them.[47] It has been pointed out that the process of setting goals and objectives is at least as important as the goals themselves.[47] Table 3 presents examples of learning objectives for residents and means to achieve them.

A systematic series of didactic conferences can provide all residents with a knowledge base. Residents can participate regularly in setting the goals and scheduling the conferences, and they can give some of the conferences.

The curriculum should follow principles of adult learning. Adult learners view themselves as self-directed. They probably function best within a problem-based curriculum. Such a curriculum specifies learning goals[47] but allows participants to set their own agendas, drawing on their past experiences and knowledge and working together as a group to solve problems.[39, 48-50] Problem-based curricula are now being adopted by medical schools.[51] Traditional rounds and clinical teaching conferences include some features of problem-based learning[52, 53]: they usually are based on a case, which entails solving a problem, the subject matter pertains to the tasks residents are expected to perform for their patients, lessons learned are immediately applied, and considerable interaction occurs between teacher and students. In the problem-based mode, however, learners take more responsibility for deciding what they need to learn, and the teacher is largely a facilitator or guide rather than the sole provider of knowledge. Experts can be called upon by the group. Currently, our approach to learning is hybrid, combining traditional teaching conferences, often given by subspecialists, with problem-based exercises where residents present cases for discussion or participate in group-learning exercises.

Conferences also fulfill purposes other than providing knowledge. Making some of the conferences a joint effort of residents and faculty encourages attitudes of mutuality, cooperation, and respect for open discussion. Having residents prepare and present some conferences encourages self-learning and taking responsibility for one's own educational needs.[39] A joint faculty–resident journal club where the methods used in studies are carefully scrutinized helps accomplish these goals and fosters a critical, analytic approach to the literature.

Specialty and Subspecialty Training

Because internists in general medical practice must deal with many problems outside "classic internal medicine," primary care residents need training in non-

TABLE 3

Learning Goals and Approaches to Achievement: Health Promotion and Disease Prevention as an Example

Goal	Approach to Achievement
1. Up-to-date knowledge of recommendations for *periodic health assessments*	1. *Lecture/discussion*
2. Familiarity with literature on *health promotion and disease prevention*	2. *Reading:* Frame and Carlson (1975), Breslow and Somers (1977), The Canadian Task Force on the Periodic Health Examination (1980), Medical Practice Committee of The American College of Physicians (1981), AMA Council on Scientific Affairs (1983), US Preventive Health Services Task Force (1987–89)
3. *Problem-solving abilities:* the resident will demonstrate sufficient proficiency in interpreting mammographic, Pap smear, and laboratory reports to make clinical decisions	3. *Series of conferences:* interpreting mammograms, interpreting abnormal Pap smears, interpreting laboratory results
4. *Physical examination skills:* the resident will demonstrate sufficient proficiency in performing breast and pelvic examinations to detect abnormalities	4. *Special exercises:* Each resident will examine breast models and will perform the pelvic examination on a live model under observation (Pap smear instruction to be given)
5. *Technical skills:* resident will demonstrate proficiency at performing routine sigmoidoscopy	5. *Clinical practice:* each resident will perform several sigmoidoscopies under supervision of a preceptor and/or GI consultant
6. *Patient education and counseling skills:* the resident will be sufficiently proficient to provide patient education and counsel patients about health-related issues during an interview	6. *Learning exercise:* under faculty supervision, residents perform role-plays addressing issued related to patient education and counseling about health-related items; principles of patient education are incorporated and practiced

medical specialities.[34, 42-45] Thus, during ambulatory training blocks, primary care residents typically spend some sessions each week at specialty clinics (Figure 2). Here they can see and care for ample numbers of patients with common specialty problems germane to primary care, and experienced supervisors are available. Specialties that are included in many programs, because they deal with clinical problems common in outpatients, are gynecology, orthopedics, dermatology, otolaryngology, proctology, and urology.[34]

