

**George Washington University
Medical Center
Washington, DC**

**UROLOGY
RESIDENCY
HANDBOOK**

2017-2018

"Urologists are first and foremost surgeons and excellence in urologic surgery can be achieved only through diligent and exhaustive application to both the fundamentals of surgery and the advancing technology of the urologic specialist."

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SECTION 1

FACULTY

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Senior Residents (PGY – 3 / URO – 2)

John DiBianco, M.D.
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Junior Residents (PGY – 2 / URO – 1)

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Interns (PGY – 1)

Albert Gilbert, M.D.
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INTRODUCTION

Welcome to the George Washington University Medical Center Urology Residency Program. This handbook outlines important aspects of the training program and will guide you during your residency. The handbook includes goals and objectives for each year-level of training, each rotation as well as the responsibilities expected of residents. You will also find in this handbook the expectations of the faculty, schedule of your training including the various conferences, as well as the methods to evaluate your progress. Additional information about the institutional policies and regulations regarding residency training may be found in the Graduate Medical Education Institutional Resident Guidelines. The Accreditation Council for Graduate Medical Education (ACGME) website provides essential information about the program requirements and faculty/resident responsibilities.

The Urology faculty is here to serve as a guide as you learn the art and science of urology. We pledge to stimulate you to think and learn and give you timely feedback and direction to ensure that you progress satisfactorily. We ask you to relentlessly pursue excellence in everything you do, providing the best possible patient care and to fulfill your maximum potential as students of urology.

Thomas Jarrett, M.D., FACS
Chairman and Program Director,
Urology Department
The George Washington University Med Ctr

SECTION 2

EDUCATIONAL PROGRAM

Mission Statement

The objective of the George Washington University Medical Center (GWUMC) Urology Residency Program is to produce urologists of the highest quality with the knowledge, clinical acumen and surgical skills to care for the entire spectrum of urologic disease. We believe in a rigorous academic training program with a strong didactic schedule, a busy surgical caseload with exposure to basic science and clinical research experience. Emphasis will be placed on instructing the residents on the importance of a strong physician-patient relationship and delivering care with compassion. We expect residents trained in the GWUMC Urology Program will become leaders in Urology, practice Urology with personal integrity, high ethical standards and respect for the patients and their families entrusted in their care.

The goal of the GWUMC Residency faculty is to make each of our finishing residents professionally competent as defined by the following: "The habitual and judicious use of communications, knowledge, technical skills, clinical reasoning, emotions, values and reflection in daily practice for the benefit of the individual and the community being served." (Epstein, R. JAMA 287(2): 226-235, 2002)

Scope of Residency

The GWUMC Urology Program is currently a five - year program with progressively increasing levels of responsibility each year. The five year program consists of 1 year of General Surgery, followed by four years of urology.

ACGME Accreditation

The George Washington University Urology Program is fully accredited by the ACGME and will undergo its next Residency Review Committee site visit in 2018.

ACGME Competency/Outcomes Initiative

The Accreditation Council for Graduate Medical Education (ACGME) is changing the way residency education is conducted. This new educational philosophy emphasizes 6 general competencies, which must be taught and evaluated in an outcomes-based methodology. The competencies include **patient care, medical knowledge** (clinical science), **practice-based learning and improvement, interpersonal skills and communication, professionalism, and systems-based practice**. These competencies are integrated into the George Washington University Medical Center Urology curriculum and are a part of the evaluation process. Also, the ACGME requires as part of the evaluation process, the Program Director has appointed a Clinical Competency Committee (CCC) to prepare and assure the reporting of Milestone evaluations to him which he will share with each resident biannually. The following describes the goals and objectives for the core competencies and how each will be evaluated.

NARRATIVE DESCRIPTION FOR EACH YEAR OF TRAINING

PGY - 2 (URO – 1, Junior Urology Resident)

The PGY-2 Urology Resident (URO-1) spends half the year at the George Washington University Medical Center (GWUMC), and half the year at Sibley Memorial Hospital. During this year; the resident will spend two separate half (1/2) days seeing patients in the Medical Faculty Associates (MFA) outpatient clinic setting and three and a half days in the operating room. The resident's outpatient clinic experience is structured in such a way that the resident will have exposure to both general urology and urology subspecialties.

In the MFA clinics, the URO-1 resident will take a history, and examine every patient assigned to them by the attending. After completing the history and physical the resident will discuss the case with the supervising faculty who will ensure that an adequate examination, documentation and counseling had occurred. In these clinics the resident will gain exposure to urologic subspecialties.

The URO-1 resident will perform inpatient surgical procedures commensurate with their level of training, assisted by a staff urologist. They will be assigned by the Chief Resident, to an endoscopy or an open operating room each day. In consultation with the Chief Urology Resident, he/she will be the primary manager of the daily care of urology inpatients, including daily progress notes.

The URO-1 resident will be responsible for assuming primary on-call duties with a supervising faculty. The resident will take home call and is not required to be in house. The resident will see inpatient and emergency room consults. They will be responsible for evaluating each patient and presenting the consult directly to the supervising faculty.

He/she will be an active participant in all academic conferences. The resident will attend the Basic Science Review Course given by the American Urological Association at Charlottesville, VA in June of the URO-1 year. They will also pick or be assigned a faculty who will serve as a mentor and research supervisor. Together they will plan for future research opportunities.

PGY - 3 (URO – 2, Senior Urology Resident)

The PGY-3 Resident (URO-2) spends 2 separate 3 month blocks at the George Washington University Medical Center (GWUMC), and 2 separate 3 month blocks at Sibley Memorial Hospital. During this year, the resident will be given more responsibility and be able to perform more procedures with less direct supervision. They will spend two half (1/2) days seeing patients in the Medical Faculty Associates (MFA) outpatient clinic setting and three and a half days in the operating room.

The URO-2 resident will build on their general urology and subspecialty exposure from the URO-1 year and manage more complex urologic problems. They will be assigned by the Chief Resident more complex cases and if appropriate assist the Chief Resident in performing certain challenging cases. This rotation serves as a transition period where senior (URO-2) resident overlaps with the chief resident and begins to assume some of the roles of the chief resident while the URO-4 is preparing to graduate. They will begin to take over managing the Urology inpatient and outpatient service as well as the operating room schedule. They will perform cases with the Chief resident and begin to takeover the more complex and bigger procedures. If the Chief Resident is absent for some reason the URO-4 will assume the role of Chief Resident. The URO-2 residents assumes the primary responsibility for the Urology inpatient consult service along with the on call supervising attending or fellow.

The URO-2 Urology resident will be responsible for assuming primary on-call duties with a supervising faculty. The resident will take home call and is not required to be in house. The resident will see inpatient and emergency room consults. They will be responsible for evaluating each patient and present the consult directly to the supervising faculty.

PGY-4 (URO – 3, Research Urology Resident)

The PGY-4 Urology resident (URO-3) will spend six months of the year on the clinical research rotation at the National Cancer Institute (NCI) on campus of the National Institute of Health (NIH). During this time they will have the opportunity to perform clinically based research in conjunction with the Urologic Oncology Service of the NCI. The resident will be assigned a faculty who will mentor them and monitor their progress. The resident will also be expected to report their progress monthly to their mentor and the residency program director.

The URO-3 resident will also spend six months on the Pediatric Urology Service at the Children's National Medical Center (CNMC), Washington DC. The resident will participate and gain experience in a large volume of routine and complex pediatric urology surgical cases performed by several Board Certified and specialty trained urologists at this institution. With staff supervision, they will be expected to follow and manage these patients in the pediatric urology clinic, as well as the preoperative and postoperative inpatient setting.

PGY-5 (URO – 4, Chief Urology Resident)

The Chief Urology Resident (URO-4) spends 6 months on the urology service at George Washington University Medical Center (in 2 separate 3 month blocks), and 6 months at Sibley Memorial Hospital. During this year, the resident will spend two half (1/2) days per week seeing patients in the outpatient clinic setting and three and a half days in the operating room. The Chief resident is responsible for the management of the inpatient urology service and supervises twice daily rounds on all urologic inpatients. The Chief Resident conducts the resident's clinic along with the fellow, and supervises junior residents, interns and students in the clinic setting. Patients requiring follow-up are scheduled with this resident over the year so that continuity of care can be preserved. The resident at this level assumes a key role in the teaching and education of more junior residents. He/she completes the history and physical exam of the patients on which they operate. The URO-4 performs all of the more complicated urological operative procedures with the faculty supervision. The Chief Resident will also be responsible for organization of the operative schedule, delegation of surgical cases to more junior residents, adherence to the academic schedule and team attendance at teaching conferences and rounds. They will also be responsible for developing the resident call schedule. At the end of this year, the URO-4 resident will be fully competent in the management of outpatient, surgical and postoperative patients.

