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LEGENDS IN UROLOGY

John Denstedt, MD, FRCSC
Professor of Urology
Department of Surgery
Schulich School of Medicine and Dentistry
Western University
London, Canada

I would like to thank The Canadian Journal of Urology for this kind invitation to contribute an article to the Legends in Urology section. While I have never considered myself to be in the category of legend, I greatly appreciate the opportunity to reflect on my career. In addition to telling a story, I will focus on a few themes including innovation, international education and medical leadership.

I was born in what was a small town at the time, Brampton, Ontario on the fringes of Toronto. That small town is now over 600,000 people and part of the large urban area of Canada's largest city. My mother was a nurse and my father was an elementary school principal. When my Dad moved to this town in the mid 1950's from the family farm, he was the principal of the only school. I played little league baseball as a kid and although I thought I was a pretty good second baseman, my limited hitting skills positioned me as less than a legend in baseball. Aside from my mother, other connections to medicine in my family included a couple of uncles who were surgeons. I did not have a significant amount of contact with them but knew they were urology doctors, however I had little notion of what exactly that entailed. In fact, my great uncle, Dr. Lloyd McAninch, founded the urology residency training program at the University of Western Ontario in the 1950's and was himself a legend in urology locally, nationally and in the Northeastern Section of the AUA where he served as President in 1973–1974.

I read a lot of books when I was in elementary school and one of those when I was in grade 8, was a book by William A Nolen entitled The Making of a Surgeon. It told the story of a young intern working at Bellevue Hospital in New York and maturing into a trained surgeon. I read that book in an afternoon and when I finished, I knew it was what I wanted to do. At times the challenges of undergraduate science, competitiveness in securing a position in medical school that we are all familiar with, caused me to reflect on my chosen pathway to the point where I mulled about becoming a farmer or a truck driver. But I stuck with it and ultimately graduated with honors from Western Ontario medical school in 1982. I had retained the aspiration of becoming a surgeon and was attracted to both orthopedics and general surgery. But, after an elective on the urology service, I decided that was what I would do. As I hear commonly today from young medical students, the urologists seemed happy with what they were doing, I loved the technology and endoscopy and the wide range of problems urologists looked after and amazingly could often definitively treat.

My residency training was in the well-known Halstead style apprenticeship model. Accompanied by one in 2 call for 5 years, no duty hour restrictions and, at times, a trial by fire approach to surgical education. The surgical training programs even now at Western are famous {or even notorious} for large case volumes and let me call it a "rigorous methodology" in training. We were well trained at the conclusion, however, and with a set of skills that made us "practice ready". At the same time I met my wife of the last 39 years, Carolyn, who was working as a scrub nurse in the same operating room in which I trained. As a chief resident I was exposed to the first few cases of ureteroscopy and percutaneous surgery done by Dr. Jack Sales and found it fascinating. At that point we were still doing daily open uretero or pyelolithotomies and anatrophic nephrolithotomy for staghorn stones.

The exposure to academic medicine during my training was somewhat limited and I was still undifferentiated in terms of what I ultimately wanted to do. While completing the Canadian Royal College exams I did some community practice, an experience that has stood me in good stead throughout my career in terms of knowledge of the demands, challenges and rewards of community practice. But I felt something was missing particularly the exhilaration of being around trainees and the overall academic environment. So, I investigated the AUA fellowship listings and started writing letters. Actually, my wife typed the letters on a standard typewriter {there were no word processors} and I put the letters in an envelope with a stamp, mailed them and waited to see what might come back. I heard back from Marty Resnick who invited me to Case Western in Cleveland for the day. We talked and then he was called to the OR to do a bilateral orchiectomy, invited me to scrub in and do the case. Which I did. I am quite sure that would not be included as part of the standard fellowship interview process these days. I also heard from Ralph Clayman, then at Washington University. I went to St. Louis for the day and this catalyzed an experience and odyssey that changed my life. The new and exciting approaches, innovations, creativity and energy in that environment were immediately apparent. I accepted the fellowship position on the spot and started a mere 8 weeks later. I was immediately swept up in the introduction of minimally invasive techniques in urology, encouraged to think broadly about how to manage urology conditions and to challenge existing thinking. It set me up for a future of success for which I will forever be grateful. And not just me. This fellowship program at Wash U birthed an entire generation of disciples who have changed to face of our specialty over the last 3 decades. When the fellowship time was drawing to a conclusion, both Ralph and Dr. Catalona asked me to consider staying on the faculty. I was committed to return to my home faculty in London, Ontario, and I was tremendously torn about what to do. As a last-ditch effort on my final day Ralph took me into his office, pointed at some boxes on the floor, which happened to be the first set of laparoscopic instruments provided by Storz and said "the future of urology is in those boxes. "You have to stay". I returned home and a few months later the world's first laparoscopic nephrectomy was performed by Ralph Clayman and Lou Kavoussi. I missed it but at the same time exciting things were developing at home.