Learning goals should be established in each specialty area.[46] Experience leads me to believe that the goals should include mastery of pertinent basic skills in history taking, in physical examination (e.g., pelvic and breast exams in gynecology, joint exams in orthopedics, prostate exams in urology), and in assessing and treating common complaints (e.g., hoarseness in otolaryngology and common skin lesions in dermatology). Conferences can supplement the clinical experiences (Table 1). Skills in performing procedures can also be acquired, but these skills atrophy unless the procedures are performed routinely.[36]

Outpatient training in medical subspecialties should be largely in areas such as endocrinology and rheumatology, which address clinical problems that now rarely necessitate hospitalization. A month-long block of training in which residents see patients referred to such subspecialties during several half-day sessions seems desirable. Including such experiences in primary care blocks allows residents to master outpatient subspecialty skills in the context of a program including patient-based continuity experiences, mentoring, and an organized curriculum applicable to subspecialty as well as general medical practice.

TEACHING DOCTOR–PATIENT COMMUNICATION SKILLS

Much of medical practice consists of verbal communication between doctor and patient. Thus, some programs offer special blocks of training in doctor–patient communication skills; a curriculum for teaching these skills has been developed.[54, 55] Other programs teach these skills during the regular blocks of ambulatory training. In either case, new teaching approaches with potentially wide applications are coming to the forefront in this important component of ambulatory training. These approaches should be thoroughly understood and used by program directors.

Videotaping

Videotaped interviews, usually reviewed with the residents by an internist and a psychiatrist, allow trainees to see themselves interacting with patients and to discuss the process of the interview.[56] We review tapes with residents in a group in which mutual respect and support, the giving of feedback,[57] and open discussion are carefully fostered.[58, 59] This approach encourages taking interviewing seriously, being open to having one's work reviewed, and relating to one's peers honestly but supportively. Establishing this atmosphere within the group helps to overcome the much-discussed resistance of medical residents to learning about psychosocially related topics.

Use of videotapes also fosters application of the biopsychosocial model of illness to each patient. We sometimes note a contrast between cases presented from the chart and those seen on video. On the latter, the patient's feelings and concerns about his or her family, symptoms, and social life become visible. The intricate interrelationships between the person, his or her family, his or her home life and occupation, and the disease can be seen. Residents can understand that much of what occurs between them and their patients relates to needing to deal with all aspects of illness. Faculty can perceive the clinical encounter realistically and can give advice pertaining to the actual situation.

In addition, videotaping permits viewing of the residents' actual work. Here, many underlying beliefs, values, and attitudes of the residents become visible; they can be discussed if approached sensitively. The following examples may illustrate these important points. A resident, asking a patient about possible angina pectoris, says, "Does your pain get ***better*** when you walk up a hill?" Our group discussed the possible implications of this question designed to mislead the patient. How will it affect the patient–doctor relationship? What are the limits of deception? Another resident, speaking to a middle-aged black woman who says she may quit her stressful job, advises her, "I think you should be working. I think work is good for your health." We discussed whether any unconscious bias was involved in offering this advice as opposed, for example, to exploring the patient's reasons for quitting. What if this has been an elderly white man? Would the resident have offered the same advice? (This resident would not.) How can we recognize and avoid unconscious biases? (Talking about them in the group helps. Another suggestion is to be especially respectful toward people who may be feeling stigmatized for any reason.) Finally, consider the case of a resident interviewing a patient having chest pain after coronary artery bypass surgery. The resident offers reassurance ("I think it is chest wall pain.") and volunteers to adjust medications ("Maybe you'd feel less tired on tenormin than propranolol?"), but the patient still seems distressed. We hear the patient say repeatedly, "I don't know what this is" or "I really don't know what's going on." The group discussed the importance of recognizing patients' requests and exploring their concerns. In this particular case we suggested asking the patient, "What do you think might be wrong? What are you worried about?"

Role-playing

Role-play was developed by Lewin as a method for changing behavior.[60] In this approach, people act out and examine behaviors that are affected by their beliefs and attitudes. They can see what they do, play around with it, and try different approaches.[58] Participants in role-play should be helped to recognize and critically examine their feelings and attitudes and to compare themselves with others. In one common exercise, a resident plays the role of one of his or her own "difficult" patients. The convincing accuracy and exuberance of the "actor" or "actress" in the exercise often suggests that the resident does indeed experience some things from his or her patient's perspective.

