Personal Statement

I joined the faculty of the Department of Urology at Indiana University School of Medicine in 2006 with the goal of continuing the department's long tradition of excellence in service, teaching and research. My goal has been to participate in the growth and well-being of students, residents, fellows, and patients to the highest levels nationally and internationally through research and creative activity, teaching and learning, and patient care. I am committed to the core values of the institution and my colleagues including excellence, respect, integrity, diversity and cooperation.

In particular, I have sought to advance the care of children with congenital and neurologic conditions affecting the urinary tract. Since my promotion to Associate Professor in 2012, I have worked to continue to expand my service to the department, school and discipline at local, national and international levels. I am applying for promotion to Professor of Urology with a declared area of excellence in service. The delivery of high quality teaching and research has remained a very important goal in my career and is intimately related with many of my areas of service.

SERVICE

Clinical Service

The medical community has been very successful in prolonging the lives of pediatric patients with diverse congenital diseases that would have been lethal in the past. However, I realized early in my career that there was a paucity of attention paid to the lifelong implications of pediatric urologic interventions and the care of the maturing child with urologic disease. Perhaps increased attention to the needs of this population might further improve and extend their lifespan. Both the Department of Urology and the Division of Pediatric Urology at Riley Children's Health is internationally known as a center of excellence for reconstructive urologic surgery and has worked diligently to improve the care of these patients. Despite many advances in their care, the long-term physical effects of our therapies remain poorly understood. Additionally, we do not fully understand the effect of our therapies on the quality of life of these patients as they survive into adolescence and adulthood. Because of this, I started the Clinic for Adults with Congenital Urologic Conditions at Riley in 2007. The clinic is dedicated to the care of adolescents and adults with congenital urologic conditions.

Over time many patients lost to follow-up have returned to Riley for clinical care and those who approach adulthood are referred to this clinic for continued urologic care. Prior to this, patients were referred to urologists who primarily care for adults. While many offered excellent care, some felt uncomfortable or burdened with the care of these complex patients. This is certainly not a fault of the urologist as the problems of this population are often uniquely different than those typically seen by adult urologists such as enlargement of the prostate or stones. Some patients and their families, particularly those with developmental delays, felt their care was not developmentally appropriate. Many patients had no follow-up care and returned with very significant complications of their disease including renal failure. The goal of this clinic is to avoid preventable complications and provide care in a continuous, developmentally appropriate manner. This is among the first such clinics in the United States and has been a model for others around the country. In addition to serving as a model, my work has prompted increased attention to the need for continued, meticulous care of children with congenital urologic disease into adulthood, both nationally and internationally.

Many patients I see in this clinic have spina bifida, the most common permanently disabling birth defect in the United States. Currently, most of the patients living with spina bifida in the United States are adults. Over time, caring for this unique group of patients as children and as they transition to adulthood has led me to identify some problems specific to them. While some problems are technical and related to surgery, others seemed to be related to other aspects of life and have led to extensive research in the field of quality of life (see research). As a result of my commitment and contributions to the service of these patients, I have been named the Director of Spina Bifida-Urology and Transitional Urology at Riley.

In addition to this special interest, I am actively involved in delivering urologic care to the children of Indiana and adjoining states. Since joining the faculty, I have grown my practice to over 1500 outpatient visits and 600 operative procedures last year. My service commitments include the inpatient and outpatient Pediatric Urology service at Riley Children's Health. My inpatient service involves the care of children admitted with urologic conditions as well as being a consultant to patients in need of urologic services. Our division has consistently ranked among the top five divisions in the country by US News and World Report since the inception of the rankings in 2007. In addition to my service at Riley, I have expanded outreach clinics in Lafayette and Northwestern Indiana. These outreach clinics help eliminate long trips to Riley for routine pediatric urologic care. This outreach service is of particular importance to the children of these areas as there are no urologists with fellowship training in pediatric urology in their communities. Also, despite the proximity to Chicago, children with state funded insurance cannot be treated in Illinois. Last year approximately 700 patient visits were in these clinics.

Despite a very busy clinical practice, I am committed to delivering the highest levels of quality care. This is evidenced by my patients' satisfaction, multiple Red Shoe Awards and being named as one of Indianapolis' Top Doctors by Indianapolis Monthly Magazine. Red Shoe Awards recognize outstanding accomplishments and contribution to family-centered care at Riley Hospital for Children. Castle Connolly Publishing has also named me one of America's Top Physicians and Top Surgeons.

Administrative and Committee Service

At a hospital level, I have become involved in teams and committees to improve the care of patients. The Riley Physician Engagement Committee, which meets monthly, includes one physician from each of the medical specialties at Riley and hospital administrators. The multidisciplinary nature of this group allows its participants to understand challenges unique to each field and allows discussion with other physicians and administrators to help effect change. The Surgical Guidelines Development Team includes surgeons, nurses and administrators who come together to set protocols to assist patient flow in the operating room.

