MEDICAL EDUCATION AND PRACTICE FOR THE TWENTY-FIRST CENTURY

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Thank you for your kind introduction. I am humbled by the honor you bestow upon me, particularly, when I am unable to converse in your very beautiful language.

My message this evening is simply that the winds of change are upon us whether we are general practitioners, specialists or academic scientists and physicians. We will be practicing differently in the 21st century than we do today. Hence, the education of the physician must change to ensure that the students of today will be able to practice effectively in the future no matter how much we value our current educational process. We must begin to make meaningful change or we will find ourselves unable to function effectively in the new environment of the 21st century.

Medicine, more than any other profession, knows no geographic boundaries. Our rich Roman/Grecian tradition, followed by the dramatic change with the birth of the scientific method on the European continent, has prepared us well. The free exchange of information has allowed physicians in all countries to practice from a common scientific base. Increasingly, English has become our scientific language that has allowed many of us, particularly on the North American continent, to neglect other languages. But, even that is changing with the bi-lingualism in Canada and ever increasing efforts in the United States to make Spanish a second language.

With the end of World War II and the rapid expansion in funding through our National Institutes of Health, the United States has been able to add to scientific tradition through research conducted primarily in our medical schools and teaching hospitals. We now must ask, have our research efforts and our efforts to secure funding become so dominant that we are neglecting fundamental reforms in medical education? Does the curriculum neglect such areas as preventive and behavioral medicine and the development of skills for counseling and managing patients with incurable disease or the chronic problems of aging? In the united States we have science-oriented, high-tech medicine readily available in all of our hospitals, even the smallest ones. Yet, have begun to price ourselves out of the market place and are currently not reaching many of our citizens. Our current federal budget deficit is requiring us to re-look at not only the funding of medical care, but how we educate and how we deliver this care.

The United States is currently spending $550 billion dollars on health care which represents just over $2,000 per year for every man, woman, and child. We must compare that to the $1,400 spent in Canada and ask: Are the citizens of the United States any more or any less healthy than in Canada for the extra expenditure?

We also hear that our General Motors Corporation requires $600 per vehicle produced to provide health benefits for its workers. Chrysler's figures are approximately $700. Honda, on the other hand, can provide health benefits for as little as $60 to $100 per car produced.

We now have statistics which show that citizens of Boston, Massachusetts spend twice that of citizens in New Haven, Connecticut on health care each year. (We need to put a distance of less than that between Barcelona and Valencia).

We also are recognizing that our IBM Corporation currently has an entire encyclopedia on one computer disc. Any material in those multiple volumes can be accessed from a variety of code words in seconds making the encyclopedia available on anyone's desk with computer access, removing the laborious job of hunting

through indexes and volumes to find the information desired. Before we enter the 21st century, most of the information we now use in practice will likewise be available on a single computer disc making it equally available to the isolated, rural practitioner as well as the big city specialist across the street from the main library. Not only will this change the library as we know it, but it will change the way we practice. Skills in problem solving and the ability to utilize the computer will reign supreme over the amassing of factual information.

Clearly, medical education must change, for in your country, as in ours, the lecture format still remains the dominant teaching tool. Books and journals in the library are the basic mode of self instruction. We are obsessed with teaching facts to students. Facts that as Dan Tosteson, Dean at Harvard University, said recently "Too often in our zeal to assure that students learn (and forget) the myriad of information essential to the practice of the various medical specialties, we repress our awareness that we know much more than anyone of us can master or manage. Faculty should devote more attention to how rather than to what our students are learning". With our ability to access all the facts we need, presented in a format that will give us probabilities as to the diagnosis and recommendations for further tests that may or may not be productive, along with assistance in the treatment's protocols, problem solving skills along with the use of computers and the ability to counsel, manage and influence patient behavior will be the dominant characteristics necessary for the physician's practice.

Are we preparing the student of today to be the practitioner of tomorrow? Roger's has recently pointed out that, "Social and behavioral factors are behing the majority of the problems we now treat in medicine. Until we address these problems we will find it difficult to make major strides in reducing the cost of health care". In a recent statement by Canadian Prime Minister Mulroney, "Health care in the future will reach beyond the traditional medical model of curing and into the very way we live as individuals and as nations. It goes beyond elaborate medical treatment systems to embrace the concepts of health promotion and disease prevention. It helps to transform individuals from passive patients of the health care system into active participants and decision makers in the care of their own health".

We are the learders in our profession. We must assume a leadership role in educating our students, our patients and our political policy makers on the need for behavioral modification if we are to materially impact further on the health of our patients. Diseases know no political or geographic boundaries nor for the most part do physicians. Currently, 21 percent of practicing physicians in the United States were trained in foreign countries. Unfortunately, opportunities for migration and practice in the other direction have been less abundant. I believe it is importants for the well-being of our profession that physicians continue to expand their educational base in other countries and maintain close communication with colleagues around the world. In this regard, it is essential that medical education provide not only a common scientific base but also hands on skills; not only computer utilization but also those skills necessary for history taking, physical diagnosis, and patient communication, so as to be able to utilize the wealth of factual information that will be at our fingertips in the computer age.

I would challenge this distinguished audience tonight to ask, have we really created the best environment for the education of the physician? Are we encouraging them to develop their problem solving skills? Are we giving them the hands on experience necessary to become competent diagnosticians and practitioners? Are we encouraging them in the broad areas of preventive medicine and behavioral medicine where lifestyle changes may be more important than surgical procedures in improving the health and well-being of each patient and our society?

At the University of Kansas, which has been one of the most traditional medical schools, we are asking these questions. We

have the most modern facilities for acute care. We have recently started construction of a fitness center which will provide an environment where our medical students can exercise and take specific instruction in diet modification and stress reduction.

We welcome the opportunity of having foreign educated physicians work in our laboratories and clinical environment, and we particularly welcome the longstanding relationship we have had with our friends in Spain and at the Cell Biology Institute in Valencia. We do recognize the impediment in obtaining this opportunity due to the necessity of passing the ECFMG and the rigid English language requirements in order to be able to take advantage of study in the United States.

In summary, the diseases we treat and the health problems of our citizens know no geographic boundary. The science fundamental to being a physician is common. As the political, cultural and language barriers that have tended to separate us in the past are increasingly broken down, we the leaders in medical education, must do our part to insure that there are common pathways to the education of the physician and scientist. While, individually, we may not have enjoyed these opportunities in our educational process, we must work collectively to ensure that the students we are educating today will be prepared for the practice of the 21st century.

In closing, I will leave you with my personal philosophy of living. Look to the past only for the lessons we can learn; live today for the joy of being alive; plan to the future to insure that what should be, will be.