

Where Do We Go from Here? : Internal Medicine in the 21st Century, Medical Professionalism and Basic Concepts in Residency Training

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Recent years have witnessed an ever-growing effort to define the new roles of internal medicine that are shaped by the demands of the health-care system, public, market forces, and the changing profiles of disease and health. The one thing that is absolutely true with regard to where internal medicine stand in the new century is that it won't be the same place as it was in the previous century.

Internists of yesterday, today and tomorrow

In the first half of the 20th century, physicians practicing internal medicine were the core elements of the health care system (1). They were authoritative and paternalistic, and were defined as "diagnosticians". The second half of the 20th century witnessed an incredible increase in scientific knowledge production, accompanied by expanding drug industries and an ever-increasing expectation of the public. That was the time that the roles and the responsibilities of the internists had to go for a change. The paternalistic, dominant and idealistic generation of the Baby Boomers rewarded by money, title and recognition transformed into the self-reliant and progressive generation of the Generation X, who worked to live and were rewarded by time and freedom (2).

Internal medicine was first established as a hospital based, academic and elite discipline, which was later

disrupted by subspecialties focusing on diagnostic methods and profit procedures (1). The market forces, insurance companies and the health care system of medicine resulted in consumerism of patients (2).

Internal medicine had lost its charm in the second half of the 20th century. With increasing subspecialization, an identity crisis for internal medicine and the internist was born. The borders of internal medicine with general practice, family practice and emergency medicine became hazy (3). While sometimes, internist replaced the job of the above specialties, at other time (s)he cared for the patients who were not diagnosed or followed-up for his complex or end-stage diseases by the subspecialist, or who thought his/her problem was not serious enough to visit a subspecialist (4). Internal medicine has been under attack by its daughters, the subspecialties (3). Shortly, the internist became "the alternative" rather than "the primary".

However, to draw a frame for an internist has never been easy, since many competencies, responsibilities and roles have been assigned. Although different societies and different cultures defined internal medicine and the internist in different ways, the core value has never changed: the care given by the internist should be holistic while focusing on a particular problem, and continuous while organizing other health care givers and

subspecialties. One of the recent definitions of the core value attributes and competencies were made by the Society of General Internal Medicine; expertise in adult patient care, acquiring and sharing knowledge, leadership and professionalism (5).

Health care quality is a growing concept in internal medicine in the 21st century. Medical quality means each patient be evaluated on his/her own; the care should be tailored to individual needs, which is actually intrinsic to the characteristic of the internist (6). The increasing subspecialization does not seem to improve health quality, since it crashed the phenomenon of holistic approach and made the health care more expensive and less accessible. Another issue about the quality of health care is the fact that it is no more solely dependent on the physician per se, as it was in the first half of the 20th century. By the end of the 20th century, public awareness about the costs and quality of health care increased even more (7).

The new century took away the privileged position of the doctor, while loading him with new responsibilities (8). Not only the roles of the internists but also the attitudes of the patients changed (9). The result is that the doctor is not capable of controlling each element of the health system, although (s)he is responsible for providing equal, well-organized, cost-effective health care (6).

A brief overview of the past would help to predict the future of internal medicine. Internal medicine has to return to its old, bright days. The future internist will be a resource manager and clinical information manager, in addition to mastering a great depth and breadth of knowledge with an area of special expertise. Subspecialties of internal medicine will have to be organized within a large department of internal medicine for a cost-effective, justified, non discriminating and reachable health care. The new century witnesses and will continue to witness an effort to revitalize the profession of internal medicine.

Two new roles for the internists: Hospitalist in charge and internists in the ambulatory care setting

While the current responsibilities and roles of the internist are matters of discussion for several years, the future will surely require two distinctive features for the internist; hospitalist and internist as “a leader and organizer in health-care” in the ambulatory setting.

Hospitalist

The term ‘Hospitalist’ was first used in 1996 by Wachter and Goldman, and was defined as “physicians whose primary professional focus is the general medical care of the hospitalized patients. Their activities include patient care, teaching, research, and leadership related to hospital care” (10). It is considered the fastest growing medical specialty in the United States (11). On the other hand, Canada and Great Britain already had a system of hospital-based specialists. As a young and enthusiastic branch, hospitalists might change the model of inpatient care (12,13). In the era of managed-care and cost containment, the hospitalist model has been shown to enhance the efficiency of hospital care, while decreasing the length of stay (14). Hospitalists’ core curriculum not only involve clinical care, but also concepts of system management and invasive procedures (Table 1). A 24-hour coverage of patient care by the hospitalists is expected, this can provide continuous care of the hospitalized patients, although this may have dangers like

Table 1. Core curriculum in hospital medicine.