It was the peak times for shock wave lithotripsy in Urology and in the centralized Canadian health system we were awarded the privilege of having what ultimately was the busiest shock wave system in the world with the only other unit down the road and similarly busy in Toronto. This brought a wave of interest in new approaches to stones and other conditions at my hospital and we became a hub for new technology assessment and introduction. The most remarkable of these came out of a casual discussion in the surgeon's lounge with an industry representative that I had known back to residency days. I had just finished a short trial with an Alexandrite laser for fragmenting stones but the results were poor at best. Electrohydraulic lithotripsy was the standard in that era but for those who used it, it will be remembered as a barely controlled explosion in the ureter often met with perforation and strictures. Bill Roberts described for me however a new laser wavelength called holmium that was being used by orthopedic surgeons to cut bone and cartilage. We mused "maybe it would break a kidney stone". While I was a bit reluctant given my recent experience I said "sure, bring it in". This was a device the size of a small refrigerator, hard wired into the wall and we only had one laser fiber for at least several months. The nurses turned it on in the first case, asked what to set it on and I said I had no idea "just put it in the middle". That turned out to be an energy setting of 0.8 joules and a frequency of 10. The same setting is mostly used worldwide today. There was no ethics approval or any other regulatory items required and away we went. I try to image what that pathway would be like today. We completed the first series of patients over a year or two, slowly moved away from EHL and the rest, as they say, is history. A burst of new approaches with this laser were trialed including soft tissue applications, {I recall flying to New Zealand for a day or two to compare notes with Peter Gilling}, eliminating stents for ureteroscopy, treating pregnant patients, pediatric patients and anticoagulated patients with ureteroscopic lithotripsy and numerous others. It was exhilarating.

In the early 1990's another journey started for me that being in the area of international education. Soon after the fall of communism in eastern Europe, the AUA put in place an educational program to assist in bringing the skills and techniques there into the 20th century. This was spearheaded by Dr's. Logan Holtgrewe and Gene Carlton. I offered to go, was accepted and travelled to Romania in 1994. I had never been out of North America before and frankly was shell shocked by what I saw. Draining TB fistulae, malignancies well advanced beyond anything I had previously seen and approaches for some conditions that I had only read about in history books. But the doctors were dedicated, enthusiastic to learn and wonderful in their hospitality to a young Canadian kid. I performed what I was told to be the first ureteroscopy in the country and amongst the first PCNL's procedures. I have good

friends in Romania still today. This experience opened the world for me and over the years since, I have travelled and been involved in various educational programs in over 70 countries on more than 400 occasions. I operated on many occasions in countries from Khazakhstan to China, Argentina, France and everywhere in between. It is often said that it is the people you meet and the experiences you have along the way that really matter and I can attest it is true. My view of the world has expanded far beyond the boundaries of that little town I grew up in in southern Ontario. Doctors have the same motivations and aspirations no matter where you are in this world. They wish for a successful career, a safe and successful family, a good working environment, keeping up with change and caring for patients. I also learned that some of the most important changes and innovations can come from anywhere in the world and increasingly so from locations you might not expect. There are dedicated and creative people everywhere. I have also been blessed with having numerous great fellows over the last 30 years. Many from across Canada but the majority from internationally. All have gone on to have a tremendous positive impact in their own communities. I also, as much as possible, tried to take one or both of my daughters on these adventures and can soundly say that I turned my two children into citizens of the world by hanging out with urologists at medical meetings. It's true!

Finally, I would touch briefly on medical leadership. I have not been a person who has intentionally or with any overarching plan sought out any particular medical leadership position but rather just stepped up when opportunities came in my direction. But this somewhat casual approach resulted in many leadership experiences in numerous organizations over the years. An example being the Chair/Chief of one of Canada's largest academic surgical Departments taking on the role at a time of crisis for a variety of reasons with many surgeons leaving, demoralization and difficult relationships with the teaching hospitals. I was precipitously asked to take on the role of acting chair of surgery, a responsibility I said I would do for a few months until a permanent chair was selected. That became 14 years of surgical leadership in which the department, consisting of 8 Divisions, doubled in size and I can proudly say resumed its stature as a leading Department of Surgery in the country academically and clinically. I had many learnings during that time including having good lieutenants, delegate appropriately, mentor new recruits in a dedicated way, build coalitions to achieve big picture projects and of course lots about the nuances of human nature. I lived by a decree that if a person seemed to be particularly challenging I needed to get to know them better. It almost always worked. I came to learn that the best thing that could happen was when an individual, often the most junior member in the Department made an appointment to meet or just came through my door which was always open and said "I have an idea" or "how do I get involved?"—it yielded the best and most powerful outcomes often eventuating in major and successful strategic projects. It has been said recently that there is a decline in interest in organized medicine and medical societies. I hope that is not true as my own involvement in entities such as the Endourological Society, Northeastern Section of the AUA, the American Urological Association and numerous scholarly journals have all been tremendously rewarding experiences. All of these tasks have been major efforts but I always felt that I easily took away as much as I put in and benefited significantly from the people I met and in seeing the organizations grow. Given the chance I would do it all again in a heartbeat!

In concluding, I am optimistic for the future of Urology. It is a wonderful medical specialty filled with innovation and opportunity. I can think of no better career than being in academic medicine. There are so many avenues for positive impact for our patients, those who we train and in new discoveries. It has been a wonderful journey for me.

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