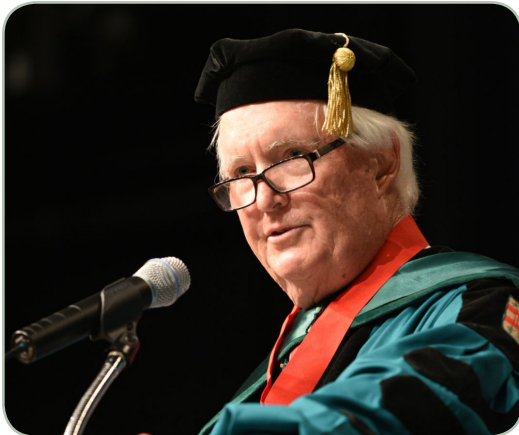


The Medical Commencement Archive

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Dr. C. Garrison Fathman, MD

Washington University in St. Louis School of Medicine
Commencement Address

More Than a Diagnostic Code

Dr. C. Garrison Fathman received his M.D. from Washington University in St. Louis in 1969, completed his residency at Mary Hitchcock Memorial Hospital in 1971, and his fellowship at Stanford University School of Medicine in 1973. He is currently the Director of the Center for Clinical Immunology at Stanford and Division Chief of Immunology and Rheumatology, and a former President of the Clinical Immunology Society and the Federation of Clinical Immunology Societies. Dr. Fathman's primary research focus in molecular and cellular immunology continues to lead the way in discovering the mechanisms of T-cell anergy and immunotherapy for autoimmune disease.

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Dean Shapiro, trustees, distinguished faculty, parents, families and friends, and students in the graduating class, thank you for inviting me to participate in this graduation ceremony to honor the Washington University School of Medicine Class of 2015.

I am here to remind all of you, students and families alike, of the efforts made by the faculty to train this graduating class to integrate the promise of molecular medicine inseparably with the social and behavioral sciences. This combined knowledge base has provided them both the understanding of the pathophysiology of disease, as well as the morality required to help them allay their patients' fears, as they translate the promise of medicine into their patient's care.

So I ask the students and families to stand and give the faculty a round of applause in appreciation of the job they have done in educating this class.

Although it is an honor to have been asked to address this class, several members of the Washington University Professoriate - who once taught me - must be turning in their graves at the thought of me speaking to you on any topic what-so-ever.



My medical school career might best be captured in a poem by Edna St. Vincent Millay:

“My candle burns at both ends;
It will not last the night;
but ah, my foes, and oh, my friends-
It gives a lovely light.”

As an academic immunologist, clinical rheumatologist and a professor of medicine, giving speeches is a lot of what I do. But this speech has created more anxiety than any since my participation as a medical student here in a clinical pathology conference 50 years ago. The senior class Clinical Pathology Conference in those days was part of our internal medicine rotation. The students on the rotation had to solve the medical mystery of a complicated case in CPC format.

I can still remember the anxiety that turned to absolute fear when I was asked questions about the case under discussion.

The case was, as usual, a very complex case and serves as a teaching lesson for you, the newest graduates of the school.

As this particular conference moved along, the students (including me) and faculty were stumped by the difficulty of the case. I remember one of my classmates, sitting by me, starting to look quite pleased with himself and as the case progressed, he finally developed a rather smug look that became apparent even to the Moderator of the CPC, who in those days was Carl Moore, Chairman of Medicine.

As one after another of the students and learned faculty turned away in frustration without making the correct diagnosis, Dr. Moore turned to the student and spoke in somewhat aggrieved tones saying, “Young man, you seem to have a diagnosis for this complex case, would you mind sharing it with the rest of us?”

The student stood and said in a rather condescending tone, “It is obviously a case of Kala Azar.” Dr. Moore was astonished as that was the correct diagnosis. How on earth did you make that diagnosis he asked the student? “What else gives you splenomegaly?” the student replied.

For the non-MDs and non-medical school gradu-

ates in the audience, there are many medical causes for a large spleen, the least likely to be seen at Barnes would be Kala Azar, a parasitic infection transmitted by the bite of an infected sand flea seen most commonly in Africa and Asia.

Today, like this student of years gone by, you have an abundance of knowledge gained over the years of study already committed to this profession, but a dearth of practical experience. It is critical that as you enter into practice, you maintain a sense of humility in your knowledge as you interact with your patients. It is indeed a life long practice of medicine on which you are about to embark, and remember as Sir William Osler once said, “Medicine is a science of uncertainty and an art of probability.”

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If you remember nothing else I tell you today, remember this: medicine is a science of uncertainty and an art of probability.