Role-plays have been used successfully in learning exercises about helping smokers to quit,[61] confronting denial in alcoholics,[61] dealing with AIDS patients,[59] and taking the sexual history,[61] all of which require residents to learn a new set of attitudinally affected behaviors pertaining to potentially sensitive issues. Skillful teachers also set up spontaneous role-plays at opportune moments. For example, after viewing the videotape described above where the resident advised his patient not to quit her job, a spontaneous role-play was for a teacher to play the role of a middle-aged white male patient, make the same statement, and note the difference in the resident's response. (Instead of giving advice, he asked what factors had led to considering quitting work.) In another successful role-play, the teacher simply asked a student about to interview an AIDS patient, "What if he says, 'It was terrible when I found out that I had AIDS,' how can you respond?" Practicing simply saying "That must have been hard for you" led to a remarkably successful interview by the student.

Interviewing Patients

Interviewing patients under guidance of a skillful facilitator can be a powerful learning experience. We sometimes take a group assigned to an ambulatory block, usually three to five residents and a teacher, to interview an outpatient or an inpatient. The interviewing exercise follows a simple format.[58] Residents discuss what they want to accomplish in the interview. Suggestions are made for how to proceed, one person volunteers to do the interview, and others are assigned to give feedback on specific parts of it. The interview itself may be as brief as 15 minutes. Considerable attention is paid to arranging the interview, requesting the patient's permission, and explaining the group's purpose. (A general principle is that setting the right example by being respectful and attentive to the patient is more important than accomplishing the interview itself.) After the interview, the group meets to discuss each aspect in detail, ask if learning goals were accomplished, and give feedback, asking the interviewer what he or she felt was done well and what he or she would like to have done differently. The exercise can be completed by asking the group what it learned and by giving the participants feedback on the teaching skills that they showed in the exercise.

Participants in these exercises come to recognize the importance of each detail of the interview, become aware of how they interact with and influence patients, learn to give and appreciate honest, specific feedback, and can be guided by the teacher to modify their behavior with patients. The respectfulness, attention to patients' comfort, understanding of patients' concerns, and other attributes fostered in the exercise are meant to carry over into practice.

This exercise, like others described above, is "learner-centered."[39] Residents define their own realistic learning objectives, systematically assess and provide feedback to each other on their performances, reward each other's successes, and remains sensitive, as does the facilitator, to the learning needs of each participant.

INFLUENCING VALUES AND ATTITUDES

A dilemma in medical education is that much effort goes into learning facts but rapid advances in medical knowledge soon render many facts obsolete. What then is accomplished? Certainly, skills such as interviewing patients and performing physical examinations do not rapidly become obsolete, and helping residents to master them is important. Fostering good attitudes and values also is important. The facts may change, but to value understanding them and keeping abreast of the literature remains worthwhile. So does basing one's practice on a rigorously thought-out, logically scientific approach. Other attitudes—of equal importance—concern the thoroughness of one's work, the accuracy and honesty of one's observations, consideration of cost in diagnostic and therapeutic decision making, availability to patients, respect for patients' autonomy, and understanding illness from patients' perspectives. I believe that good training programs must encourage, even demand, appropriate attitudes in these areas. I also think that programs should foster those characteristics generally considered desirable, such as empathy for patients, tolerance for others, and self-reflectiveness in one's work. Some approaches to teaching may help to accomplish this.

