Rhoads Oration on Mentoring:, Dec. 2008

I am both honored and privileged to address you today.. When Bill Meyers asked if I would be willing to give the annual oration this year, I paused to decide what pearls of wisdom I could provide to this distinguished body in my waning years . As I looked back over the history of this event I found that this tradition was initiated, in 1881, by our founder , Samuel D. Gross, At that time he had asked Dr. John B. Roberts to give the first annual oration, but Dr. Roberts insisted that Dr. Gross have the honor. Dr. Gross gave the first annual oration, entitled a " Memoir of John Hunter and His Pupils". For the next 99 years this talk was known as the Gross Annual oration. In 1980, the name was changed to the . Rhoads Annual Oration in honor of one of our most illustrious and faithful Fellows of the Academy, Dr. Jonathan E. Rhoads. At that time, Dr. Rhoads and his family initiated an endowment that enables surgical residents to attend this meeting. Since Dr. Gross's talk was about Dr. John Hunter mentoring his pupils, I decided that this would be a good topic for me to expound upon .. Dr. Gross our founder and Dr. Rhoads were both consummate mentors. Both achieved the pinnacle of their profession as outstanding educators, clinicians, and ethical surgeons with local, national and international renown. They were both prolific writers, authoring numerous texts and articles published in the most prestigious journals, and were either founder or president of our most important surgical societies. Dr. Gross is remembered for his "System of Surgery" which was to become the most complete treatise of its kind in the English language. In 1856, Dr. Gross became the fourth chair of Surgery at Jefferson where he spent most of his surgical career, Dr. Gross is considered by many as the "father of American surgery", but is best remembered today by his immortalization in the famous painting "the Gross Clinic" by Thomas Eakins.

Dr. Rhoads, whom we all remember with great fondness, served both his internship and surgical residency.at the Hospital of the University of Penna. and remained there for his entire professional career His real mentor at HUP was

Isador Ravdin, who showed his respect for his young trainee , by choosing him as his surgeon when the "Rav" developed acute cholecystitis. Dr. Ravdin also left him in charge of his very busy service when he went to Burma in WWII to command the 20th General hospital Dr. Rhoads achieved fame on his own becoming one of "Philadelphia's most distinguished citizens. Renowned as a researcher, scholar and medical leader His entire career was at HUP where he succeeded Dr. Ravdin as John Rhea Barton Professor and Chairman of Surgery.. Besides being a very busy clinical surgeon he also was a premier "academic surgeon" authoring nearly 400 papers during his lifetime covering the entire field of surgery. His most notable was his work was in parenteral alimentation. . Dr. Barker summed up Dr. Rhoads's personal qualities as "wisdom, patience, self-discipline, carefulness, consistency, persistence, and an incredible capacity for work.", all traits of an outstanding mentor.

So what do we mean by mentoring? It actually comes from the Greek word that means enduring. The word itself was inspired by the character Mentor in Homer's Odyssey. Mentor was the man that Odysseus left behind with the job of raising his son Telemachus in his absence. The root of the practice of mentoring can be found throughout recorded history, but in medicine it can actually be traced back to the oath of Hippocrates which stated "To hold him who taught me this art as equal to my parents and to live my life in partnership with him,….and to regard his offspring as equal to my brothers in male lineage and teach them this art – if they desire to learn it – without fee and covenant…." In a more modern interpretation, Louis Lasagne, Dean of Tufts Medical school, described that portion of the oath thusly, "I will respect the hard-won gains of those physicians in whose steps I walk, and gladly share such knowledge as mine with those that follow." Another definition is "a form of teaching that includes walking alongside the person you are teaching and inviting him or her to learn from your example." Mentors can be teachers, coaches, clergy, "big brothers", colleagues or even friends. Mentoring can be either formal or informal. In surgery, informal relationships develop almost on their own, as between attending and residents, or residents and students.

Formal mentoring refers to assigned relationships often associated with organizational mentoring programs. In these a more senior faculty member is assigned to mentor a newly appointed junior member of the faculty. In this role the mentor will act as both counselor and advisor. and will help guide and nurture the junior faculty member through the sometimes turbulent waters of career development , whether they be clinical or research or both.