GENERAL COMPETENCY BASED GOALS AND OBJECTIVES FOR ALL RESIDENTS

1. PATIENT CARE

Goal: Provide care, both medical and surgical, of patients with urological health problems that is appropriate, effective and compassionate.

Objectives:

1. Obtain a complete and accurate history and physical examination from patients with genitourinary complaints. (1,2,4,5,10,11)
2. Interpret and obtain appropriate laboratory studies for the evaluation of urologic disorders. (1-5,11)
3. Formulate treatment plans based on patient information and preferences for specific genitourinary diseases. (1,2,4,5,11)
4. Apply current scientific evidence using information technology to facilitate the diagnosis and treatment of urologic disease. (1-5,11)
5. Appropriately counsel and educate patients and their families about specific urologic problems. (1,2,5,7,10)
6. Know the health care services aimed at preventing urologic problems and maintaining health. (1,2,4,5,11)
7. Work with other medical and surgical disciplines and health care professionals to provide multidisciplinary care to the urology patient. (1,2,4,7,10,11)
8. Competently perform all diagnostic and invasive procedures required for the appropriate management of genitourinary disorders in the outpatient setting. (1,2,5-7,9)
9. Perform all urologic surgical procedures including open, endourologic and laparoscopic cases, in a competent manner. (1,2,5-7,9)

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Rotation specific readings
4. Direct faculty mentorship
5. Daily supervised care of surgical patients
6. Presentations in clinic
7. Rotation specific conferences
8. Supervised on-call experiences
9. Checklists-surgical checklist
10. Observed clinical examination
11. Simulation

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Examination-in-service
5. Teaching rounds
6. Biannual review with residency program director
7. Surgical simulators
8. Patient surveys
9. Case logs and procedure logs
10. Laparoscopy lab
11. Observed clinical examination
12. Medical Record review on wards

2. MEDICAL KNOWLEDGE

Goal: Acquire basic scientific and clinical knowledge of the full spectrum of genitourinary disorders and be able to apply this knowledge to care of the urologic patient.

Objectives:

1. Know the embryology, anatomy and physiology of the genitourinary system. (1-7)
2. Apply knowledge of the pathophysiology of urologic disorders to the care of individual patients. (1-7)
3. Obtain and process knowledge about urologic disorders from reading sources, the literature and didactic teaching sessions. (1-6)
4. Perform well on standardized examinations (both written and oral) assessing fund of basic science and clinical knowledge. (1,4-6)
5. Dedication to improvement in medical knowledge through a commitment to continued medical education. (1-7)

Teaching Methods:

1. Rotation specific readings
2. Direct faculty mentorship
3. Presentations in clinic
4. Rotation specific conferences
5. Simulation
6. Laparoscopic lab

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Chart stimulated recall
5. Examination-in-service
6. Teaching rounds
7. Biannual review with residency program director
8. Laparoscopy lab

3. PRACTICE-BASED LEARNING AND IMPROVEMENT

Goal: Improve urologic patient care practices by the critical evaluation of current practice patterns and by the appraisal and assimilation of scientific evidence.

Objectives:

1. Critically analyze on a regular basis current practice experience using a systematic and reliable methodology. (1-2)
2. Perform practice-based improvement by implementing a change in practice based on newly acquired clinical information. (2,3)
3. Locate, appraise and assimilate scientific studies from the urologic literature applicable to patient management. (1,2,3)
4. Understand scientific study design and statistical analysis to allow evaluation and appraisal of clinical studies. (1,2)
5. Use information technology to access medical information for them selves and the patient. (1,2,3)
6. Be an effective teacher of medical students, junior urology residents and other health care professionals. (1-3)

Teaching Methods:

1. Clinical performance with direct observation
2. Direct faculty mentorship
3. Daily supervised care of surgical patients
4. Presentations in clinic
5. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Biannual review with residency program director

4. INTERPERSONAL AND COMMUNICATION SKILLS

Goal: Develop interpersonal and communication (verbal and writing) skills that will allow effective exchange of information with urologic patients, their families and other health care professionals.

Objectives:

1. Develop rapport with urologic patients and their families. (1,2,4-7)
2. Develop effective listening skills and be able to elicit and provide information using appropriate nonverbal, explanatory and patient interview skills. (1,2,4-7)
3. Formulate and write coherent and legible notes in the medical record. (1,3,6-8)
4. Write clear, concise and comprehensible manuscripts for publication in the urologic literature. (1,7)
5. Prepare and deliver oral or case presentations in a thoughtful, organized and coherent manner. (1-4,6-9)
6. Work effectively with others (urologic residents and faculty) as a member or leader of the Urology health care team. (1,2,5,7,9)
7. Interact and communicate effectively with nurses and other health professionals and hospital staff. (1,2,5,7,9)

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Simulation
8. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Chart stimulated recall
5. Observed clinical examination
6. Patient surveys
7. Teaching rounds
8. Biannual review with residency program director
9. Review of medical records
10. Laparoscopy lab

5. PROFESSIONALISM

Goal: Be professional by adherence to high ethical standards, professional responsibilities and sensitivity to the diverse urologic patient population.

Objectives:

1. Have respect, compassion and integrity in your interactions with patients, their family members and other health care professionals (1-4,6-8)
2. Accept responsibility readily, be industrious and self-motivated, and bring assigned tasks to completion. (1-8)
3. Function as an effective leader of the Urology health care team. (1-8)
4. Understand and commit to the ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent and urology business practices. (1-8)
5. Be sensitive and responsive to the urology patients' culture, age, gender and disabilities. (1-4,6-8)

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Observed clinical examination
5. Patient surveys
6. Case logs and procedure logs
7. Teaching rounds
8. Biannual review with residency program director
9. Laparoscopy lab

6. SYSTEMS-BASED PRACTICE

Goal: Be aware of and responsive to the health care system in which you practice, and use available resources from this health care system to optimize care of the urologic patient.

Objectives:

1. Understand how urology patient care practices affect other health care professionals within the local, regional and national military health care system. (1,2,3,6)
2. Describe how elements of the health care system affect your individual urology practice. (1,2,3,6)
3. Understand differences between various types of medical practices and delivery systems (e.g., HMO, academic, military, private practice, etc), especially with regard to health care costs and allocation of resources. (1,2,4,6)
4. Readily identify and correct health care system deficiencies that may result in less than optimal care of the urology patient. (1,2,3,6)
5. Assist urology patients in dealing with health care system complexities. (1,2,3,4,6)
6. Practice cost-effective health care and resource allocation without compromising quality of patient care. (1-4,6)
7. Know how to partner with health care managers or other providers in efforts to improve coordination and effectiveness of the health care system (1-3,6)

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Morbidity/Mortality Reports, Tumor Board Reports
5. Observed clinical examination
6. Case logs and procedure logs
7. Biannual review with residency program director

GOALS AND OBJECTIVES FOR EACH RESIDENT YEAR AND ASSIGNMENT

PGY-2 UROLOGY RESIDENT (URO-1)

The URO-1 resident is assigned for six months on the Urology service at GWUMC and six months on the Urology service at Sibley Memorial Hospital. This is done in a 3 month, 6 month, 3 month pattern. During these twelve months the resident will be assigned an outpatient clinic, work under the supervision of the chief resident in the management of inpatients and be assigned operative cases by the chief resident. This is a pivotal year in which the resident is introduced to urology, and it is in this year that the resident will begin to develop the knowledge base and experience that he/she will be expected to expand upon during each year of his/her training. The resident will be exposed to the different subspecialties representing the domains of urology through his/her clinic experience, conference and reading assignments. The resident will be expected to master the basics of history taking, examination, become proficient in basic procedural and operative skills as well as become exposed to and read about disease processes from each of the domains of urology. Following are general goals and objectives for the URO-1 year along with specific, topic based goals and objectives that will serve as the foundation of knowledge, and experience for the ensuing years. The residents will be expected to build upon these goals and objectives throughout their urology training.