As emphasized throughout this paper, the milieu in which residents learn is important. The practice should be organized so that patients have access to their physicians, are seen on time, and are notified if results of tests are abnormal. Faculty members seeing patients with residents should introduce themselves respectfully, explain their roles, and provide opportunities for patients to ask questions and voice concerns. High-quality care should be provided to all patients, regard-

less of payor class. All of the learning exercises described above — ranging from didactic conferences, to residents' presentations of cases, to interviewing exercises at the bedside — can be used to promote proper attitudes. Role models are especially important, and thus setting up a faculty group practice should include giving generalists sufficient practice opportunities, support staff, rewards for teaching, and opportunities for academic advancement for them to be viewed as desirable role models.[62]

Group Process

Group process plays a key, though heretofore somewhat neglected, role in fostering values and attitudes in medical students and residents.[58] Its role is particularly apparent in the videotaping, role-playing, and interviewing exercises described above. Teaching conferences on medical ethics are another setting in which group process is important. In a conference where, for example, a resident presents a clinical problem with ethical implications to an internist and an ethicist, often absolute answers do not exist but the process of dealing with the issues is important. Here, individuals have opportunities to see how their views compare with those of the group. When residents ask tough questions such as "How do I deal with a manipulative drug addict?" "How should I present a do-not-resuscitate decision to a dying patient?" and "To what extent shall I share my own feelings with patients?" serious discussion and reflection by the group help to define, legitimize, and test ideas, aid in setting boundaries, and are supportive. Seeing how one's peers deal with the same issues, how they are affected similarly by them, and how they become able to cope with them helps residents navigate the difficult transition from student to physician. Facilitation of such a group is crucial to its success. The facilitator should be a role model and should skillfully establish a serious, safe atmosphere, without necessarily losing perspective or sense of humor.[59] The facilitator also must be skillful at encouraging participation and expression of ideas by all members of the group and managing conflict or disagreement within the group.

Group process is especially important because the values and attitudes applied to one's work are influenced by one's peers, coworkers, and teachers. Making one's feelings explicit and having others do so helps to shape one's values.

Teaching Medical Ethics

As noted above, medical ethics can be taught by having residents present their cases to an ethicist and an internist in a conference. Ethical traditions and principles and current court rulings may apply to the case. At least one faculty member needs particular expertise in patient–doctor communication, because solution of conflicts revolving around ethical issues often involves eliciting others' perspectives, gaining rapport and understanding, and negotiating to reach a mutually satisfactory course of action. Working on finding solutions to ethical problems in a group provides valuable learning to residents, who can test their ways of approaching problems and learn to be self-reflective and examine all sides of an issue.

Teaching Quality of Care

The practice should set the example of having a quality assurance program. Residents' participation is vital. Use of structured chart audits maximizes participation by providers. In one model, the group of providers, including residents, identifies an important clinical problem, agrees on explicit criteria for good care related to it, and meets to review charts that fail to meet the criteria. For example, charts of patients receiving digoxin and diuretics in whom serum potassium remains below an agreed-on level may be identified, and those lacking evidence of corrective action might be reviewed. Such review allows the group to assess the quality of care in each case (e.g., to decide whether unanticipated factors justified failing to correct hypokalemia). Appropriate feedback must be given to providers. Faculty members facilitating the quality assurance group need to set the tone of fairness, equal participation, openness to constructive feedback, and willingness to change. Many deficiencies in care will be found to reflect failures in the system, rather than failures by providers. Solutions often require organizational changes (e.g., use of reminder cards, better retrieval of laboratory data).

ADDITIONAL ASPECTS OF THE PROGRAM

Securing Financial Support

Incremental costs to set up a teaching program are needed at a time when physicians generally are under pressure to be more efficient and productive. A fully developed division of general medicine may receive half or more of its financial support from patient-care-derived funds and the rest from grants and hospital salaries. Collections must support faculty teaching time, as well as sufficient amenities and adequate support staff to make the practice a good example for the residents. Productivity by staff can be multiplied if residents' patients are billed; if, however, faculty therefore must sign the charts, then the patient–faculty interactions should be substantive, so that faculty members model providing high-quality, single-class care.

Establishing Esprit

Esprit is important in residency training. Structured steps can help to prevent residents in the ambulatory part of the program from feeling second-class. Such

steps include having all residents participate in the same inpatient rotations and share the same on-call responsibilities; protecting residents from other responsibilities, however, while they are in the ambulatory practice; making residents feel like partners in the practice; promoting a mentoring relationship between each resident and one member of the faculty; and providing a well-organized, scientifically-based curriculum. Faculty esprit is equally important. Measures to enhance it include providing reasonable job security, providing adequate amenities in the practice, recognizing the contributions of teaching and patient care in reviews for academic promotion, and respecting the clinical abilities of generalists (e.g., by giving them admitting privileges to the inpatient service, having them serve as ward attendings, and including them in grand rounds and other departmental activities).