Dr. Ed Copeland, a former president of the American College of Surgeons, defined a surgical mentor as “one who establishes for the protégé the professional ethics that will dictate practice patterns years after the protégé leaves the direct supervision of the mentor” Mentoring is what we do every day either consciously or unconsciously by our words and our actions, during time in the operating room and rounding with the team.

I had the good fortune to serve my surgical residency with my personal mentor, John H.Gibbon Jr. He shared many of the attributes of both Drs. Gross and Rhoads. A Philadelphia native, born in 1903, and son of a former Professor of Surgery at Jefferson, he was named the Samuel D. Gross Professor and Chairman of Surgery at Jefferson, in 1956. He had spent 20 years of his life developing the heart lung machine which, as many of you know, was the first to successfully support total cardiopulmonary function during closure of an atrial septal defect .. This event ushered in an entirely new era in surgery that permitted the successful treatment of a wide variety of cardiac conditions which heretofore had no known treatment available. He also was active in matters of health, training, teaching, research, professional organizations and community affairs. He too was president of The Philadelphia Acad. of Surg. as well as the most prestigious local, regional and national surgical societies. He was editor of the Annals of Surgery and authored the first authoritative textbook of thoracic surgery “Surgery of the Chest” I first met Dr. Gibbon when I was a medical student at Jefferson. It was between my sophomore and junior year in med school, where I had a most memorable experience. I was attracted to his research lab as a result of the activity going on there related to the hear-lung machine. I was assigned the

task of operating a positive-negative pressure ventilator during surgical procedures on dogs using the heart-lung machine. Ventilators were almost unheard of in those days, but Dr. Gibbon felt even though oxygenation was being provided by the heart-lung machine, it was essential to keep the lungs moving to prevent pulmonary capillary damage during bypass. I was still a youngster, still “wet behind my ears”, but the excitement of working in Dr. Gibbon’s lab during the development of this monumental work was overwhelming. One day the great man himself came into the lab and told me he wanted to use the ventilator in the O.R. on a case he was doing the next day. I in my naïveté I blurted out “but Dr. Gibbon, it’s covered with dog blood.” He turned to me and said “clean it up” and left the lab. I don’t think he knew who I was, but clean it up I did. I didn’t just clean it, I rebuilt it changing all of the tubing and scrubbing the solenoid so that it shined . When I presented it to the nurse anesthetist in the O.R. the next day she asked, “What is that, boy?” She didn’t know who I was either. I told her it was a ventilator that Dr. Gibbon wanted to use, and she claimed she didn’t know any thing about it. When Dr. Gibbon entered the room she repeated her concern to him and he replied, “but he does”, pointing to me. He reassured me that he had the utmost of confidence in me and that I should do the same things that I did in the lab and every thing would be OK. I did just as I was told to the best of my ability, sitting behind the ether screen, sweating and operating the ventilator and praying that all would go well. Unfortunately the baby died. Dr. Gibbon reassured me that it had nothing to do with my assignment, and that there would be other opportunities for me in the future. Such was his interaction with his team boosting their self confidence. He was true to his word since I later had the privilege of working with him both in residency and in his practice until he retired. He had this phenomenal breadth of knowledge
from basic physiology, to art and literature, and was forever challenging young people to expand their scope of knowledge for the betterment of their patients. Our training consisted of long hours with every-other night call schedules, and many hours spent in patient care. We had journal club with a different journal every week. Rounds were made, most days, with one or more attendings We were

encouraged to try new things, knowing that he was always there to back us up with moral support and sage advice when needed. We took pride in knowing all that there was to know about each of our patients, a habit that was good training for the future. We were trained as general surgeons, expected to handle any and all problems that we encountered in this broad field. We worked hard, trying to emulate those who went before us, with their work ethic, their honesty and integrity, their innovativeness, and their desire to teach others as Hippocrates had encouraged us to do.

But things have changed over the years. The breadth of medical knowledge has expanded exponentially, much like our knowledge of the universe. New discoveries, new techniques, new bugs, new drugs, new regulations, new lawyers! We ultimately realized that you can not be all things to all people.
New areas of specialization evolved. Trauma care became a specialty. Cardiac surgery split from thoracic. Organ transplantation became possible. Vascular surgery became a specialty. And on and on. Regulatory agencies like the Joint Commission evolved, claiming that we were not doing the required job of policing ourselves. Sounds much like what we have recently learned about Wall street. Each succeeding generation has had their own priorities trying to distinguish themselves from the prior generation.