1. PATIENT CARE

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Rotation specific readings
4. Direct faculty mentorship
5. Daily supervised care of surgical patients
6. Presentations in clinic
7. Rotation specific conferences
8. Supervised on-call experiences
9. Checklists-surgical checklist
10. Observed clinical examination
11. Simulation

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Examination-in-service
5. Teaching rounds
6. Biannual review with residency program director
7. Surgical stimulators
8. Patient surveys
9. Case logs and procedure logs
10. Laparoscopy lab
11. Observed clinical examination
12. Medical record review on the wards
13. Surgical evaluation form

Goal 1: During the junior urology year, the resident will develop the ability to perform a complete interview and obtain an accurate history from patients with urologic disorders encountered in the urology outpatient clinic setting

Objectives:

1. Using appropriate and effective interview techniques elicit and characterize an accurate history of the present illness from patients presenting with genitourinary complaints (1,4,10)
2. Develop effective listening skills and be able to elicit and provide information using appropriate nonverbal and explanatory skills (1,4,10)
3. Formulate and write coherent and legible notes in the medical record (1,4-6,11)
4. Formulate treatment plans based on patient information and preferences for specific genitourinary diseases (1-5)
5. Appropriately counsel and educate patients and their families about specific urologic problems (2,4,7,10)
6. Be empathetic, understanding, compassionate and honest in dealings with patients and their families (2,4,7,10)
7. Be sensitive and responsive to the urology patients' culture, age, gender and disabilities (2,4,7,10)

Goal 2: During the junior urology year, the resident will perform a detailed and appropriately focused urologic physical examination.

Objectives:

1. Discuss and demonstrate ability to perform a detailed examination of the following genitourinary organ systems: (1-5,10,11)
 - a. Abdominal examination of the kidneys (inspection, palpation, and percussion)
 - b. Inspection, percussion and palpation of the bladder
 - c. Inspection and palpation of the penis
 - d. Inspection, palpation and trans-illumination of the scrotum and its contents including the testis, testicular tunics and adnexa, spermatic cord and vas deferens
2. Discuss and demonstrate ability to perform a detailed male rectal examination to include: (1-5,10,11)
 - a. Assessment of the anal sphincter and lower rectum
 - b. Prostate palpation to characterize its size, consistency, mobility and the presence or absence of abnormalities such as nodules or induration
 - c. Prostatic massage
 - d. Palpation of the seminal vesicles
3. Discuss and demonstrate an appropriate vaginal and recto-vaginal examination in the female. Be able to evaluate and grade pelvic organ prolapse (1-5,10,11)
4. Be able to perform and interpret a focused neuro-urologic examination (1-5,10,11)
5. Demonstrate ability to recognize visually and to palpate enlarged lymph nodes in regions related to genitourinary disease and to discuss their importance relative to differential diagnosis to various disorders (1-5,10,11)
6. When performing physical examination, be sensitive and responsive to the patients' culture, age and gender (1,2,7,10)

Goal 3: During the junior urology year, the resident will be able to accurately perform and interpret commonly performed urologic laboratory studies.

Objectives:

1. Demonstrate ability to perform and interpret the following laboratory studies: (1,3-5,10,11)
 - a. Routine urinalysis
 - b. Residual urine measurements
 - c. Expressed prostatic secretions (EPS)
 - d. Semen analysis
2. Interpret and discuss the following laboratory studies: (1,3-5,10,11)
 - a. Serum PSA level and free/total PSA

- b. Urinary electrolyte studies
- c. Serum electrolyte studies and acid-base analysis
- d. Serum creatinine and BUN
- e. Creatinine clearance

Goal 4: During the junior urology year, the resident will perform and accurately interpret radiographic studies performed in the outpatient clinic.

Objectives:

1. Be able to competently perform and interpret the following radiographic studies: (1,3-5,10,11)
 - a. Plain films of the kidney, ureters and bladder (KUB)
 - b. Intravenous pyelogram (IVP)
 - c. Retrograde pyelogram
 - d. Retrograde urethrogram
 - e. Voiding cystourethrogram (VCUG)
 - f. Transrectal prostatic ultrasound
2. Be able to accurately interpret an abdominal/pelvic CT scan, MRI scan, renal ultrasound and radionuclide studies of the genitourinary tract (1,3-5,10,11)

Goal 5: During the junior urology year, the resident will perform diagnostic and therapeutic procedures encountered in the urology outpatient clinic

Objectives:

1. Be able to perform the following outpatient procedures: (1,2,4-5,8,12)
 - a. Transrectal ultrasound guided prostate biopsy
 - b. Flexible and rigid cystoscopy
 - c. Suprapubic tube placement
 - d. Vasectomy
 - e. Spermatic cord and penile block
 - f. Circumcision
 - g. Intravesical administration of chemotherapeutic or immunotherapeutic agents
 - h. Urethral dilation

Goal 6: During the junior urology year, the resident will competently care for and evaluate the preoperative and postoperative urologic patient.

Objectives:

1. Perform and write clear, legible and an appropriately detailed history and physical examination on all preoperative patients (1,2,4-5,10,11)
2. Prepare and write clear and detailed admission orders (1,11)
3. Assess and discuss the operative and anesthetic risks of surgical procedures (1,3,4,6,9-11)
4. Obtain informed consent for all surgical procedures (1,4,10)
5. Understand the indications for obtaining consultation with other health care specialists prior to the surgical procedure in select patients (1-2)
6. Discuss the physiologic response of the normal patient to surgical procedures and factors that modify these responses (1-4)
7. Discuss and evaluate wound healing as it relates to surgical incisions (1-4)
8. Treat and evaluate pain in a safe and effective manner in the post-surgical patient (1,4,7)
9. Discuss and evaluate the role of pharmacological agents, singly or in combination, and apply this knowledge to the care of the surgical patient (1-4)
10. Understand the influence of other diseases and co-morbidities upon surgical care (1-4)
11. Recognize and correct nutritional defects in the surgical patient (1-4)

12. Recognize and deal effectively with the psychological and emotional problems associated with anxiety imposed by urologic surgery (1-4)

Goal 7: In the junior year of urology, the resident will demonstrate proficiency in independent evaluation of the surgical patient.

Objectives:

1. Establishing criteria for admission, and managing a patient in the hospital environment, to include urologic trauma, pediatric urology, and general inpatient and outpatient urological services. (1,3,4,8,11)
2. Demonstrate management skills required to independently evaluate the adult and pediatric Urology inpatient consultation and acute care emergency room patient. (1,3,4,8,11)
3. Develop a management plan that is effectively communicated with the next level of supervision. (1,3,4,8,11)
4. Assure implementation and follow-up of all management plans. (1,3,4,8,11)
5. Formulate the organizational and administrative skills required to manage a surgical service while intermittently acting as the "chief resident" in their absence. (1,3,4,8,11)
6. Build on the patient care knowledge and skills obtained as a PGY-2 resident. There should be a clear progression in skill and knowledge developed in the PGY-3 year that allows the resident to exercise greater responsibility in the management of surgical patients, as well as in the type of surgical cases he/she can act as primary surgeon, as judged by the chief resident and staff. (1,3,4,8,11)
7. Round on all patients at least twice a day to ensure continuity of patient care. (4,11)
8. Demonstrate safe and effective transfer of patient care. Ensure continuity of care with appropriate face-to-face sign-outs. (2,4,8,11)

Goal 8: In the junior year of urology, the resident will advance their technical skills in open and laparoscopic procedures.

Objectives:

1. Advance on to more technically difficult procedures. (1,2,5,6,8,9,12)
 - a. Major index reconstructive procedures
 - b. Laparoscopic procedures
 - c. Ureteral reimplantations
 - d. Urethral reconstruction
 - e. Female urology
 - f. Cancer procedures.
2. Continue to develop skills as a first assistant/ teaching assistant in the operating room. (1,2,5,6,8,9,12)
 - a. Proctoring medical students on minor procedures such as wound closure, excisions, circumcisions, and hernias.
3. Demonstrate correct surgical techniques of incising, dissecting, suturing, knot tying and video-endoscopic technique in the operating room through operative experience tutored by experienced attendings. (1,2,5,6,8,9,12)

Goal 9: In the junior year of urology, the resident will become proficient in clinical based procedures.

Objectives:

1. The resident will become proficient in: (1,2,6,8,10,12)
 - a. Cystoscopy
 - b. Prostate ultrasound and biopsy
 - c. Vasectomy
 - d. Circumcision
 - e. Ureteral catheterization and retrograde pyelography

- f. Ureteral stent placement
- g. Clinical based radiographic procedures.