Nurturing Teaching Skills

Mentioned above are non-traditional teaching approaches such as use of problem-based conferences, of videotapes and role-plays, and of group process. Many principles for using these approaches also apply to more traditional approaches, such as conducting teaching rounds, seeing patients with residents one-on-one, and reviewing residents' charts with them. Explicit attention to teaching skills of faculty, though rare, is needed to implement the new approaches and improve outpatient teaching in general.[38, 39, 62-66] Learning to teach is also part of residency training, and residents learn teaching skills by modeling themselves after faculty.[38, 39, 67, 68]

Good arguments exist for having generalists—alone or with a psychiatrist, psychologist, social worker, sociologist, or ethicist—teach the doctor–patient communication skills and related topics listed above. Generalists understand the problems that residents face in these areas, and they are realistic role models. Hence, at least one faculty member in a division of general medicine should acquire special expertise in doctor–patient communication and teaching. An intensive course offered by the Society of General Internal Medicine's Task Force on the Medical Interview[58] may suffice to introduce interested faculty to these skills. Applying the skills while working with another faculty member and giving mutual feedback on teaching can then be useful; after some time, an additional intensive course or mini-sabbatical can enhance skills further. One or two faculty interested in these areas can have a catalytic effect on the program as a whole.

Providing Feedback

Evaluations are needed to determine whether goals and objectives are being met. For example, are residents obtaining an appropriate knowledge base, mastering clinical skills, learning to work well with others, and functioning as teachers and role models themselves? Does the practice provide good conditions for learning? Do faculty members impart good information, participate enthusiastically in teaching, and set good examples?

Feedback to residents, usually given orally, is meant not to convey a final judgment but to assist in improving performance.[56] Therefore, it is a central part of teaching. Faculty should give it frequently in all of the learning situations described above. Good feedback is specific, contains useful suggestions for improvement, and is not personally threatening. Regular, more formal feedback in sessions between the program director and residents (see below) serves as an example, and it can supplement, clarify, and highlight the important feedback that residents receive in their many everyday interactions with faculty.

Giving Residents Sufficient Support, Counseling, and Guidance

The program director says much about caring for people and giving them support and guidance by the ways that he or she supports, counsels, guides, and provides feedback to residents. Working with residents in group learning exercises allows program directors and other key faculty to form the basis for support, guidance, and feedback. Helping residents to sort out their ways of dealing with patients and approaching ethical problems, as well as their feelings about caring for patients, while sharing some of one's own experiences and feelings is supportive. A relationship formed through such interactions can be the basis for other interactions, such as periodic meetings of the program director with residents to discuss career goals or personal problems. Again, the examples set by leaders on the faculty permeate the program and influence how residents treat each other, the support staff, and their patients.

WHERE DO WE GO FROM HERE?

Currently, over 70 medical schools in the United States have divisions of general medicine. Most have teaching programs similar to that described above. Other schools have medical clinics where residents learn to care for outpatients. The number of residents completing training specifically in primary care is increasing; most enter primary care careers. As argued above, residents in traditional programs now need considerable training in ambulatory care. When polled, graduates of these programs identify outpatient medicine as a major deficit in their training.[34, 35] In addition, ambulatory care training programs have emerged as the main sites for some essential aspects of medical training—for example, teaching items such as medical decision making and patient–doctor communication

skills. Departments of medicine lacking these programs need to find adequate resources to begin high-quality outpatient training. Well-established programs should reassess whether they are meeting their goals. In particular: Do we supervise and review residents' clinical work sufficiently? Are our medical practices good models for learning how to provide high-quality care? Do our programs adequately address the entire spectrum of issues, including those relating to doctor–patient communication, so that graduate physicians are well-versed in the humanistic as well as the biotechnical parts of medicine? Developing and maintaining a comprehensive program requires attention to several interrelated aspects. It begins by recruiting an excellent faculty group, proceeds by developing a well-functioning teaching practice, and culminates in the design and presentation of a curriculum providing the knowledge, skills, and attitudes that physicians need.