Things had to change. .And then along came the Libby Zion case and the imposed requirements of the 80 hour work week.
There is always a certain amount of resistance to change. But, as Dr. Carlos Pelligrini has said “If you’re afraid of change and you want to keep old models, then you are not going to be able to move forward.” Medical education and resident education have taken on new paradigms. With the advent of the 80 hour work week, restrictions have been imposed on scheduled work hours and essential time off has been mandated. In my days of training, we worked approximately 120 hours per week. Our time was spent doing all of the things necessary to become good surgeons. We spent long hours in the O.R., rounding on our patients at all hours day and night, attending conferences, attending clinics

and spending a fair amount of time with our various mentors. But it took its toll, as evidenced by how fatigue has been shown to lead to unplanned and unanticipated bad outcomes. When the 80 hours work week was mandated it required a significant adjustment in how the time would be spent.. 80 hours is really a lot of time It's the equivalent of working 12 hours a day seven days a week minus 4. With all of that time available, it just means we must manage our time more efficiently while still taking care of patients, going to the O.R., spending time in self-education, attending conferences, writing papers, presenting at local and national meetings. To meet this challenge, the concept of team based care has evolved, even as the complexity of care has increased. We must rely more and more on trusted colleagues to provide the continuity of care so essential in good practice. That includes other physicians, nurses, physician extenders, respiratory therapists, pharmacists, and social workers as members of the team. Communication amongst team members must be fluid and comprehensive to avoid gaps in care delivery. Training in surgery requires much of our time being spent mentoring our residents and students in the O.R. and this time must be protected. This places.a greater burden on other team members to attend to other demands such as information gathering and bedside care. Some of us question whether this reduction in work hours has benefited our residents. In a collective review in this month's Journal of the American College of Surgeons, Dr. Cutter from Stanford summarized many of the articles published looking at the effects of work hour restrictions on various aspects of resident education. She found that the quality of life as evidenced by
decreased depression, decreased emotional exhaustion, more family time and more time to read have definitely improved. However the benefits such as increases in operative volume are more worrisome. There has been a definite decrease in the number of first assistant cases for the junior residents, which lengthens the learning curve by eliminating the chance to "see one", before "doing one". There has also been a decline in the ability to attend conferences and clinics. Some studies suggest a decrease in the quality of patient care, suggesting problems with hand-offs, cross coverage, and communication. On December 2,

The Institute of Medicine(IOM) released a report entitled “Resident duty hours: Enhancing Sleep, Supervision, and Safety” which proposed some modification and further restriction in duty hours. This prompted an immediate response from the American College of Surgeons asserting that such constraints could compromise the integrity of a resident’s educational experience, effect the continuity of patient care, and exacerbate the looming surgical workforce shortage.
Unquestionably, more research is needed to fully assess the true impact of work hour restrictions. But in the meantime new paradigms of resident education must and have evolved in anticipation of some of these drawbacks. Simulations have been designed to teach skills that used to be taught at the bedside on live people by live teachers, who were either upper level residents or attending staff. Now many of these skills can be taught in simulation centers, on synthetic models by simulation experts or computer programs.. Mentors take on new responsibilities and must over see these new teaching modules and simulators to assure that the trainees achieve the level of competence necessary before they can move to the bedside or O.R. for direct patient contact. Teaching must take place whenever and where ever the mentor and protégé are together, in the O.R., on rounds, in conferences, never failing to take advantage of the opportunity to teach, and constantly being sensitive to the more complex environment in which our protégés must work.

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We all have our role models who we try to emulate. Each of us has our own individual personality into which we try to embrace the positive traits of our mentors as we embark on our various surgical journeys. I have mentioned several, but would be remiss if I did not mention two others that I have had the privilege of working with over the years. They are Francis E. Rosato and John Kairys. I had the privilege of being Frank’s Vice. Chair and residency program director for 20 years. Frank was the Samuel D. Gross Professor and Chair of Surgery at Jefferson during that time. He was the consummate mentor. Affable, able, unflappable, kind, stimulating and supportive. He was known for his sage and

comforting comment to his residents when they were operating, “don’t worry, there is nothing that you can do, that I can’t fix” Certainly reassuring to a resident embarking for the first time on their solo flight into a complex procedure. He was revered by his residents and served as a role model for all who worked with him, myself included.. He was also loved by his patients.