Clinical care
- Common diseases and syndromes
- Palliative care
- Geriatrics
- Perioperative care
- Evidence-based medicine
Systems
- Teamwork
- Performance and quality improvement
- Patient safety
- Leadership
- Ethics
Procedures
- Advanced Cardiac Life Support
- Endotracheal intubation
- Central lines
- Chest tube replacement
- Arterial lines
- Paracentesis
- Thoracentesis
- Lumbar puncture

Adapted from reference 11.

burnout syndrome. As a growing field on its own, hospital medicine creates its own venues of research, mainly, research on systems of health care delivery, patient-centered care, and clinical trials (11).

Hospitalists take part in the active process of resident and medical student training as role models. Residents report effective training practices under the supervision of hospitalists (15). The hospitalist system is a new venue for the academic general internal medicine (16).

The ageing population brings new responsibilities and new fields of practice to the internists. Patients with chronic illnesses are well cared and now they live much longer than they did a few decades ago. This, however, brings new problems to be solved. The hospitalized patients are becoming older, more chronic and terminally ill with complex diseases, which necessitates a good organization of health care among subspecialties, better and increasing demand for acute and intensive care, and an equipped leadership of the hospitalist. Most of the beds of the future hospital wards will probably belong to intensive care units, and the hospitalists will work as intensivists most of the time in a hospitalist-intensivist model (17).

Internist in the ambulatory care setting

Medicine is shifting from disease to health, from patient to public. Most of the diseases that needed to be hospitalized are now managed in the outpatient setting. In-hospital care is expensive and should be reserved for the patients that really deserve it. Managed care has been discussed since 1990s in the US health care system (18). The role of the general internist in this health system is to evaluate the patient as a whole, with consultations as required, and to manage the patient in the most cost-effective way. Organization of health services under a large internal medicine department will be the way to deliver the most cost-effective, integrated and efficient care for the patients. The internist should be the team leader and organizer of the managed care (19). Health care depending on high-tech is costly; although the quality of care is increasing, the possibility of people with low socioeconomic status reaching that care is decreasing. There is a vital role for the internist to accomplish social justice by helping to distribute the limited sources appropriately. The subspecialties should be reserved for the specific diagnostic and therapeutic procedures, follow-up of patients with very specific diseases and this system should flow through consultations organized by

the internist. Such a system would allow the efficient use of the limited sources and a better, faster running health care of the patients, who are evaluated as a whole while focusing on specific problems.

Evidence based medicine, which is defined as “the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research”, will be the guide to promote health care of internists (20). Electronic patient records, a wide knowledge of biostatistics, and a prospective record evaluation will improve the patient care as well as providing immediate feedback to the internist. The internist has the responsibility to choose the best way of treating a patient with the evidence-based medicine in mind, but also not overlooking the characteristics of the unique patient. A holistic and an integrated approach is the key to the best practice.

Internal Medicine Residency Training: Basic Concepts in the 21st Century

Sir William Osler stated his famous words at the beginning of the 20th century: “to study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all” (21). These words actually summarize the fact that all learning should begin with the resident actively participating in patient care, taking responsibility while being supervised and being trained while solving the problem. Residents should be stimulated to take responsibility for their learning activities (22). As Dr. Kruseman states in his report on undergraduate medical education “a structured learning process, clear learning objectives, a challenging learning environment, valid and reliable assessment procedures, and an effective learning organization are essential for undergraduate medical training.... These elements are also relevant for the postgraduate training of medical specialists” (22). The suggested venue of the learning process is dealing with problems of increasing complexity, with supervision and feedback.

Subspecialization caused a huge degree of fragmentation of internal medicine; a structured and continuous training of the resident, especially during the

first years of training, can only be possible by practicing general internal medicine, which also offers the resident the chance to cope with the real outpatient world of the ageing population (23). Training by the specialist physicians usually concentrates on the specific methods of diagnosis, high technology equipment and specific but rare diseases, but not on an integrated and holistic approach to the patient (4).

