

The following address was made to the graduates of the inaugural Houston Methodist Hospital Cardiology Training Program, which held its first commencement ceremony in June 2014.



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## LESSONS IN CREATING A REWARDING CAREER

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You have much to anticipate in your upcoming professional career with the likes of genomic medicine, regenerative medicine, and nanotechnology in the offing. I would like to be a fly on the wall 40 or 50 years into your careers to see if the extraordinary advances in medicine made in the last half-century are replicated. My guess is they will be even more extraordinary.

To give you some perspective from my experience, I will share with you some aspects of medicine that I encountered at a similar stage as yours in my training.

I graduated from Northwestern Medical School in 1953 at the age of 27. That occasion was further highlighted by my marriage to Barbara, who has survived living with a physician who for many of the past 61 years was more often than not away from home. We moved to Philadelphia so I could enter a 1-year rotating internship at the Philadelphia General Hospital, which was similar to The Houston Ben Taub Hospital. The Philadelphia General Hospital, affectionately called “old Blockley” by those who served there, no longer exists, nor do general rotating internships. The latter have been replaced by a “transitional year” for those physicians entering a nonmedical specialty. My marriage nearly floundered in the first month as my initial rotation was on a general surgical service. For each month, I was allowed one Wednesday afternoon and one Sunday off. Contrast that to the working hours trainees must adhere to today.

As so often happened then for young physicians, I followed one of my role models, Dr. Thomas M. Durant, to Temple Medical School, where he was to become chairman of the Department of Medicine and also president of the American College of Physicians. The faculty at Temple Medical School Hospital was small and equally distributed between private practice physicians and full-time medical school physicians, all of whom were superb teachers.

Penicillin, as a cure for streptococcal infections and a prevention for rheumatic fever, was well known, but there were literally hundreds of patients with rheumatic heart disease. At that time, there was a rheumatic heart disease hospital in Philadelphia to help care for them. In the 46 years since I’ve been in Houston, I may have seen one case of acute rheumatic fever from Louisiana and scattered cases of rheumatic heart disease from mostly south of the border.

I spent 3 months at a tuberculosis sanatorium because tuberculosis was still very prominent. There I became proficient

in producing pneumothorax and pneumoperitoneum as a form of treatment. Tuberculosis pericarditis was the most common form of pericarditis. My tuberculin skin test became positive when I was there. The most attractive part of that rotation was the monthly salary of \$150 compared to the \$50 I was paid at Temple. Remember, this was 60 years ago.

Hypertension was treated medically with the rice diet and Smithwick splanchnicectomy (thoracic lumbar sympathectomy) operations, of which there were more than one.<sup>1</sup> We became experts in physical diagnosis, because I knew that when we took the internal medicine board examination, the most common cause for failure was missing some significant physical finding. Examinations in those days were oral, and gamesmanship played a large role. My examination took place at King’s County Hospital in Brooklyn, and my examiner, well known for being a very tough examiner, entered the room where I was waiting and called my name, “Mr. Winters.” I learned that day not to take umbrage when being put down. As it turned out, the examiner and I hit it off right from the start, and I easily passed. I earned a Master’s degree in Medical Science during my residency, investigating new oral diabetic drugs that had just become available for study.

At the end of my medical residency, I stayed on at Temple for 1 year as their first cardiology fellow. A year doesn’t sound like much in today’s timeframe, but at the time there was very little to learn. Electrocardiography, fluoroscopy, and chest X-rays were high on the list. A German physician, Hugo Roesler, was an expert in cardiac fluoroscopy and took pride in demonstrating his expertise. We spent hours perfecting our physical examination technique. Ballistocardiography became popular. And when I took my cardiology board examination in 1970, I was offered the option of interpreting electrocardiograms or ballistocardiograms.

A myocardial infarction was treated by 6 weeks in bed, and the patient was not permitted to feed himself/herself the first week or two. Drugs available at the time included digitalis, morphine, nitroglycerin, oxygen, barbiturates, and an injectable form of mercurhydrin. There were no coronary care units; that concept came much later. Dr. George Burch at Tulane Medical School treated dilated cardiomyopathy with a year of bed rest. Among those who survived, a few actually improved.

Patients with rheumatic heart disease and intractable peripheral edema frequently encountered “Southey tubes”—a small metal tube placed in the flesh of the lower extremities to drain fluid...a

truly prehistoric treatment.<sup>2</sup> We estimated the degree or severity of heart failure by calculating the time it took for a substance, sodium dehydrocholate (Decholin), injected in the right antecubital vein to reach the tongue, the end point being the bitter taste of Decholin when it reached the tongue.

We studied the right and left heart by venous angiograms in patients with congenital and rheumatic heart disease, and we began to do right-heart catheterizations in 1957 and left-heart catheterizations in 1958 with fluoroscopy, Cambridge strain gauges, and copper tubing.

The highlight of that year was the time I spent in the dog laboratory with a surgical resident, Dr. Bill Wright, learning how to run a heart-lung machine with a disc oxygenator. After nearly a year of doing sham operations on dogs using the heart-lung machine, we were deemed ready to graduate to human patients. So in 1958, Dr. Wright and I operated the heart-lung machine for the first open-heart operation at Temple University Hospital. The surgery was performed by two thoracic surgeons, Drs. George Rosemond and Robert Tyson, who operated on an 11-year-old boy from New Jersey with a ventricular septal defect. The boy survived, as did the surgeons and the heart-lung operators.