At the school and university level, the Dean appointed me to the Indiana University School of Medicine Women's Advisory Council in 2008. This group includes physicians and scientists from various departments and campuses across the school. The Council provides an advisory role for the School's efforts to create a culture where all members of the IUSM community can thrive. The council has been effective in helping the promotion of women as well as mentoring and identifying potential barriers that may disproportionately affect women across all IUSM campuses. I am also an active

member of the newly formed IUSM Women in Surgery group. The group focuses on career development and advancement of women surgeons as leaders. It also provides a forum to discuss ways to improve collaboration and career satisfaction.

In 2011, I assumed the role of Pediatric Urology Fellowship Director after acting as Associate Fellowship Director since 2006. As fellowship director, I have accountability and authority for the operation of the fellowship program. Additional responsibilities include the administration and maintenance of an environment that is conducive to educating fellows. During my tenure as fellowship director we have attained the most favorable reviews by the American Committee on Graduate Medical Education.

I am very pleased to have also been invited to join the IUSM Transition Steering Committee by Dr. Mary Ciccarelli. This group has been brought together to discuss the needs of children with special health care needs as they transition into adulthood. The group is comprised of members of multiple specialties with the common goal of creating an appropriate mechanism of transition from childhood to adulthood within the IU Health system. My experiences in the treatment of individuals with congenital urologic conditions during transition from childhood to adulthood have been very useful in helping to identify barriers to quality care. The need for such services has also been recognized on a national level and in 2014 the National Institute of Diabetes & Digestive & Kidney Diseases (NIDDK) decided to focus on this particular population. I was invited to participate in the planning committee of a meeting sponsored by the NIDDK to evaluate the research needs for people with congenital genitourinary conditions. This culminated in multidisciplinary meeting in Bethesda, Maryland in 2015 entitled “Research Needs for Effective Transition in Lifelong Care of Congenital Genitourinary Conditions”. At the meeting I was the co-leader of two Working Groups 1) Neuropathic Bladder and Exstrophy: Lower Urinary Tract and Bowel Dysfunction and 2) Outcome Measures. The findings of this group have been summarized in a manuscript submitted for publication by the Transitional Urology Writing Group of which I am a part.

My interest in the care of children with spina bifida has allowed me to participate in several national organizations and panels. I have been a member of the Spina Bifida Association’s Professional Advisory Council since 2008. This was a five-year commitment that was extended. The Spina Bifida Association is a nonprofit organization that serves adults and children who live with spina bifida. It is the nation’s only voluntary health agency that works exclusively for people with spina bifida and their families through research, advocacy, education and service. I have actively participated in Spina Bifida Clinical Care Network as a Urology Representative since 2014. The network has been helpful in drafting a plan to improve communication among all stakeholders in the care and lives of people with spina bifida, to develop spina bifida clinic site performance expectations, to improve the care of adults with spina bifida and to develop best practices for clinical programs. Additionally, I have been active in the Spina Bifida Association Continence Working Group since 2012. I have also been invited to speak and moderate sessions on the topic of transition at national meetings of the Spina Bifida Association, the American Academy of Pediatrics, the Society of Pediatric Urology and the American Urological Association.

Since my promotion to associate professor, I have become increasingly more involved in the Society of Pediatric Urology, the primary organization representing pediatric urologists in the United States. I have served on the nominating committee and became

the membership coordinator in 2014. Today, the SPU represents the largest society of pediatric urologists in the world.

At an international level, I have been a contributor to Faculty of 1000 Medicine Review since 2007. As part of Faculty of 1000 I assist in identifying and evaluating the most important articles in Pediatric Urology research publications. This is a group of peer-nominated global 'Faculty' of the world's leading clinicians who rate the best of the articles they read and explain their importance. In addition to participating in presentations of original research at the World Congress on Spina Bifida and the Congress of the European Society for Pediatric Urology, I have also been invited to moderate sessions at the annual meetings.

Most recently, I have been chosen section editor of Adolescent Urology for the Journal of Pediatric Urology. The journal's mission is to advance and improve education in Pediatric Urology. It is the official journal of the European Society of Pediatric Urology, the Sociedad Iberoamericana de Urologia Pediatric (representing pediatric urology in Latin America) and the Asia Pacific Association of Pediatric Urology (representing pediatric urology in Asia). It has a close affiliation with the Society of Pediatric Urology in the US that has no official journal. In addition, I also conduct regular reviews for numerous other journals.

TEACHING

The opportunity to teach medical students, residents and fellows is one of the most gratifying aspects of my life as an academic surgeon. Teaching is intimately involved and intertwined in all aspects of my professional life. My goal as an educator is to transform a student into a competent, empathetic, independent practitioner of medicine who will work throughout his or her career to improve the care of patients and continue to grow professionally. I feel it is my responsibility not only to impart medical knowledge and procedural skills, but also to train a professional with excellent interpersonal skills who can function well within a healthcare system. It is my opinion that the latter skills are best taught by example. The transformation may be difficult as it involves hard work and dedication as is often coupled with emotional, physical and intellectual challenges. I believe that acknowledging the different challenges of learners is essential to becoming a successful teacher. For example, some residents are gifted technical surgeons who operate gracefully while others may be awkward and require additional technical training. The same graceful surgeon may struggle with some elements of professionalism and may need some additional guidance when interacting with patients and families. In urology, teaching often occurs in small groups and is most often one-on-one. This allows me to alter my teaching style based on the student. I strive to create a collegial setting where inquisitiveness, analytical thinking, and respect for others are encouraged.