In my brief comments to the graduates, I would like to discuss three paths your future may take. I initially address those in the graduating class who will predominately be practicing physicians. There

are several issues that you may face that are quite unlike those I faced 5 decades ago. There are no Norman Rockwell moments in medicine now.

One overriding difference is the intrusion of big business into the practice of medicine. Medical care is costly and increasingly so; 20% of the US economy is captured by the business of medicine.

If the current rate of increase in health care costs continues, the national cost of health care will surpass that of the defense budget in the near future. You, the physician, are viewed as a worker by the business interests who run the health care system.

And the actual responsibility of patient care has been so dispersed as to almost lack accountability.

We, as clinicians, need to wrest control of medical care delivery from the vested interests that view medical care as a business. Patient care is much more than billing and reimbursement, however those are the main drivers of the current ethic of the business of medicine.

In your practice, I urge you to try and resist the intrusion of the business of medicine into your lives as

physicians. An example of one major intrusion is the use of diagnostic coding. When I graduated medical school, we were confined to hand written notes and listed diagnoses by their names. Along with the advent of the electronic medical record, many newer diagnoses have evolved, but do we really need the incredible complexity of the current international classification of diseases called ICD9, to be supplanted by ICD10 next October? There are now almost 70,000 diagnostic codes and over 70,000 procedure codes. I ask myself, how and why did this start.

To my astonishment, the modern classification of medical diseases began over 250 years ago when Sydenham first pointed out the potential advantage of a systematic nosology for disease. He was quoted saying:

“It would be a very good thing if all the diseases were reduced to definite and certain species with as much accuracy as the botanists have done with descriptions of plants.”

Shortly thereafter, a well-known figure in science Karl Linneaus, a renowned botanist and physician, wrote the first nosology of human disease called the *Genera Morborum*, published in 1759.

In that work, he divided the known diseases into classes, orders and species, much as he had done for the classification of plants. He described eleven classes, thirty-seven order and three hundred twenty five species of disease.

One of the most interesting of these classifications was in his listing of the 37 causes of death, wherein the 37th was a visitation from God. Now isn't that more interesting than saying it was due to IDC code 682?

Several years ago when I was undergoing what is known as ICD training, I wondered at the time whether knowing 140,000 codes would make any difference in the care of my patients.

I now know that it does not; it is simply a way to allow billing services to call up a charge for the service provided. The complexity of this formulation serves no other purpose.

In fact, as billing strategies have evolved, it seems that a patient is assigned the ICD code that allows the highest reimbursement for the services provided the patient.

When one of my rheumatology fellows recently tried to ask how many patients with systemic lupus ery-

thematosi, billed as ICD9 code 710, were seen at Stanford Hospital for a study we were contemplating, upon chart review, less than 10% of the patients selected by the billing code for SLE, actually had lupus.

This complexity is for billing purposes only, not for help in making a diagnosis or for helping the patient's future physician attempt to retrieve the appropriate diagnosis.

Let's also consider the detrimental impact the computer/patient interface has had on the practice of medicine.

When I was a medical student, I spent, in my mind, far too much time in the library, digging through dusty old journals, trying to link clinical signs laboriously collected during my physical examination and the patient's symptoms elicited during my interview and laboratory values, in search of the correct diagnosis, or at least a plausible differential diagnosis.

Imagine that - when now you have more information in your handheld devices than I had access to in Olin Library and these hand-held devices can now provide selective imaging tests. Incredible.

However, as one becomes more and more enamored with computer based devices, the actual practice of medicine starts to shift from that of interacting with and comforting the patient to one of seeming indifference as you the medical student or, in the near future, a member of the house staff, have your back turned to the patient while asking questions about his or her problem and busily entering the patient's answers into the computer-based electronic medical record, without looking at or interacting in a meaningful way with the patient.

“Why listen to the chest when I can order a chest x ray” is a comment I often hear on the wards. “Why should I palpate the radial pulse?” Because these moments of physical contact help you connect with the patient.

In general, the patient is in fear, engendered in part by the surroundings of the unfamiliar and quite sterile examining room, but more importantly, fear of what you may tell them.

Patients are coming to you for assurance and comfort, as well as for diagnosis and treatment. One of the major complaints expressed by patients about their care during clinic visits is, “The doctor never touched me! He or she never laid a finger on me.”

If you want to practice medicine well, connect with your patients physically and emotionally. It is re-

warding to both you and your patient and can lead to life long friendships.

But you must remember that the more skilled you become, the more specialized you become, and the more dependent on technology you become, the easier it becomes to lose your humanity by discarding your compassion and connectivity with your patient. You must continually strive to maintain your compassion and connectivity with your patient. This will allow you to maintain your humanity.

I now address those of you who will choose a career of clinical or translational research in your practice of medicine.

