Multíple Opportunítíes Spawn Multíple Careers Warren E Grupe, MD

When I finished University, I knew precisely what I was going to do: I was going into the world as a clinical physician to save lives, relieve suffering, support the weak and heal the afflicted! I even left Johns Hopkins University to attend Medical School at the University of Pennsylvania, because Penn had a new program that allowed students to be involved in the medical care of a family on our very first day. It was a path I was so certain about! Yet, it never happened! My dream never came true! And it was the best thing that ever happened to me! How could that be?

After Medical School, I went for specialty training in pediatrics at Western Reserve University, because at that time Reserve had completely revamped medical education. How could I not benefit from an eager, involved, creative faculty and a new way to learn? While there, I was exposed to new developments in kidney research. Three new techniques promised to revolutionize what we knew about how the kidney became diseased; much like we hear today about stem-cell research. Once I started working in the laboratory, I became even more fascinated and more excited. For the next decade, a combination of laboratory and clinical research dominated my time. Probably the most significant contribution of this period was the study we published in 1966, with Professor Walter Heymann, pioneering the use of alkylating agents in the treatment of childhood nephrosis; this treatment has since become standard therapy.

Career course change #1.

But, as I did more and more research, I thought, "How do you teach this stuff to clinical physicians?" Not just the facts of science, but the PROCESS and THOUGHT PATTERNS of science? Medical School in the US at that time was divided into two major segments. The first two years involved teaching facts about biological science; the final two years were clinical training, largely by apprenticing with a

series of talented clinician-teachers. It was mainly lessons in what is known, what to do and how to do it. Often the 'why' it's done that way was not emphasized or, sometimes, not even known. Empirically, it just worked, and the patient got better! That's the "WOW!" of clinical medicine; the patient gets better.

But the process of scientific research also includes a wonderful "WOW! factor." The WOW comes when the results you get are <u>not</u> what you expect! Those are some of the most exciting times in research because that often means you're on to something new. What can be learned from that; what should be done about that? Contrast that with clinical medicine; a patient not responding as expected generally does NOT make for a good day! For the provider or, more importantly, for the patient! Instead of "WOW!" it's more like "WHOOPS!" Yet, for the patient's sake, it must be dealt with. "I don't know" is not an option. A new, unanticipated approach is required. So how do you teach that? Before I got very far, I was made Assistant Dean for Medical Education with the specific task of reintroducing a science mind-set, a thought process, into the clinical curriculum of the final year of Medical School. I put together several courses that paired clinical problems with problem solving research scientists in an attempt to re-direct customary clinical thought patterns for the students.

Career course change #2.

The effort was modestly successful. But soon after, I received a call from Harvard University asking me if I would join their faculty to establish a brand-new academic department of Pediatric Nephrology; a program that would include patient care, advanced training, clinical research and laboratory research. One does not easily turn away from an offer from Harvard. As we reviewed the possibilities of what might be done, the Chairman of Pediatrics made a statement that captured me; he said, "Warren, you can do anything you can pay for." What a challenge! No help from the world's richest university, but absolute freedom to do anything, to try anything, to explore anything, to change everything. All I had to do was be creative enough to capture enough outside interest to cover the cost! Sound like starting a new business? That's exactly what it was! The program I started is now the largest and best funded pediatric kidney program in the western hemisphere.

Career course change #3.

While still at Harvard, I returned to the question of how to squeeze the thought patterns of scientific inquiry back into clinical training. Here I was at a University known for its creative scientific thinking. Harvard is a warehouse of brains with whole buildings just stuffed with I.Q. Unfortunately, most of these great brains had clinical skills that were just scary; very intelligent, yet they could not be turned loose on a live patient! How then to get these brains integrated into the clinical setting? A group of us devised a team approach, patterned after the British "Firm" system, that incorporated these great brains into a multidisciplinary faculty group that met regularly with advanced pediatric clinical trainees; the idea was to review the complex and difficult patients who were not responding as expected. The Kenneth Daniel Blackfan Medical Service was born with me as its first Chief. Because these scientists did not think in the same boxes as the clinicians, soon we saw refreshing, new approaches evolve. We watched as the introduction of seemingly unrelated laboratory research fueled innovative thought patterns and therapeutic approaches. On occasion, we saw the scientists and the clinicians join forces to solve a convoluted problem; what is now called translational research. Back to course change #2, but in an entirely different setting and at an entirely different level. We'll call it *Career course change #2b*.

As our nephrology training program grew, I began receiving calls from Ministers of Health, Heads of Universities, and Directors of Hospitals from all over the world. Would I train a pediatric nephrologist for their country? Of course we would. But all too soon, I began to receive calls from these trainees; once back in their country they could not implement what we had taught them. Just training the person was not enough; one needed to prepare the home institution to utilize the new skills we had created. So, we began to couple international program development to the training program; we would take a trainee only if that home entity would allow us to co-direct what was done to prepare for that person's return. We were now designing and implementing programs specifically adapted to the cultural, financial structure and sustainability of several countries. That led to a 25-year odyssey in international health program development and implementation that continued, even after my retirement.

Career course change #4

This career change ultimately led to developing medical education programs in 39 middle income countries on 6 Continents.

One example is a program implemented in Poland during Marshall Law that ultimately established the first pediatric dialysis center in Poland, trained pediatric nephrologists and accomplished the first hemodialysis on a child in that country.

We also worked in Shanghai to establish a medical environment that helped China recruit and retain Fortune 500 companies to the mainland. In this instance, the Shanghai government saw medical care as an investment, not an expense.

With the owner of a tea plantation in Africa, we established a small, on-site, nongovernmental primary care clinic that was followed by improved productivity, better worker morale, less absenteeism, and fewer disciplinary problems. The owner felt these changes at least matched his costs for the clinic, so he also came to see care for his workers as an investment and not an expense.

We have examined the negative effect on local health care of people in economically disadvantaged countries going abroad to obtain medical care. The more affluent citizens were outsourcing medical care, often to very expensive facilities, thereby exporting funds that could have been used at home to upgrade the quality of everyone's care.

Now, at age 75, I'm currently exploring the cultural and non-medical factors that have a negative impact on medical care. Specifically, we're examining why people

do not seek appropriate medical care even when it is available to them, and the financial barriers have been removed. These studies will eventually become important as the Affordable Care Act, and its subsequent permutations, are increasingly implemented.

All of this is very far away from the initial dream of a young university graduate who just wanted to "save lives and relieve suffering."

By now, my point should be evident. Had I stuck to my dream, I would have probably led a useful and productive life, and that's OK. But it wouldn't have been as much fun. I wouldn't have had the opportunity to do the things I have done or see the things I've seen. By not getting stuck in a focused career rut, I have had a very exciting and rewarding life. I'm not rich...but I'm so glad I gave in to my career "attention deficit disorder" to avail myself of all these different opportunities.

> Warren E. Grupe, MD for the lacocca Institute Lehigh University July 27, 2009