The two important issues about learning are the depth and width of knowledge. The greater the spectrum of patients the resident experiences, the wider will be the learning. Not only the inpatient venue, but also the outpatient venue should expose the resident to a variety of diseases and patients (24). The ambulatory care training was never so vital in the previous century as it is now. Managed care, limited economical sources and the need to care for as many patients as possible in a defined period of time necessitate the internists of the new century to be capable of dealing with any disease condition in the ambulatory care setting. On the other hand, the realization of the importance of the concepts of health and public, besides disease and patients, mandates preventive medicine to become a major part of the outpatient practice. These concepts are fairly new and need to be integrated in the residency training curricula, as well as the clerkship curricula (24). The depth of learning is another concern. This can be achieved by adequate exposure to the senior physicians who are experienced and who will be the role models in teaching not only medicine, but also professionalism (24-26).

The residency training curricula in the US and in Europe, and particularly in different countries of Europe differ considerably. In the US, the Society of General Internal Medicine offers a 2-year core training of inpatient and outpatient internal medicine and subspecialties (19). The third year would include more focused experience in specialized areas. A fourth year would be added as a mastery year to acquire the advanced skills and knowledge for a specific career pathway. The European Federation of Internal Medicine also has made efforts to standardize the residency training programs in Europe, mainly through the implementation of a "common trunk", which will cover general internal medicine before the resident is specialized.

The current residency training curriculum is far more than the expectations of modern internal medicine in the

new century. In the US, there is growing argument about the "Oslerian-generalist" model which is named in the honor of Sir William Osler (27). Internal medicine residents have long been perceived as the care providers of patients in the academic hospitals and were expected to meet the service needs of these teaching hospitals (28,29). This resulted in an increased workload of residents and a predominant training in inpatient care, which in turn caused burn-out syndrome and insufficiency of training in ambulatory care setting. Residency training curricula depending on inpatient care restricts the development of outpatient care skills, which are vital for the future real life of the internist. We propose that residency training should involve an adequate and satisfactory experience in the General Internal Medicine Outpatient Clinic. This will help the young internist to practice real life in continuity care and to get a positive feed back, while expanding the variety of patients and diseases experienced. Continuity care clinic in the outpatient care setting is also a venue to practice preventive medicine, adolescent medicine, occupational diseases and ambulatory follow-up of congenital and multisystem diseases of the adulthood. Integrated departments led by internists are needed to train internists and subspecialists of the future in patient centered interviewing skills and physical examination to develop a perception of problem solving and a critical mind (4). General Internal Medicine should be responsible for the uniformity of training with a central role in providing the core attributes and values of internal medicine, in coordination of training in the subspecialties and in teaching professionalism to the new generation of internist.

The inpatient residency training will also need reform in the 21st century for two main reasons, the working hour regulation directives and the growing role of hospitalists. Working Time Directives have been implemented that mandated a 48-hour weekly working hour limitation (30,31). This approach mainly aims to decrease medical errors resulting from burnout syndrome and decreased concentration of the residents. However, it is criticized since the continuity of resident training is disrupted and higher numbers of doctors will be needed in the shift system. The second reform in the field of inpatient residency training is the dominant role of the hospitalists. Although some authors express concerns about the training in hospitalist-led services,

good role models of hospitalists were shown to improve the residency training (32).

To meet the high expectations of the professionalism project, medical and residency education should be organized with respect to the principles of professionalism (33). The teaching of professionalism requires that the core concepts and the appropriate behaviors should be implanted into the faculty program (34). The integration of the three fundamental principles of medical professionalism project into residency training at the foremost should include changes in medical education curriculum. The primacy of patient welfare is based on altruism, encouraged moral development, competency, high-quality care and commitment to scientific knowledge, all of which can be achieved by role models, continuing medical education and positive feedback (33,35). The principle of patient autonomy can be achieved by informed decision-making process and honesty, tailored by the cultural perspectives of a particular society. Teaching by patient centered interviewing skills can help the resident to handle the patient in a culturally sensitive way. Current teaching methods usually fail to demonstrate the real-life situations that the young internists meet in the ward or outpatient setting (36). The last principle, principle of social justice, should be expressed in terms of elimination of discrimination, providing equal health care and helping limited sources to be distributed efficiently. Residents should be taught not only clinical care, scientific knowledge and principles of research, but also, as important as all, health economics, the organization of the health system, and the principles of managed care (33,37).