Goal 10: During the junior year of urology, the resident will become proficient in the evaluation and management of a patient with urologic injuries.

Objectives:

1. Be able to take a medical history from a trauma victim, describe the physical signs associated with urologic injuries and understand the mechanism of injury. (1,4)
2. Demonstrate an understanding of the evaluation of a patient with urologic trauma. The resident is expected to understand the indications for imaging, the type of study to be performed and how to perform the exam. This will include but not be limited to: (1-4)
 - a. Indications for imaging in the setting of hematuria
 - b. When and how to perform a retrograde urethrogram
 - c. Indications and proper technique for cystography
 - d. Indication for imaging in pediatric patients with hematuria
 - e. Indications, how to perform and interpret a one-shot IVP
3. Understand the management of blunt and penetrating renal trauma. (1-5)
4. Be able to discuss the evaluation, diagnosis and the management options for ureteral injuries and the indications and contraindications of each. (1-5)
5. Discuss the presentation and management of bladder injuries. (1-5)
6. Discuss the evaluation, diagnosis and management of urethral injuries. (1-5)
7. Be able to diagnose and manage injuries to the scrotum and its contents. (1-5)
8. Develop an understanding of the management of the total trauma patient and the role of a urologist as a consultant. (1-5,7)

2. MEDICAL KNOWLEDGE

Teaching Methods:

1. Rotation specific readings
2. Direct faculty mentorship
3. Presentations in clinic
4. Rotation specific conferences
5. Simulation

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Chart stimulated recall
5. Examination-in-service
6. Teaching rounds
7. Biannual review with residency program director
8. Laparoscopy lab

▪ GENERAL

Goal 1: During the junior year, the resident will build on the knowledge base gained in the pre-urology year(s).

Objectives:

1. Read selected chapters from Campbell's Urology 8th Ed. and Gillenwater's 6th Ed, per the academic syllabus. (4-6)
2. Demonstrate proficiency in accessing and applying information technology and the surgical literature to research a given topic, instead of only textbook information (1,4-7)

3. Complete the Annual AUA Urology In-Service exams and score above the 30th percentile. (4)

Goal 2: During the junior urology year, the resident will develop an understanding of the pathophysiology, presentation, evaluation, treatment and management of common urologic conditions.

▪ **BENIGN PROSTATIC ENLARGEMENT**

Objectives:

1. Become proficient in the diagnosis and medical management of Benign Prostatic Hypertrophy (BPH) (1,3-6)
2. Become proficient in the surgical and minimally invasive management of BPH. Show an understanding of how to manage the complications of these treatments. (1,3-6)
3. Demonstrate proficiency in the management of acute and chronic urinary retention. (1,3-6)
4. Demonstrate proficiency in the ability to place a foley catheter in the setting of altered anatomy or previous traumatic catheterization. (1,3-6)
5. Become proficient in the diagnosis and management of acute and chronic prostatitis (1,3-6)
6. Demonstrate proficiency in the management of phimosis and paraphimosis (1,3-6)

▪ **ERECTILE DYSFUNCTION AND INFERTILITY**

Goal 1: During the junior urology year, the resident will become proficient in the diagnosis, evaluation and treatment of patients with erectile dysfunction.

Objectives:

1. Describe the normal development and demonstrate the anatomy and function of the penis and male urethra. (1,3-6)
2. Describe the normal physiology of penile erection. (1,3-6)
3. List the etiologies of erectile dysfunction. (1,3-6)
4. Discuss common medical and psychological disorders associated with erectile dysfunction. (1,3-6)
5. Describe in depth the evaluation of patients with erectile dysfunction including sexual history, medical history, surgical history, physical examination, laboratory evaluation and specialized testing. (1,3-6)
6. Describe in detail the various treatments of erectile dysfunction to include the following: (1,3-6)
 - a. Medical treatment
 - b. Intracavernosal injection
 - c. Vacuum constriction devices
 - d. Psychological and sexual therapy
 - e. Surgical procedures
 - f. implantation of penile prothesis
7. Be able to describe the pathophysiology and management of Peyronie's Disease. (1,3-6)
8. Demonstrate proficiency in the diagnosis and management of a penile fracture. (1,3-6)

Goal 2: During the junior urology year, the resident will demonstrate ability to diagnose, evaluate and treat patients with idiopathic priapism and prolonged penile erection secondary to intracavernosal injection of vasoactive drugs

Objectives:

1. Describe the normal development and surgical anatomy of the penis. (1,3-6)

2. Discuss disturbances in the mechanism of normal erection resulting in priapism. (1,3-6)
3. List and describe the various etiologic factors in priapism. (1,3-6)
4. Demonstrate the ability to take a pertinent history and physical examination in patients with idiopathic or PIP induced priapism. (1,3-6)
5. Demonstrate knowledge of the diagnostic studies that are helpful in establishing the etiology of priapism. (1,3-6)
6. Given a patient of patient history with supportive data, select and defend alternative methods for the management of priapism. (1,3-6)
7. Describe the vascular shunting procedures used in the treatment of priapism. (1,3-6)
8. Discuss the complication of each therapeutic method and appropriate treatment of these complications. (1,3-6)

Goal 3: During the junior urology year, the resident will understand the basic science of male reproductive physiology and infertility.

Objectives:

1. Demonstrate an understanding of the hypothalamic-pituitary-gonadal (HPG) axis and its endocrine control of testicular function. (1,3-6)
2. Identify the hormones involved in the HPG axis, their origins, function, reciprocal interrelationships and feedback control. (1,3-6)
3. List the endocrinopathies, both exogenous and endogenous, that may interfere with the normal testicular axial relationship and specify the nature of these alterations. (1,3-6)
4. Describe the anatomy, physiology and pathophysiology of the male reproductive tract, spermatogenesis, sperm transport and capacitation. (1,3-6)
5. Identify the sequence of sperm maturation, the cell types found within and between the seminiferous tubules and the time sequence of spermatogenesis. (1,3-6)
6. Describe the mechanism of ejaculation including neurologic control and the anatomic structures involved. (1,3-6)
7. Identify disease states that interfere with ejaculation and the manner in which these states disrupt normal ejaculatory mechanisms. (1,3-6)
8. Describe the difference between emission and ejaculation. (1,3-6)

Goal 4: During the junior urology year, the resident will be able to competent diagnosis, evaluate and treat patients with male infertility

Objectives:

1. List the important components of a historical review in males presenting with infertility. (1,3-6)
2. Describe the components of the physical examination of infertile males. (3-6)
3. List the specific laboratory studies that should be obtained as part of the male infertility evaluation and the manner in which abnormal results may contribute to or reflect the extent of infertility. (1,3-6)
4. Select the surgical diagnostic techniques used in patients with male infertility including vasography, rectal sonography and testicular biopsy. (1,3-6)
5. Identify exogenous drugs that may suppress fertility, ejaculation and erectile function. (1,3-6)
6. Identify the appropriate surgical or medical therapies for patients with male infertility and defend the rationale and indications for clinical application of these modalities. (1,3-6)
7. List and describe in detail the assisted reproductive techniques commonly used in patients with male factor infertility. (1,3-6)

▪ **UROLITHIASIS**

Goal 1: During the junior urology year, the resident will know the etiology and pathophysiology of urinary tract stone disease

Objectives:

1. Understand the epidemiology of urolithiasis to include the following: (1,3-6)
 - a. Geographic distribution of urinary calculus incidence in this country and the world
 - b. Incidence in relation to race, sex, age and climatic factors
 - c. The effects of dietary and fluid intake on occurrence
2. Describe the crystalline architecture of urinary calculi and theoretical factors affecting crystallization. (1,3-6)
3. Describe the part played by matrix in the architecture and possible prevention or initiation of stone formation. (1,3-6)
4. Describe the role of urinary tract obstruction in the etiology of urolithiasis. (1,3-6)
5. Present a working classification of the etiology of stone disease to include at the least the following: (1,3-6)
 - a. Renal tubular syndromes
 - b. Enzyme disorders
 - c. Hypercalcemic conditions
 - d. Hypercalciuric states
 - e. Uric acid lithiasis
 - f. Secondary urolithiasis
 - g. Iatrogenic urolithiasis

Goal 2: During the junior urology year, the resident will become proficient in the evaluation and diagnosis of a patient with urolithiasis

Objectives:

1. Elicit a history compatible with stone disease from a patient including a list of pertinent problems referable to stone formation. (1,2,3,5-6)
2. Discuss the information to be gained from urinalysis including the appearance of typical crystals. (1,3-6)
3. Know the relationship of stone formation to urinary bacteria and pH. (1,3-6)
4. Select appropriate serum studies in the evaluation of stone disease including assessment of serum creatinine, calcium, phosphate and uric acid. (1,3-6)
5. Describe the role of stone analysis in the diagnosis and treatment of patients with stone disease. (1,3-6)
6. Have an in-depth knowledge of the radiographic evaluation of patients with stone disease including the use of both plain film radiography and Spiral Computed Tomography. (1,3-6)

Goal 3: During the junior urology year, the resident will select appropriate management strategies for patients with stone disease.