Over the last 50 years I have had the privilege to be a part of rather dramatic evolutionary changes in the field of surgery. I have mentioned a few. But one of the most dramatic has been the transformation of open surgery into minimally invasive surgery. With the introduction of laparoscopy into general surgery in the early “90’s, I had to decide whether to remain a “dinosaur” and continue to do what I considered to have done well for years, or learn new techniques so that I could pass them on to our residents. I decided that whatever it would take at that stage in my life I would do it. A remarkable opportunity became available to me when the Air Force decided they didn’t need Dr. John Kairys after he completed his Air Force sponsored residency at our institution. It was their loss but my gain as we worked together as a team for over 10 years as partners in clinical practice. While I had the privilege of mentoring John during his residency, he was also mentored by many other members of our surgical faculty, more skilled at minimally invasive techniques than I It was then that an opportunity arose for Dr. Kairys to become my mentor in new laparoscopic techniques. This helped me admirably in converting from my prior posterior paravertebral approach to the adrenal gland to the much more desirable minimally invasive laparoscopic adrenalectomy. I can’t help but recall the first lap adrenalectomy that we did together. It was on a 250 pound retired police commissioner who had an aldosterone producing adenoma of the left adrenal. The laparoscopic approach gave everyone excellent visualization of the entire operation on the video screen, but entailed much more dissection than the paravertebral approach that I had been accustomed to. The operation went well. On rounds that evening, when went into the patient’s room, he was standing at his bedside table having dinner. He asked “when can I go home” I t was the first time in all my years of practice that a patient wanted to go home the same day after having had an adrenalectomy. Laparoscopic adrenalectomy

became a standard after that. Dr. Kairys also took over the reins as program director when I stepped down .He has moved residency education into the 21st century as I never could have done He has effectively worked the core competencies into resident education, and developed work schedules and rotations into the restrictions of the 80 hour work week, without compromising resident competence. Mentoring has taken on a new paradigm with the evolution of simulation centers for student and resident education. And John is right at the center of this activity. He has taken advantage of simulators and simulations to develop and enhance resident technical skills in procedures as simple as inserting a central line to the most complex of minimally invasive operative procedures. He has done a unique study asking our incoming house officers to enumerate their experience as medical students in procedures as simple as drawing blood to more complex procedures such as inserting a central line or suturing. You would be amazed at the lack of experience uncovered. He then designed and executed a program for all incoming house officers to be taught and tested in many of the skills that we take for granted are learned in medical school, to assure competence before they embark on their clinical responsibilties and direct patient contact. And, in addition, he remains a caring physician and mentor.

While the potential for technologic advances in our field as well as in teaching methodology are limitless, we must never lose sight of the fact that medicine is an art as well as a science.

In his book the “Youngest Science, or Notes of a Medicine Watcher”, Lewis Thomas compared the physician patient relationship as it existed over 150 years to that of today. The physician of that era was revered by the patient. What greater display of concern than the physician placing his or her ear to the chest of the patient to listen for breath sounds. Couldn’t hear a damn thing, but revered in spite of their limited diagnostic let alone therapeutic capabilities. The physician of today, with the remarkable technologic advances of CT, CTA, MRI, MRA can learn much of what there is to know about the patient without ever touching the patient.. The “laying on” of hands has become a lost art and has impacted adversely on the

physician patient relationship. Lewis Thomas stated that his greatest fear with advancing technology was that the roll of the physician would be taken over by machines. As a practicing surgeons, while taking advantage of the many technologic advances that have helped to improve patient care, we must continue to show our patients that we care for them. A simple gesture such as taking your patient by the hand, when you are making rounds goes a long way in reinforcing the bond between you and your patient.

As I look over the audience here this evening I am reassured that our current mentors are alive and well and reside in the multitude of venerable medical institutions that populate our great city. You will continue to provide the role models that current and future surgical trainees will try to emulate, so that they can continue to keep up with the demands of society for the outstanding and compassionate surgical care that they deserve.