The venue of teaching, the teaching hospital, should have some standards. It should be a place where there are clear standards for medical care to which the staff consistently complies. The staff should be trained in training, conscious about their role as models and the hospital should provide the trainees and residents with a wide range of patients (22). The learning environment should not punish generational differences; no generation should blame the other, rather the educators should be role models and teachers of a professional hidden curriculum (2,26). The work place should be patient focused, prioritizing the physician well-being with flexible work hours and rewarding excellence, not endurance. Continuous team care should be promoted. Adequate

exposure of the resident and the university is required for the flow of knowledge between generations and the counseling of the resident during training. As a result, the resident should realize the joy of being a doctor while being committed to the profession (2).

If something is taught by clear objectives and in a particular learning environment, it should be assessed objectively as well. Traditional methods of assessment seem to be replaced by objective, standard, valid and reliable assessment methods. There should be clear objectives of learning, which are assessed by logbooks, board examinations and formal evaluations. Mortality sessions, reports on medical accidents and untoward events can built a system in which the resident can have the necessary feedback.

Residency education should include the principles of scientific research planning and performing, as well as basic knowledge of epidemiology and biostatistics in the era of evidence-based medicine (22). Teaching skills and becoming a role model for the youngsters should also be taught. Being a perfect physician is not enough for the future internist; (s)he should also learn how to become an excellent teacher and a life long learner, yet the young internists themselves are actively involved in the teaching process (21). Although modern technology offers unlimited knowledge through the web, excellent visual material and virtual patient models, the new century will not take away the one peculiar characteristic of the internist; the need for real patient-doctor encounters and the flow of knowledge and experience from the seniors to juniors (24).

The internist, who is expected to have extensive skills in diagnosis, problem solving and decision making, should practice a vast array of patient and disease situations. This wealthy environment of education and practice can only be possible with an adequate period of general internal medicine practice, which is called "the common trunk" in some countries.

The European Union of Medical Specialists-Section of Internal Medicine defines three goals for the future of internal medicine and residency education (38).

1. To define, to defend and to promote internal medicine: The aim is to stop the "super-specialization" which only uses certain techniques and deals with certain diseases. If this is inevitable, then the aim is to promote and organize cooperation between the specialties.

2. To unite the internal medicine training and quality management in internal medicine: The European Board of Internal Medicine is responsible for providing the best internal medicine training and retaining professional standards.
3. Continuing medical education is a professional and ethical obligation and should be accredited.

The residency training should provide skills to evaluate the patient as a whole. The importance of history taking, physical examination and classical methods of patient evaluation should be expressed as the most important steps, despite the incredible advances in diagnostic techniques. Analytical and critical diagnostic thinking are the core skills of etiologic and differential diagnosis. The internist should be armed with skills to use diagnostic techniques, to manage emergency cases, to prescribe appropriate therapies, as well as to do methodological research. Not only diagnosing and treating diseases, but also preventing diseases and promoting health should be taught as the core values of internal medicine in the 21st century.

Medical Professionalism Project

The concept of medical professionalism has its roots in the Hippocrates' Oath of Medical Ethics. Professionalism requires a commitment to competence, integrity, scientific knowledge, morality, altruism and a contract with the society (39). The privilege of treating patients and gaining their trust requires intimate, ethical patient-physician relationship and dedication to professionalism. The failure to put the primacy of patient welfare in first place is the reason for the decline of medical professionalism, particularly in the Western countries (40). The crisis was accentuated by the generation gap (2).

The efforts to teach and scrutinize professionalism, in the way we understand today, began in the first half of the 20th century in the United States (US) (5). Research and debate on professionalism abruptly increased in the second half of the past century and peaked at the beginning of the millennium (2). A search for disciplinary actions in the US demonstrated that almost two-thirds of the actions were related to public complaints and the complaints were related to the quality of care, incompetency, negligence and malpractice (41,42). Changing market forces, developing technology, health

care system, globalization and bioterrorism were all factors that brought out a need to redefine professionalism (35). The factors listed above not only made the demands of the society harder to meet by the physicians, but also yielded new responsibilities for the physicians. The communication media became a confounding factor as well, which necessitated the inevitable acceptance of a professionalistic approach on the basis of physician-community relationships. Not only internists, but also subspecialists and surgeons became involved in the debate about professionalism (39,43,44).

The board of Medical Specialties and the Academic Council on Graduate Medical Education (ACGME) stated six core competencies, one of which was professionalism; patient care, medical knowledge, practice-based learning, interpersonal and communication skills, professionalism and systems-based practice. Postgraduate programs had to have a plan to evaluate each of these competencies and measure the outcomes in order to be approved by ACGME by July 2003 (39).