Objectives:

1. Describe the role of dietary restriction and fluid intake modifications. (1,3-6)
2. Discuss in detail the medical therapy of patients with metabolic stone disease. (1,3-6)
3. Discuss in detail and perform various procedures used in the treatment of stone disease to include at least the following: (1,3-6)
 - a. ESWL
 - b. Percutaneous nephrolithotomy
 - c. Ureteroscopy
 - d. Cystolithotomy
 - e. Litholopaxy
4. Given a patient with recurrent stone disease, develop a plan for follow-up care including metabolic evaluation, appropriate treatment by diet, fluid intake or medications and subsequent evaluation by radiographic studies. (1-6)

Goal 4: During the junior urology year, the resident will demonstrate competence in the use of ESWL in the treatment of urolithiasis

Objectives:

1. List the types of ESWL machine available including the sources of energy, methods of coupling energy to patient, and the methods for imaging and targeting stones. (1,4-6)
2. Describe the physics of shock wave stone fragmentation including the absorption of energy at the acoustical interface, internal reflections of shock wave within the stone and cavitation bubbles. (1,4-6)
3. List the indications and contraindications for the use of ESWL. (1,4-6)
4. Be familiar with pre-lithotripsy management including the indications for pretreatment stents and selection of methods of anesthesia. (1,4-6)
5. Demonstrate ability to treat various stone types and describe initial energy levels used, total energy delivered and the use of contrast to assist stone targeting. (1,4-6)
6. Discuss the post-treatment management of patients treated with ESWL. (1-6)
7. List the complications and risks of ESWL. (1,3-6)

Goal 5: During the junior urology year, the resident will develop competence in the use endourologic techniques to treat upper urinary tract stones

Objectives:

1. Describe the surface relationships of the kidney and the structures traversed when a needle is passed into the renal pelvis through a posterior calyx. (4,7)
2. Know the intrarenal anatomy important to percutaneous renal access. (4,7)
3. Discuss the equipment used commonly in endourology including guide wires, balloon dilators, stents, stone baskets and lithotriptors. (4,7)
4. Demonstrate knowledge of the various types of fluoroscopy equipment and the risks of fluoroscopy. (1,4,5)
5. Understand the technique of percutaneous nephrostomy placement, the use of fluoroscopy or ultrasound for guidance and the potential complications of this access procedure. (1,4,5)
6. Know the methods and instruments used for stone removal including forceps, baskets, and various grabbers, and know which stones can be removed with each. (1,4,5)
7. Discuss various methods of power lithotripsy including ultrasound, electrohydraulic and laser lithotripsy. (1,4,5)
8. Know the complication of percutaneous stone removal and understand methods for their management. (1,4,5)
9. Discuss the appropriate selection of patients for percutaneous lithotripsy as compared to ESWL. (1,4,5)
10. Discuss in detail the use of percutaneous stone dissolution and describe various chemolytic agents including Renacidin, Suby's solution and THAM. (1,4,5)
11. List the complications specific to various types of stone dissolution techniques. (1,4,5)

Goal 6: During the junior urology year, the resident will develop competence in the use endourologic techniques to treat lower urinary tract stones

Objectives:

1. Demonstrate ability to perform both rigid and flexible ureteroscopy in the treatment of ureteral and renal stones. (1)
2. Understand the use of baskets, forceps and other devices for ureteroscopic stone removal. (1)
3. Have a thorough knowledge of lithotripsy methods used via the ureteroscope to fragment ureteral stones. (1,3-6)

4. Describe the immediate and long-term complications of ureteroscopy including extravasation, ureteral stricture and avulsed ureter. (1,3-6)
5. Discuss the indications for ureteroscopic stone extraction as compared to the use of ESWL in the treatment of ureteral stones. (1-6)

▪ UROLOGIC ONCOLOGY

Goal 1: During the junior urology year, the resident will know how to diagnose, evaluate and treat patients with kidney cancer.

Objectives:

1. Understand the normal development, function and surgical anatomy of the kidney. (1,4-7)
2. Identify and discuss the gross and histopathologic features of the various types of renal tumors. (1,4-6)
3. Discuss the natural history and epidemiology of kidney cancer. (1,4-6)
4. Know the paraneoplastic syndromes that may be associated with renal cell carcinoma. (1,4-6)
5. Know and discuss the clinical and pathological staging systems used for renal cancer, and identify the prognosis as a function of the TNM stage of disease. (1,4-6)
6. Discuss the evaluation and plan a course of therapy for selected patients with various stages of renal cell carcinoma. (1,4-6)
7. Demonstrate the ability to select the best surgical approach (radical versus partial versus laparoscopic nephrectomy) in patients with kidney cancer. (1,4-6)
8. Discuss adjuvant therapy for patients with renal cancer including the roles of radiotherapy, chemotherapy and use of biologic response modifier therapies. (1,4-6)
9. Identify and discuss the appropriate follow-up, including the role of radiographic imaging, of patients after radical or partial nephrectomy for renal cancer. (1,4-6)

Goal 2: During the junior urology year, the resident will competently diagnose, evaluate and treat patients with cancer of the renal pelvis and ureter.

Objectives:

1. Understand the normal development, function and anatomy of the ureter and renal pelvis. (1,4-7)
2. Discuss the theories regarding the etiology of cancer of the renal pelvis and ureter, and know the natural history and risk factors for tumor progression. (1,4-6)
3. Know the histopathologic features of transitional cell carcinoma of the upper urinary tract, including evaluation of urinary cytology. (1,4-6)
4. Demonstrate ability to elicit a history compatible with cancer of the upper urinary tract and discuss findings on physical examination. (1,2,4-7)
5. List and be able to interpret the appropriate laboratory studies necessary to diagnose and stage cancer of the renal pelvis and ureter. (1,4-6)
6. Accurately select and interpret imaging studies of the upper urinary tract. (1,4-6)
7. Demonstrate competence in evaluation of the ureter and renal pelvis using endoscopic techniques. (1-7)
8. Discuss the rationale for various surgical procedures used in the treatment of patients with ureteral or renal pelvic cancer. (1,4-6)
9. Discuss the rationale, methodology, agents used and potential toxicities of intracavitary agents used in the treatment of superficial tumors. (1,4-6)
10. For patients with invasive or metastatic tumors of the upper urinary tract, discuss the role and potential toxicities of systemic chemotherapy. (1,4-6)

Goal 3: During the junior urology year, the resident will competently diagnose evaluate and treat patients with cancer of the bladder.

Objectives:

1. Understand the embryology, normal development, function and anatomy of the bladder. (1,4-7)
2. Discuss the epidemiology of the various forms of bladder cancer, the concepts of initiation and promotion of carcinogenesis and risk factors for bladder cancer development. (1,4-6)
3. Know the natural history of superficial and muscle invasive bladder cancer. (1,4-6)
4. Know and discuss the clinical and pathological staging systems used for bladder cancer, and identify the prognosis as a function of the TNM stage of disease. (1,4-6)
5. Demonstrate the ability to recognize the signs and symptoms of patients with bladder cancer and be able to perform a bimanual examination of the bladder under anesthesia. (1,4-6)
6. Demonstrate the ability to interpret the results of laboratory and imaging studies in the diagnosis and staging of bladder cancer. (1,4-6)
7. Demonstrate competence in the performance of urethroscopy and cystoscopy in the evaluation and follow-up of patients with bladder cancer. (1,4-6)
8. Describe the endoscopic approaches to treatment of bladder cancer. (1,4-6)
9. Know and discuss the indications, efficacy and complications associated with the use of intravesical therapies. (1,4-6)
10. Know and discuss the role of open surgical therapy for patients with bladder cancer, and discuss the role of lymph node dissection. (1,4-6)
11. Describe the various types of urinary diversion and considerations of their suitability in the context of extent of disease and patient preferences. (1,4-6)
12. Discuss the role of radiotherapy and chemotherapy in the treatment (adjuvant and therapeutic) of advanced bladder cancer. (1,4-6)

Goal 4: During the junior urology year, the resident will become proficient in the diagnosis, evaluation and treatment of patients with prostate cancer.