REFERENCES

1. Karpf M, Levy GS. Training internists for the changing medical scene. Ann Intern Med. 1986;104:567-9.
2. Gellhorn A. Graduate medical education in internal medicine. Ann Intern Med. 1986;104:569-70.
3. Lewis CE. Training in internal medicine: time to retool the factory? Ann Intern Med. 1986;104:570-2.
4. Schroeder SA, Showstack JA, Gerbert B. Residency training in internal medicine: time for a change? Ann Intern Med. 1986;104:554-61.
5. Branch WT. Expanded medical education in primary care—is this the next step? J Gen Intern Med. 1986;1:269-70.
6. Perkoff GT. Teaching clinical medicine in the ambulatory setting, an idea whose time may have finally come. N Engl J Med. 1986;314:27-31.
7. Association of American Medical Colleges. Physicians for the 21st century—the G.P.E.P. report. Washington, DC: AAMC, 1984.
8. Lawrence RS. The goals for medical education in the ambulatory setting. J Gen Intern Med. 1988;3(suppl):S15-S25.
9. Shine KI. Innovations in ambulatory care education. N Engl J Med. 1986;314:52-3.
10. Forrow L, Wartman SA, Brock DW. Science, ethics and the making of clinical decisions. Implications for risk factor intervention. JAMA. 1988;259:3161-7.
11. Guttmacher S, Teitelman M, Chapin G. Ethics and preventive medicine: the case of borderline hypertension. Hastings Center Rep. 1981;11:12-20.
12. Dawson N. Systematic errors in medical decision making. J Gen Intern Med. 1987;2:183-7.
13. Pauker SG, Kassirer JP. Decision analysis. N Engl J Med. 1987;316:250-8.
14. Hiatt HH. Protecting the medical commons: who is responsible? N Engl J Med. 1985;293:235–41.
15. Eisenberg JM. The internist as gatekeeper: preparing for a new role. Ann Intern Med. 1985;102:537-43.
16. Gillick MR. Talking to patients about risk. J Gen Intern Med. 1988;3:166-70.
17. Bedell SE, Delbanco TL. Choices about cardiopulmonary resuscitation in the hospital. When do physicians talk with patients? N Engl J Med. 1984;310:1089-93.
18. Wanzer SH, Adelstein SJ, Cranford RE, et al. The physician's responsibility toward hopelessly ill patients. N Engl J Med. 1984;310:955-9.
19. Perkins HS. Ethics at the end of life: practical principles for making resuscitation decisions. J Gen Intern Med. 1986; 1:170-6.
20. Novack D. Therapeutic aspects of the clinical encounter. J Gen Intern Med. 1987;2:346-55.
21. Suchman A, Matthews D. What makes the patient–doctor relationship therapeutic? Ann Intern Med. 1988;108:125-30.
22. Greenfield S, Kaplan S, Ware JE Jr. Expanding patient involvement in care: effects on patient outcomes. Ann Intern Med. 1985;102:520-8.
23. Friedman RH, Posen JT. The academic viability of general internal medicine: the views of department of medicine chairmen. Ann Intern Med. 1985;103:439-44.
24. Walker JEC, Murawski BJ, Thorn GW. An experimental program in ambulatory medical care. N Engl J Med. 1964;271:63-68.
25. Berarducci AA, Delbanco TL, Rabkin MT. The teaching hospital and primary care. Closing down the clinics. N Engl J Med. 1975;292:615-20.
26. Delbanco TL, Parker JN. Primary care at a teaching hospital: history, problems and prospects. Mt. Sinai J Med. 1978; 45:628-45.
27. Kosecoff J, Fink A, Brook RH, et al. General medical care and the education of internists in university hospitals. An evaluation of the teaching hospital general medicine group practice program. Ann Intern Med. 1985;102:250-7.
28. Epstein A, Pollock DK. The HMO and the academic medical center. HMO Practice. 1988;2:133-8.
29. Rosenblatt RA. Current successes in medical education beyond the bedside. J Gen Intern Med. 1988;3(suppl):544-61.
30. Goroll AH, Stoeckle J, Goldfinger SE, et al. Residency training in primary care internal medicine. Ann Intern Med. 1975; 83:872-7.
31. Goodson JD, Goroll AH, Barsky AJ, et al. The training of physicians outside the hospital. Arch Intern Med. 1986;146:1805-9.
32. Schroeder SA, McPhee SJ. Training internists in ambulatory settings: four problems to resolve. Arch Intern Med. 1986; 146:1685-6.
33. Day SC, Cook EF, Nesson HR, Wolf MA, Goldman L. A learning-curve approach to the self-assessment of internal medicine training. J Med Educ. 1984;59:672-5.
34. McPhee SJ, Mitchell TF, Schroeder SA, et al. Training in a primary care internal medicine residency program. The first ten years. JAMA. 1987;258:1491-5.
35. Kantor SM, Griner PF. Educational needs in general internal medicine as perceived by prior residents. J Med Educ. 1981;56:748-56.
36. Kern DC, Parrino TA, Korst DR. The lasting value of clinical skills. JAMA. 1985;254:70-6.
37. Bazuin CH, Yonke A. What and how to teach in a primary care setting. J Med Educ. 1980;55:874-6.
38. Stritter FT, Hain JD, Grimes DA. Clinical teaching reexamined. J Med Educ. 1975;50:876-82.
39. Yonke AM. The art and science of clinical teaching. Med Educ. 1979;13:86-90.
40. McLeod PJ, Harden RM. Clinical teaching strategies for physicians. Med Teacher. 1985;7:173-89.
41. Skeff KM. Enhancing teaching effectiveness and vitality in the ambulatory setting. J Gen Intern Med. 1988;3(suppl):S26-S33.
42. Rosenblatt RA, Cherkin DC, Schneeweiss R, Hart LG. The content of ambulatory medical care in the United States: an interspecialty comparison. N Engl J Med. 1983;309:892-7.
43. Cypress BK. Patterns of ambulatory care in internal medicine: the national ambulatory care survey, Hyattsville, MD: National Center for Health Statistics, 1984; DHEW publication no. CPHS 84-1741 (Vital and Health Statistics; series 13, no. 80).
44. Branch WT, ed. Office practice of medicine. Philadelphia: WB Saunders, 1987.
45. Goroll A, May LA, Mulley AG, eds. Primary care medicine. Philadelphia: J.B. Lippincott, 1987.
46. Hatem CJ, Lawrence RS, Arky RA. A curriculum for the clinical education and training of physicians in primary care medicine. Hartford, CT: National Fund for Medical Education, 1978.
47. Guilbert J-J. How to devise educational objectives. Med Educ. 1984;18:134-41.
48. Tough A: The adult's learning projects. 2nd ed. Toronto, ON: Ontario Institute for Studies in Education, 1979.
49. Knowles M. The modern practice of adult education. New York: Association Press, 1980.
50. Cross P. Adults as learners. San Francisco: Jossey-Bass, 1981.
51. Tosteson DC. The Oliver Wendell Holmes Society: a new pathway to general medical education at Harvard Medical School. In