The actions of the United States were continued by European organizations. The Medical Professionalism Project was first proposed in 1999 in Florence in response to the perception of the threats to the nature and values of medical professionalism and in need of a re-definition of professionalism in the 21st century (33,35). Based on three basic concepts; i.e., primacy of patient welfare, patient autonomy and social justice, a "Physician Charter" has been prepared to guide physician-patient relationships in the new millennium, which is the united work of the American Board of Internal Medicine Foundation, American College of Physicians and European Federation of Internal Medicine. This charter defines fundamental principles and a set of professional responsibilities based on four ethical priorities; advancing the well-being and the dignity of patients, improving the accessibility and quality of institutional health services, encouraging principled physician behavior, moving society to equitable positions in distributing health resources (Table 2). This charter has gained recognition since it is concise, clear and focused on the physician-patient relationship, and has been given to each new graduate of medicine in the US. The physician charter forms an action plan for the "medical professionalism project" and creates an international link between national societies in order to develop the universal profession of Internal Medicine.

Table 2. Principles and Professional Responsibilities Stated in the Physician Charter.

Fundamental principles
- Principle of primacy of patient welfare
- Principle of patient autonomy
- Principle of social justice
A set of professional responsibilities
- Commitment to professional competence
- Commitment to honesty with patients
- Commitment to patient confidentiality
- Commitment to maintaining appropriate relations with patients
- Commitment to improving quality of care
- Commitment to improving access to care
- Commitment to a just distribution of finite resources
- Commitment to scientific knowledge
- Commitment to maintaining trust by managing conflicts of interest
- Commitment to professional responsibilities

Adapted from reference 35.

Although the charter asks physicians to reassert their authority, there are drawbacks, such as, the responsibilities of physicians are far more than their rights and there is need to cooperate with the new health authorities to fulfill the aims (45). The physicians are expected to change the health care system on their own, however this is somewhat utopic without the cooperation of the public and government (46). In addition, this project has other cloudy areas and some objections have been made (46,47). First of all, it is not clear whether the majority of physicians want to implement this action. There is the possibility of confrontation with the market forces, and it is unclear whether the society is willing to cooperate. Another drawback is that the project is oriented to patient and disease rather than society and preventive health, and involves only the physicians as the health care givers. Some claim that the charter should have referred to the essential human values first, then to ethical principles (48). Human life and identity, integrity and liberty, health and welfare have been proposed as the basic pairs of values, which address the public and the human as well. Another caveat about the Physician Charter is that it omits the important principle of medical education, that is, the teaching of the profession and professionalism by one generation to the next (25).

The issues addressed up to now raise some important questions. Can we, as doctors speak on behalf of society and patients, can we define political and socioeconomic issues? Without the support of the public, all the responsibilities laid in front of doctors seem to be impossible to bring to reality. These ideas led to the formation of another action called the "alliance project" which means alliance with the public. The principle concepts of this project are; strong cooperation with the public, believing in the sharing of responsibilities, and high quality sharing. The alliance project will follow the medical professionalism project in order to define the place, role and responsibility of internal medicine and its interactions with the public and other health forces (government, market, insurance companies, etc.) in the 21st century.

Conclusions

Internal Medicine should remain bound to its core values and competencies, as it did previously. It should stay broad and deep, ranging from providing uncomplicated primary care to delivering continuous care to patients with multiple, complex, chronic diseases. The values of yesterday should be integrated with the changes in information systems. Internists should be trained not only to provide good quality health care, but also to act as team leaders and organizers in the changing health system.

The future of Internal Medicine will surely be bright and glamorous. A short journey in time will demonstrate the point that the profession started as the medicine of invisible diseases, depending on history taking and physical examination and progressed to the point where the modern profession is running now. Advances in genetics and technology will draw the profession to the point of genetic counseling, early diagnosis and preventive medicine, whereas the economic forces, quality concept, and changes in the social and ethical values of societies will force Internal Medicine into professionalism and managed care system. End-of-life decisions and use of advanced directives, while keeping the patient's autonomy, will integrate the internist into legal issues as a team leader (49).

The primary goal of the internists of the 21st century, whose diagnostic skills come from the history and are supported by modern technology, will be “to provide the maximum number of patients with the high quality health care that they deserve in the most cost – effective manner.

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