Objectives:

1. Understand the embryology, normal development, function and anatomy of the prostate. (1,4-7)
2. Discuss the pathophysiology and theories regarding the etiology of prostate cancer. (1,4-6)
3. Know the gross and microscopic histopathology of prostate cancer and be able to differentiate these from other common histologic entities. (1,4-6)
4. Discuss the natural history and epidemiology of prostate cancer. (1,4-6)
5. Elicit a detailed and appropriate history from patients with prostate cancer. (1,4-6)
6. Demonstrate ability to perform a digital rectal examination, including location and size of induration or nodules, pelvic sidewall and seminal vesicle extension of cancer. (1,4-6)
7. Discuss the appropriate diagnostic and staging studies used to evaluate cancer of the prostate and interpret their results. (1,4-6)
8. Demonstrate ability to perform an adequate transrectal ultrasound and biopsy of the prostate, and understand the rationale for various biopsy strategies. (1,4-6)
9. Discuss the risks, complications and benefits of the various treatment options for prostate cancer, and demonstrate the ability to select appropriate patients for each treatment modality. (1,4-6)
10. Discuss with patients and families the prognosis and complications associated with prostate cancer treatment and understand the medical and psychological management of these complications. (1,4-6)
11. Know the appropriate follow-up regimens for patients after radical prostatectomy and radiation therapy for prostate cancer. (1,4-6)
12. Discuss the indications and controversies surrounding the use of adjuvant therapy after definitive therapy (radical prostatectomy or radiotherapy). (1,4-6)

Goal 5: During the junior urology year, the resident will competently diagnose, evaluate and treat patients with testicular cancer.

Objectives:

1. Understand the embryology, normal development, function and surgical anatomy of the testis and paratesticular structures. (1,4-7)
2. Know and discuss the lymphatic drainage of the testicle and the pattern of lymphatic progression of disease to the retroperitoneum. (1,4-6)
3. Discuss various factors in the possible etiology of testis cancer. (1,4-6)
4. Know and differentiate the gross and histopathologic features of seminomatous, nonseminomatous and non-germ cell tumors. (1,4-6)
5. Demonstrate the ability to elicit a history compatible with testicular cancer. (1,4-6)
6. Perform a complete and accurate physical examination of patients with testicular cancer including evaluation for lymphadenopathy and gynecomastia. (1,4-6)
7. List the appropriate diagnostic and staging studies used to evaluate cancer of testicle and be able to interpret the results of these studies. (1,4-6)
8. Discuss the use of serum tumor markers in patients with testis cancer. (1,4-6)
9. Interpret testicular ultrasound and abdominal/pelvic CT findings in patients with testis cancer. (1,4-6)
10. Discuss the relative roles of retroperitoneal lymph node dissection and surveillance in patients with Stage I nonseminomatous testis cancer. (1,4-6)
11. Understand and discuss the selection of radiotherapy for the treatment of patients with testis cancer. (1,4-6)
12. Discuss various chemotherapeutic agents used in the treatment of advanced testis cancer and their relative value, depending on tumor type and stage. (1,4-6)

Goal 6: During the junior urology year, the resident will competently diagnose, evaluate and treat patients with penile cancer

Objectives:

1. Understand the embryology, normal development, function and surgical anatomy of the penis and urethra. (1,4-7)
2. Discuss the incidence, epidemiology and potential etiologic factors of penile cancer. (1,4-6)
3. Identify and discuss treatment and follow-up of premalignant penile lesions. (1,4-6)
4. Know and use the TNM staging system for squamous cell carcinoma of the penis. (1,4-6)
5. Demonstrate an appropriate examination of the penis and inguinal lymph nodes in patients diagnosed with penile cancer. (1,4-6)
6. Describe the surgical treatment options and their applicability to various stages of penile cancer. (1,4-6)
7. Discuss the strategies and indications for inguinal lymph node dissection. (1,4-6)
8. Discuss the roles of radiotherapy and chemotherapy in the treatment of local and advanced penile cancer. (1,4-6)

Goal 7: During the junior urology year, the resident will understand the role of chemotherapeutic agents in the treatment of genitourinary malignancies.

Objectives:

1. Classify the commonly used chemotherapy agents used in urologic cancers. (1,4-6)
2. Discuss the pharmacology of the various types of chemotherapeutic drugs used in the treatment of urologic cancers. (1,4-6)
3. Describe the current chemotherapeutic regimens for genitourinary cancers. (1,4-6)
4. Know the specific complications of chemotherapy, both immediate and long-term, and the treatment of these complications. (1,4-6)

5. Discuss the treatment results and expected response rates of chemotherapy regimens used for the treatment of various genitourinary malignancies. (1,4-6)

Goal 8: During the junior urology year, the resident will understand the role of radiotherapy in the treatment of genitourinary malignancies.

Objectives:

1. Discuss the physical properties of ionizing radiation, including the fundamental units used to describe the interaction of radiation with matter and the differences in penetration and absorption between different types of radiation. (1,4-6)
2. Know the differences between external beam and interstitial radiotherapy. (1,4-6)
3. Discuss the isotopes used for interstitial radiotherapy including differences in energy emitted, half-lives and the clinical utilization of each. (1,4-6)
4. Discuss the biologic factors impacting the effectiveness of radiotherapy. (1,4-6)
5. Demonstrate a basic understanding of radiotherapy treatment principles as it relates to genitourinary malignancy. (1,4-6)
6. Discuss the commonly employed curative and palliative radiotherapeutic doses, schedules and fields for urologic tumors. (1,4-6)
7. Demonstrate knowledge of potential complications of radiotherapy both in general and those associated with the treatment of specific urologic tumors. (1,4-6)

▪ FEMALE UROLOGY AND VOIDING DYSFUNCTION

Goal 1: During the junior urology year, the resident will understand the normal development, function and surgical anatomy of the female urethra, bladder and pelvis.

Objectives:

1. Describe and explain the developmental processes by which the urethra progresses to tubular form and the hormonal influences on urethral development. (1,4-6)
2. Describe female urethral function by which urinary continence is maintained and the functional role of secondary structures such as striated muscle. (1,4-6)
3. Know the blood, lymphatic and nerve supply of the female bladder and urethra. (1,4-6)
4. Understand the normal anatomy and support of the female pelvis including all involved organs and the supporting ligaments, muscles and fascias. (1,4-6)

Goal 2: During the junior urology year, the resident will competently evaluate, diagnose and treat females presenting with urinary incontinence.

Objectives:

1. Perform and demonstrate a complete medical history applicable of female patients presenting with urinary incontinence. (1-6)
2. Demonstrate an appropriate and complete physical examination of women with incontinence. (1-6)
3. Describe the laboratory studies that may assist with the diagnosis of women with incontinence. (1-6)
4. Demonstrate the ability to choose and carry out the appropriate therapy for the following conditions associated with female incontinence: (1-6)
 - a. Stress incontinence due to anatomical changes
 - b. Stress incontinence due to sphincteric damage
 - c. Urge incontinence and bladder instability
 - d. Neurogenic bladder dysfunction
 - e. Urinary retention and obstruction
 - f. Urethral diverticula
5. Understand the role of pelvic floor neuromodulation in the treatment of patients with refractory voiding dysfunction due to pelvic floor dysfunction. (1-6)

Goal 3: During the junior urology year, the resident will understand the evaluation, diagnosis and treatment of women with pelvic prolapse syndromes.