Barrows HS, Peters MJ, eds. How to begin reforming the medical curriculum: report of a conference, June 14–15, 1984. Springfield, IL: Southern Illinois University School of Medicine, 1984.
52. Engel GE. The deficiencies of the case presentation as a method of clinical teaching. N Engl J Med. 1971;294:20-4.
53. Kassirer JP. Teaching clinical medicine by iterative hypothesis testing. N Engl J Med. 1983;309:921-3.
54. Lipkin M, Quill TE, Napodano RJ. The medical interview: a core curriculum for residencies in internal medicine. Ann Intern Med. 1984;100:277-84.
55. Lipkin M. The medical interview and related skills. In: Branch WT, ed. Office practice of medicine, 2nd ed. Philadelphia: W. B. Saunders, 1987.
56. Davis JC, Dans PE. The effect on instructor–student interaction of video replay to teach history-taking skills. J Med Educ. 1981;56:864-6.
57. Ende J. Feedback in clinical medical education. JAMA. 1983; 250:777-81.
58. Branch WT. Doctors as "healers": striving to reach our potential. J Gen Intern Med. 1987;2:356-9.
59. Makadon HJ, Wilkerson L, Williamson P. AIDS for primary care givers. A faculty development course: introduction: strategies for implementation, The AIDS Task Force of the Society of General Internal Medicine, September 1988.
60. Lewin K. Group decision and social change. In: Newcomb TM, Hartley EL, eds. Readings in social psychology. New York: Holt, Rinehart and Winston, 1947.
61. Patient/Doctor Curriculum; Year I, Harvard Medical School, Class of 1992, prepared by W Branch, E McLaughlin, D Levy.
62. Greenberg LG, Jewett LS. Committment to teaching: myth or reality? South Med J. 1983;76:910-2.
63. Miller GE. On teaching teachers. Med Educ. 1985;19:331.
64. Guilbert J-J. Teacher training workshops in education: summary of 15 years' personal experience. Med Educ. 1985;19:332-43.
65. Skeff DM, Stratos G, Campbell M, et al. Evaluation of the seminar method to improve clinical teaching. J Gen Intern Med. 1986;1:315-22.
66. Bazuin CH, Yonke AM. Improvement of teaching skills in a clinical setting. J Med Educ. 1978;53:377-82.
67. Wilkerson LA, Lesky L, Medeo FJ, The resident as teacher during work rounds. J Med Educ. 1986;61:823-9.
68. Foley RM, Smilansky J, Yonke A. Teacher–student interaction in a medical clerkship. J Med Educ. 1979;54:622-6.