My interest in medical research began the year before I started medical school when, like many of you, I worked as a lab assistant in the laboratory of a professor here at Washington University Medical School, Kirk Osterland, who was working in a new field that was unnamed at the time - clinical immunology. During my year in his lab dealing with mice and rats and human tissues, I became enamored with scientific research and with the possibility of translating the research in preclinical animal models into human disease.

Following residency training in internal medicine, I chose the clinical subspecialty of rheumatology, then, it was the only medical specialty that entertained immunology as a scientific discipline.

As I advanced in my career as a clinician scientist, helping found the translational research field of clinical immunology, I was astounded at the lack of communication among clinician scientists from disparate specialties. This came to a head when I found myself, a rheumatologist, at a meeting of neurologists talking about my research in diabetes.

How difficult was it to understand that the same sort of immune dysregulation was instrumental in many autoimmune diseases despite their organ system predilec-

tion?

It became apparent that the organ system clinical bureaucracy that dominated the various subspecialty research associations was wedded to a vertical view of their field. Autoimmune diseases were studied in splendid isolation.

If you had an autoimmune disease of the GI tract, you were seen by a gastroenterologist and the clinical research was undertaken by gastroenterologists interested in research.

Likewise, patients with multiple sclerosis were seen by neurologists and the research in the field dominated by clinical scientists trained in neurology. Similarly, research in type one diabetes was carried out by endocrinologists. This list could go on and on.

The only way to break the mold of organ-based research in autoimmunity was to develop a horizontal view of the immune based diseases, to look at shared pathophysiology, not try to understand autoimmunity through studies in a single organ system.

My initial solution was to start locally by developing the Center for Clinical Immunology at Stanford, wherein clinician scientists from many disciplines studying immune based diseases came together to discuss their studies in a non-denominational manner.

This idea was extremely successful at the local level, thus I joined forces with a clinical neuro-immunologist at Harvard, David Hafler, to found a new federation of clinician scientists interested in clinical immunology. Together, we founded the Federation of Clinical Immunology Societies, called FOCIS.

The FOCIS meeting and educational activities focus on studies in disease areas as disparate as oncology to transplantation, not single organ system based science. I invite all of you who may be interested in the field of clinical immunology to take a look at the web site for FOCIS and look at the program for the next meeting.

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To those of you interested in clinical research, the field is limitless. The incredible number of new techniques and new technology allows an in-depth look at fantastic, almost unimagined new disciplines. One example would be studies of the microbiome in our world and in ourselves to ask how and why biodiversity in bacteria and viruses is absolutely crucial to our survival.

Interestingly, the increased incidence of immune based diseases in the developed world is mirrored by an exact inverse relationship with biodiversity of the organisms inhabiting the part of the world suffering these remarkably increased rates of immune based diseases. Is this diminished biodiversity causal, and if so, how?

This is the type of question begging for new clinician scientists' research. For those of you interested in translational clinical research, the opportunity has never been better. Finally, there is the path of the medical educator that some of you will take.

I remember when my class was told by one of my professors 50 years ago, "The best of you will enter into the profession of teaching medical students, for without the continuity of the best becoming teachers, we will lose our way."

I remember thinking at the time that this was a rather self-serving statement for a professor to make, but as someone that has entered the world of medical education complemented by medical care and research, I now know that there is much more than this self-serving statement to inspire the career of a medical educator.

The excitement of teaching a group of students who are truly interested in receiving the knowledge you impart will be priceless to you as the educator. Staying up with medical information as it conforms to the kinetics of Moore's Law, almost as well as do transistor densities on a square inch of silicon, doubling every year, makes the art of teaching exciting and rewarding, but remarkably intellectually challenging.

It is this intellectual challenge that drives and supports the medical educator, always striving to contain and understand, and then disseminate to the students this enormous amount of knowledge in comprehensible pieces.

Believe me, it is as exciting to the faculty as it is to you, the graduating class of 2015, to have reached this final step along your path to becoming a physician.

When I graduated from this medical school almost 50 years ago, I had no idea, then, what direction my path would take. I am relatively certain that most of you,

now, have questions about what direction your path will take.

The exciting yet discomforting reality is that later today, you are going to be a doctor with all of the awesome responsibility that entails and that life changing decisions are now yours to make. Starting later today, you will no longer be a student.

In times of indecision, remember what Osler said, "Medicine is a science of uncertainty and an art of probability." Trust the education you received at this internationally esteemed medical school to help you make the right probability-based decisions, but don't stop learning; continuing education is a life long requirement of the medical profession. Embrace that requirement and you will be assured of success.

Let me close by again expressing my congratulations to each and every one of you, the 2015 graduating class of Washington University School of Medicine.

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