Objectives:

1. Perform and demonstrate a complete medical history applicable of female patients presenting with pelvic floor prolapse. (1-6)
2. Demonstrate an appropriate and complete physical examination of women pelvic prolapse. Be able to grade pelvic organ prolapse (1-6)
3. Describe any adjunctive studies that may assist in the diagnostic workup of women with pelvic floor prolapse to include any radiologic studies and urodynamics. (1-6)
4. Demonstrate the ability to chose and carryout the appropriate therapy, both surgical and nonsurgical, for the following conditions associated with pelvic floor prolapse: (1-6)
 - a. Anterior compartment relaxation with or without associated urinary incontinence
 - b. Middle compartment relaxation with or without associated urinary incontinence
 - c. Posterior compartment relaxation with or without associated urinary incontinence

Goal 4: During the junior urology year, the resident will know how to perform urodynamic studies in patients with voiding dysfunction.

Objectives:

1. Discuss the value and indications for urodynamic evaluation of the lower urinary tract. (1,3-6)
2. Have an in depth knowledge of the relationship of specific parts of the urodynamic study to the filling/storage and emptying phases of micturition. (1,3-6)
3. Demonstrate the ability to independently set up and perform filling and voiding cystometry and be able to identify and interpret all of the following: (1,3-6)
 - a. Urinary flow rate
 - b. Residual urine volume
 - c. Flow patterns
 - d. Bladder compliance
 - e. Involuntary bladder contractions
 - f. Abnormal bladder sensation
 - g. Leak point pressures
 - h. Pressure/flow studies
4. Demonstrate the ability to independently set up and perform videourodynamics. (1,3-6)
5. Demonstrate the ability to independently set up and perform electromyography utilizing patch electrodes. (1,3-6)

Goal 5: During the junior urology year, the resident will know how to evaluate, diagnose and treat patients with pelvic pain syndromes including interstitial cystitis

Objectives:

1. Demonstrate an understanding of the epidemiologic aspects of interstitial cystitis. (1,3-6)
2. Be familiar with the common theories regarding the pathogenesis of interstitial cystitis. (1,3-6)
3. List the typical symptoms of interstitial cystitis in men and women. (1,3-6)
4. Discuss the differential diagnosis of the symptoms of interstitial cystitis. (1,3-6)
5. Be familiar with the cystoscopic findings in patients with interstitial cystitis and the indications and limitations of bladder biopsy. (1,3-6)
6. Explain the therapeutic rationale for the various treatments used in interstitial cystitis and be familiar with their benefits, efficacy and side effects. (1,3-6)

7. List the systemic and intravesical pharmacotherapies used to treat interstitial cystitis. (1,3-6)
8. Know the role of bladder hydrodistention in patients with interstitial cystitis. (1,3-6)
9. Know the role of pelvic floor neuromodulation in the treatment of patients with interstitial cystitis and other pelvic pain syndromes. (1,3-6)
10. Know the role of surgical therapy for patients with refractory interstitial cystitis. (1,3-6)
11. Demonstrate proper selection of interstitial cystitis patient for surgical therapies. (1,3-6)

Goal 6: During the junior urology year, the resident will become competent in the diagnosis and treatment of patients with vesico-vaginal and uretero-vaginal fistulae.

Objectives:

1. List the signs and symptoms commonly associated with vesico-vaginal (VVF) and ureterovaginal (UVF) fistulae. (1,3-6)
2. Describe the pathogenesis of VVF including iatrogenic, post-irradiation and obstetric trauma induced fistulae. (1,3-6)
3. Describe the important components of the history and physical examination in patients with VVF and UVF. (1,3-6)
4. Distinguish between VVF and UVF using historical and diagnostic techniques. (1,3-6)
5. Discuss the surgical principles involved in repair of these fistulas including the biology of wound repair and the preparation of tissues for surgery. (1,3-6)
6. Describe the conservative management of VVF and UVF. (1,3-6)
7. Discuss in detail the surgical repair options for patients with VVF or UVF. (1,3-6)

▪ NEURO-UROLOGY

Goal 1: During the junior urology year, the resident will know the appropriate evaluation, diagnosis and treatment of various neurogenic bladder disorders in patients with spinal cord injury.

Objectives:

1. Describe the normal innervation and neuromuscular physiology of the bladder, urethra and surrounding striated musculature of the bladder and urethra. (1,3-6)
2. Discuss the expected lower urinary tract sequelae of injuries to the peripheral innervation of the bladder, spinal cord at various levels, and supraspinal pathways. (1,3-6)
3. Describe the pathophysiology of lower urinary tract dysfunction associated with the following neurogenic bladder (NGB) disorders: (1,3-6)
 - a. Diabetes mellitus
 - b. Multiple sclerosis
 - c. Spinal cord tumors and vascular insults
 - d. Cerebrovascular accidents and brain tumors
 - e. Parkinson's disease
 - f. Radical pelvic surgery
 - g. Myelomeningocele
 - h. Shy-Drager syndrome
4. Discuss the significant aspects of the history in the evaluation of neurogenic bladder dysfunction. (1,3-6)
5. Perform an adequate physical examination to aid in the diagnosis of patients with NGB including neurologic exam and bulbocavernosus reflex. (1,3-6)
6. Discuss the use and indications as well as the results of urinalysis, serum creatinine, excretory urography, VCUG, ultrasound and cystoscopy in the evaluation of the NGB. (1,3-6)

7. Select and carry out appropriate therapy for patients with NGB including non-surgical and surgical management options. (1,3-6)
8. Describe the potential long-term sequelae and complications of NGB including deterioration of renal function, autonomic dysreflexia and development of bladder malignancy. (1,3-6)

Goal 2: During the junior urology year, the resident will perform and interpret a complete and appropriate urodynamic study in patients with spinal cord injury.

Objectives:

1. Describe the use of urine flow rates and patterns, and residual urine volumes, in patients undergoing urodynamic study. (1,3-6)
2. Describe the critical aspects of filling cystometry including: (1,3-6)
 - a. Appropriate methodology and conduct of the examination
 - b. Phases of filling cystometry
 - c. Concept of bladder compliance
 - d. Significance of involuntary bladder contractions
 - e. Significance of normal or absent bladder sensation
 - f. Differences between classical and valsalva leak point pressures
3. Describe the methodology and significance of the pressure/flow phase of a urodynamic study. (1,3-6)
4. Describe the role of videourodynamics and recognize findings in situations where videourodynamics is specifically helpful. (1,3-6)
5. Discuss the primary value of electromyography (EMG) in urodynamic assessment. (1,3-6)
6. Understand the role of urethral profilometry (UPP) in patients undergoing urodynamic study. (1,3-6)

▪ PEDIATRIC UROLOGY

Goal: During the junior urology year, the resident will develop a sound understanding of the examination, diagnosis and management of the Urologic pediatric patient.

Objectives:

1. Be able to discuss the pathophysiology, evaluation and treatment for the following disorders: (1,3-6)
 - a. Cystic diseases of the kidney
 - b. Obstructive uropathy
 - c. Enuresis
 - d. Uretero-pelvic junction obstruction
 - e. Wilm's tumor and other genitourinary malignancies
 - f. Neurogenic bladder
 - g. Urinary incontinence
 - h. Anterior and posterior urethral valves
 - i. Epispadias and bladder exstrophy
 - j. Hypospadias
 - k. Urologic problems associated with imperforate anus
 - l. Intersex disorders
 - m. Vesico-ureteral reflux
 - n. Megaureter
 - o. Ureteral duplication and ureterocele
 - p. The acute scrotum
 - q. Cryptorchidism
 - r. Pediatric urinary tract infection
 - s. Pediatric urinary tract trauma
 - t. Neonatal emergencies
 - u. Management of the myelomeningocele patient

▪ UROLOGIC TRAUMA RECONSTRUCTION

Goal 1: During the junior year the residents will become proficient in operative and non-operative management of Urologic trauma.

Objectives:

1. Develop knowledge of current indications for and implementation of a strategy of damage control surgery. (1,4-7)
2. Develop knowledge of current indications for radiological and operative staging of urologic injuries and provide an accurately staged diagnosis consistent with the currently accepted staging format. (1,4-7)
3. Develop knowledge of current indications and implementation of acute surgical management of urologic injuries (e.g., renorrhaphy, nephrectomy, ureterorrhaphy, ureteral stent placement, cystorrhaphy, urethral realignment, scrotal exploration). (1,4-7)
4. Develop knowledge of current indications for and application of interventional radiological services where appropriate (e.g., angioembolization, percutaneous drain placement). (1,4-7)
5. Develop knowledge of current indications for and implementation of injury surveillance for delayed sequelae, including knowledge of imaging techniques used to make these diagnoses. (1,4-7)
6. Develop knowledge of indications for and techniques used for delayed reconstruction of urologic injuries. (1,4-7)
7. Develop knowledge of the complex interplay of urologic injuries as they pertain to concomitant orthopaedic, gastrointestinal, vascular, and gynecologic injuries. (1,4-7)

Goal 2: During the junior year the residents will understand the principles of and gain skills pertaining to complex genital reconstructive surgery, employing plastic surgical techniques, and understand the particular advantages and limitations to their use.