We ran the heart-lung machine for the next year, operating primarily on patients with congenital heart disease but gradually including patients with rheumatic mitral stenosis. We had no intensive care unit; instead, a corner of the recovery room was cordoned off for these patients. One operation per week was performed. There were no nurses who would take on the postoperative care of these patients, so we hired medical students who rapidly proved their worth while we were training nurses.

Upon completing the fellowship year, I remained at Temple University Hospital on the academic faculty but also began a practice. My office was across the hall from the chairman of the Department of Medicine, so my practice had a head start on others.

Early on, I became the director of a newly established cardiovascular research unit and general medicine research unit funded by the National Institutes of Health under the "Great Society" program of President Lyndon Johnson. During that first year, I became the cardiologist assigned to the first renal dialysis team under the direction of Drs. Carmen Bello and Roger Sevy.

In the early 1960s, I was introduced to a new technology by Dr. Claude Joyner, a cardiologist at the University of Pennsylvania. It was cardiac ultrasound, and it looked so promising that I made it my business to learn all I could about it. I became acquainted with Dr. Inge Edler, a Swedish cardiologist at the University of Lund Hospital who, with his physicist friend Helmuth Hertz, introduced cardiac ultrasound to the world. Cardiac ultrasound became echocardiography, and you know where that is today. Dr. Edler and his family and I became close friends. Last October, in 2013, the Edler family invited me and my wife to Lund, Sweden, to celebrate the 60th anniversary of the publication of his first paper. During our trip, we reunited with two Swedish cardiologists who had worked with Dr. Edler 50 years ago.

In the 1960s and 1970s, we became experts in Starling's Law and force velocity relationships, the events of the cardiac cycle recording simultaneously the arterial and intracardiac pressures, phonocardiogram, electrocardiogram, apex cardiogram, and echocardiogram. We learned about isovolumic contraction and relaxation times. Whole textbooks were written on these subjects. We became experts in drawing these events in patients with different forms of heart disease. These exercises

were critical in our understanding about heart sounds and murmurs.

The rapid expansion and knowledge of cardiovascular medicine over the past 60 years is really difficult to put into perspective. But it may presage what's to come in the next 50 years. As you enter practice, it is imperative to remember that the science of medicine should be a partner to the art of medicine. The art of medicine is not taught well in training programs today, nor has it ever been. That has nearly always been the province of mentors and role models from whom young physicians learn.

To that extent, I have formulated over the years what I call "Rules for the Road" and "Complements" to those rules derived from personal experience and observation of other physicians I have admired.

The first rule is "Attitude is everything." Without a positive attitude, you might as well stay home. It is reflected in how you treat patients. A big smile and a strong handshake have prompted many patients to tell me, "I always feel better after I have seen you." There is strong evidence that a physician's demeanor affects the outcome of treatments.

Rule number two is "Be the best you can be." You may never be the best, but you can always be the best you can be. Listen, communicate, examine your patient. What better way is there to connect with them? Besides, you may turn up unexpected findings: enlarged organs, a tumor, an aneurysm. Be interested in their lives. As Dr. Francis Weld Peabody noted in 1927, "The secret of the care of the patient is in caring for the patient."<sup>3</sup>

Rule number three is "Become a lifelong learner." Learn something new every day. Particularly learn from your mistakes and failures; it will keep you humble. And remember, there is much to learn from outside the world of medicine. Become a fly fisherman. That became my passion.

The fourth rule is "Live your faith every day." Whatever your faith may be, live it. At the very least, believe in yourself. This is where the golden rule comes in: Treat your patients as you would wish to be treated. It applies to your colleagues and friends as well. Then there are the Complements.

- Honesty and integrity go hand in hand. You have it or you don't. You don't buy it off the shelf. You earn it by earning the trust of your patients. I'm always amazed at how many people don't know the meaning of integrity: it is your moral compass; knowing right from wrong.
- Practice humility. Humility is sadly lacking from many physicians. They lose it between medical school and success. You're a better doctor for having it.
- Be perseverant...it comes in handy when dealing with contrary and/or uncooperative patients. Don't be discouraged if a proven treatment is not always successful. At the same time, learn when to hold and when to fold, particularly where end-of-life is concerned.
- Have a sense of humor. A sense of humor often diffuses tense situations, especially when it includes the ability to poke fun at yourself.
- Show gratitude. Gratitude is important to portray, but don't expect other people to have it. My father once told me, "If you expect to be thanked for the good things you do in life, you'll be sadly disappointed."

As your practice and professional responsibilities weigh on your time, do not forget your family. You have two lives to live:

your professional life and your private life. You will be hard-pressed not to shirk your private life for your professional life. But let me assure you, after 61 years of marriage, it is very comforting to age with someone you love.

Finally, as you leave tonight, you will receive from us a book titled "Houston Hearts: A History of Cardiovascular Surgery and Medicine and The Methodist DeBakey Heart and Vascular Center at Houston Methodist Hospital." Now that you have trained here, I recommend you read this book to learn about your predecessors, your teachers, and the extraordinary events that have occurred over the past 60 years making this institution one of the leading hospitals in the world. You will look back with pride as you look

forward with enthusiasm. We all wish you the best in the years to come.

## References

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