Teaching Residents to Care for Vulnerable Populations in the Outpatient Setting

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Residency programs have an obligation to teach house officers to care for vulnerable populations. Such populations consist of those whom physicians tend to consider undesirable as patients, and thus who often lack adequate care, because they cannot pay for medical services, because they have medical problems that are difficult to manage, or because they have characteristics giving them low social status. The authors identify and discuss key aspects of learning to care for such populations. These aspects include obtaining appropriate experience caring for disadvantaged patients, developing sensitivity to pertinent sociocultural issues, exploring biases, acquiring relevant special skills, studying epidemiology of diseases in specific vulnerable groups, and learning about health care financing and health policy. Measures to help residents obtain more satisfaction from caring for vulnerable patients are among additional topics discussed. **Key words:** ***ambulatory care; education; residents; outpatients.*** **J GEN INTERN MED 1990;5(supplement):S27–S34.**

DURING THEIR YEARS of training, house officers not only acquire basic biomedical knowledge and become skilled in its application but also encounter patients who, as people, are different from themselves. They are also exposed to the value systems of their mentors and of the institutions in which they train, and they are likely to adopt some of these values. Thus it is important that the structure and ambience of the ambulatory teaching environment encourage the social responsibility of the physician in training. This responsibility includes fulfilling the obligation to care for individuals who for financial reasons lack access to care or who for other reasons are particularly vulnerable to illness and experience barriers to care. Teaching hospitals and their outpatient clinics care for a higher proportion of such patients than do other hospitals.[1,2]

In this paper we discuss issues in teaching the care of vulnerable populations in the ambulatory setting. We briefly review the historical role of the academic medical center in caring for the poor. We then define vulnerable populations in a contemporary context. Finally, we propose a set of learning objectives for divisions of general medicine and their housestaffs, and we discuss the structural and curricular issues related to them. Although our focus here is on education of housestaff, we believe that teaching medical students to care for vulnerable populations is also critical. In fact, many of our comments regarding goals and curriculum pertain to all levels of medical education.

HISTORICAL PERSPECTIVES

Why do teaching hospitals care for a higher proportion of indigent patients than other hospitals? Hospitals began as poorhouses, providing charity care, shelter, and terminal care to the poor. Not only were they built in existing population centers; also, because of their underlying mission, they generally were lo-

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