In line with one of the core tenets of American medical education, I believe in the concept of graded and progressive responsibility. Early on in medical education, I feel it is important to the learn basics of disease and the art of patient interaction. My goal is to build upon the knowledge and skills gained with each passing year of training. The environment in which teaching occurs most often involves myself, the medical student, resident and/or fellow and the patient. While I am the designated "teacher", it often

amazes me to see how the three parties involved often learn from each other and it is for this reason that I cannot imagine not being a teacher.

As a member of the faculty of the IUSM department of urology there are a multitude of clinical and didactic learning opportunities for students both at the graduate and postgraduate levels. I am always pleased to teach. I have served as a mentor to students, residents and fellows. I have taught second and third year students (IUSM Introduction to Clinical Medicine 2007-2013 and IUSM Third Year Surgery Lectures in Urology 2008-2015). Recently, I developed an online lecture series for third year medical students to replace the live lectures in urology. I was actively involved in the third year urology elective during the surgery rotation until 2013, at which time pediatric urology was eliminated given the narrow scope of the specialty. I continue to interact with students who rotate in pediatric urology as part of special electives during the third and fourth year of medical school. At the residency and fellow level, I interact with the trainees on a daily basis including teaching in the operating room, outpatient clinic and wards for interns, second and fourth year Urology residents. I actively participate in weekly didactic lectures and activities. These include formal lectures or case based discussions often involving multiple disciplines such as nephrology and/or radiology. As an active member of the faculty I have also had the opportunity to engage students, residents and fellows in research activities. This has allowed me to teach important research related skills such as the development of hypothesis driven research.

At the community, regional, and national teaching level, I have provided grand rounds regionally and I have spoken at national and international conferences in my areas of expertise. As part of my work on the professional advisory council of the Spina Bifida Association, I have had the opportunity to lead many sessions whose goal is to educate parents and patients about the effects of spina bifida on the genitourinary tract, as well as treatments available. I have actively taught nurse practitioners and nurse practitioner students who visit Riley from around the country to learn about the evaluation and treatment of voiding dysfunction. Together with our senior nurse practitioner, Shelly King, I have assisted in the production of videos teaching catheterization techniques for our patients.

RESEARCH AND CREATIVE ACTIVITY

My clinical activities and observations have been the inspiration for most of my research. This, coupled with the previously mentioned mentorship of residents and fellows, has led to multiple peer reviewed publications. The division of pediatric urology at IUSM has a long been known as a world leader in the surgical management of children with poorly functioning bladders due to spina bifida. While I have actively participated in many studies evaluating the success of surgical procedures in this patient population, I have focused on long-term outcomes and quality of life issues among adults with spina bifida since my promotion to Associate Professor. I have collaborated extensively with Dr. Konrad Szymanski, first as a mentor during his fellowship and now as an associate in my division. His expertise in patient-centered outcomes combined with my clinical experience has led to the critical evaluation and study of many aspects of life in people with spina bifida. Together we worked to design a novel health-related quality of life instrument for adults with spina bifida (QUAlity of Life Assessment in Spina bifida for Adults (QUALAS-A)). We continue to evaluate how continence affects various aspects of life for this patient group and are evaluating better measures of renal function in people with spina bifida. This is of critical importance as renal failure was historically their

primary cause of death.

The results of my research in adult related issues have enabled me to improve my care of children. By carefully evaluating what is important to children as they grow into adults, and by assessing the success and complications of various surgical interventions, I am improving clinical care. By disseminating my research in peer reviewed journals, chapters, presentations and lectures I believe that I am able to provide more positive outcomes for patients and parents around the world.

My future goals are to continue to provide excellent service to my patients, my department, the school, the university and my discipline. I am particularly interested in developing a multidisciplinary program for the care of people with spina bifida as they become adults. My hope is that together we can further improve the health and quality of life of these patients. In addition, I am spearheading a movement to develop a new fellowship in Transitional Urology or Congenital Urology to help fill the current gap in care. It is estimated that 80 physicians dedicated to transitional care are needed in the United States. Currently, this need is partially fulfilled by pediatric urologists, urologists trained in reconstructive urology and community urologists. I presented the proposed training program to the American Board of Urology in May. I was able to highlight the specific needs of this patient population and the positive impact of such a program. This further heightened interest and will be the subject of the Board's summer meeting. If approved this program will involve dedicated training in pediatric urology and adult reconstructive urology and will allow for new mentoring, teaching and research opportunities. Our department is poised to begin training the first such fellow in July 2017.

I am honored to be considered for promotion to the position of Professor in the Department of Urology at Indiana University School of Medicine. I have been fortunate to have excellent colleagues, mentors and sponsors who have made important contributions locally, nationally and internationally. It is my sincere wish to continue this tradition.