Objectives:

1. Participate in the multidisciplinary diagnosis and management of diseases of the genitalia/perineum which can result in the need for complex reconstruction following initial stabilization (e.g., necrotizing infections/Fournier's, pelvic trauma, ionizing radiation, thermal injury/burns). (1,3-6)
2. Demonstrate an understanding of plastic surgical reconstructive techniques and principles as they apply to traumatic genitourinary injuries, genital skin loss/deficiency, and complex pelvic wounds involving the genitalia and lower urinary tract. Such techniques includes: surgical debridement, dressing care, urinary diversion, skin grafting, graft bed preparation). (1,3-6)
3. Demonstrate an understanding of the current indications and imaging modalities relevant to diagnosis, surveillance and preoperative planning as they apply to urologic reconstructive surgery: Peyronie's disease, urethral stricture, ureteral stricture, UPJ obstruction. (1,3-6)
4. Acquire an understanding of the physical, psychological and social implications that may be associated with complex genital/perineal reconstruction. (1,3-6)

Goal 3: During the junior year the residents will acquire a basic understanding of complex urethral reconstructive surgery with an understanding of the benefits and the technical limitations of surgical procedures.

Objectives:

1. Participate in the clinical evaluation, diagnosis, radiological evaluation and decision-making process of patients with urethral stricture disease, urethrocutaneous fistulae or failed prior reconstruction. (1,3-6)
2. Demonstrate knowledge of indications for minimally invasive procedures for urethral stricture disease, such as urethral dilatation, urethrotomy, suprapubic (open, percutaneous) catheter insertion, and be able to perform these procedures. (1,3-6)
3. Participate in open urethral reconstructive cases as they pertain to the lesion and become familiar with the techniques of: (1,3-6)
 - a. Anastomotic urethroplasty
 - b. Graft or flap onlay techniques
 - c. Staged urethral reconstruction
 - d. Perineal urethrostomy
 - e. Posterior stricture repair
4. List the adjunctive surgical maneuvers that may be required to facilitate successful urethral reconstruction for anterior and posterior strictures: (1,3-6)
 - a. Corporal splitting
 - b. Corporal rerouting
 - c. Urethral mobilization
 - d. Inferior pubectomy
5. Participate in all aspects of postoperative care for these patients, including dressing care, catheter care, clinical assessment and evaluation for complications and participate in their management. (1-7)

3. PRACTICE-BASED LEARNING AND IMPROVEMENT

Teaching Methods:

1. Clinical performance with direct observation
2. Direct faculty mentorship
3. Daily supervised care of surgical patients
4. Presentations in clinic
5. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluations
4. Biannual review with residency program director

Goal 1: During the junior urology year the resident will develop a working knowledge of the regular conferences needed to provide excellent urological care.

Objectives:

1. Participate in weekly department conferences and apply knowledge learned to your patients. (1,2,3)
2. Participate in weekly hospital-based conferences and apply knowledge learned to your patients. (1,2,3)
3. Prepare, document, and present regular M&M Rounds. Become familiar with complication and consent issues regarding surgery and investigate ways to prevent adverse outcomes. (1,2,3)

Goal 2: During the junior Urology year the resident will become proficient at contributing to education of those around them.

Objectives:

1. Demonstrate proficiency in the teaching of medical students and junior residents. (1-3)
2. Demonstrate proficiency at training paraprofessional care givers, technicians and nursing staff in clinic and OR. (1-3)

4. INTERPERSONAL SKILLS AND COMMUNICATION

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Simulation
8. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Chart stimulated recall
5. Observed clinical examination
6. Patient surveys
7. Teaching rounds
8. Biannual review with residency program director
9. Review of medical records on the ward
10. Laparoscopic lab

Goal 1: During the junior urology year, the resident will develop presentation skills, healthy study habits and plan for upcoming research rotation.

Objectives:

1. Present cases to faculty at conferences, on rounds, on call and in clinic. It is through these presentations that the resident develops skills in taking a history, putting the facts together and developing a treatment plan. (1-9)
2. Learn to speak and present effectively in front of their peers and faculty. Be able to handle questions and prepare well thought out responses. (1-3,6-8)
3. Develop study habits and a regular reading schedule so that they are prepared for rounds, conferences and the in-service exam. (1,6,8)
4. Pick or be assigned a faculty who will mentor them and serve as their advisor for the research endeavors. (1)

Goal 2: During the junior resident year the resident will demonstrate proficiency in the management and leadership of a ward service, utilizing the cooperative skills of medical students, junior residents, nurses, consult staff, and ancillary personnel.

Objectives:

1. Demonstrate skill and sensitivity for appropriately counseling and educating patients and their families in a variety of clinical situations. (1,2,4-8)
2. Demonstrate effective documentation of practice activities with proper operative/procedure note dictations, clinic visit dictations, discharge summary dictations, daily progress notes and event notes. (1,3,7,8)
3. Demonstrate how to properly consult a specialty service (radiology, GI, PT, etc..) by correctly formulating the specific question to be answered. Follow through with consultant's suggestions after appropriate discussion with the attending staff. (1,2,6-8)
4. Demonstrate a kind, thoughtful, understanding and helpful attitude to consulting services. (1,2,6-8)
5. Demonstrate ability to independently manage the Urology service, to include administrative, clinical and academic responsibilities. (1-8)

6. Present all patient and conference material in a concise, organized, logical and knowledgeable manner. (1,2,6,8)
7. Demonstrate leadership by assuring the attendance of team members at all rounds and conferences. (1-9)

5. PROFESSIONALISM

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Simulation
8. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Observed clinical examination
5. Patient surveys
6. Case logs and procedure logs
7. Teaching rounds
8. Biannual review with residency program director
9. Laparoscopy lab

Goal 1: During the junior resident Urology year, the resident will demonstrate respectful, altruistic and ethically sound behavior with patients and all members of the health care team.

Objectives:

1. Wear proper attire at all times. Maintain a professional bearing at all times. (1-4,6-8)
2. Adhere to all hospital-specific policies. (1-4,6-8)

Goal 2: During the junior resident Urology year, the resident will maintain professional bearing and behavior at all times.

Objectives:

1. Record duty hours every week on the ACGME web site to ensure compliance with the 80 hour work week limit. (1,7)
2. Attend all resident and hospital-specific conferences. (1,7)
3. Demonstrate leadership by assuring the attendance of team members at all rounds and conferences. (1,7)
4. Maintain a current unrestricted medical license. (7)
5. Maintain daily/weekly updates of your Surgical Operative Log on the ACGME web. (5,7)
6. Treat each patient, regardless of social or other circumstances with the same degree of respect they would afford to their own family members. (1-8)
7. Demonstrate administrative skill in preparation of the weekly M&M reports and presentation at conferences. (1-8)
8. Educate and incorporate medical students, sub-interns into the service. (1,2,7,8)
9. Continue work on research project, with goal of one publication in a peer-reviewed journal or presentation at a national meeting prior to graduation. (1,2,7,8)

6. SYSTEMS-BASED PRACTICE

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Morbidity/Mortality Reports, Tumor Board Reports.
5. Observed clinical examination
6. Case logs and procedure logs
7. Biannual review with residency program director

Goal: During the junior resident urology year, the resident will demonstrate effective interaction with referring physicians throughout the Mid-Atlantic Region.

Objectives:

1. Demonstrate effective and safe patient care which minimizes delays in discharge. (1,2,4-6)
2. Demonstrate effective time management and adherence to work hours regulations. (1-6)
3. Demonstrate an understanding of the larger system of hospital care by: (1,2,6)
 - a. Participating in weekly multidisciplinary rounds
 - b. Participating in daily patient care rounds.
4. Demonstrate an understanding of how patients are properly referred, scheduled, and approached for surgery. (1,2,4-6)

PGY-3 UROLOGY RESIDENT (URO-2)

The URO-2 resident is assigned for a staggered six months on the Urology service at GWUMC, and six months on the Urology service at Sibley Memorial Hospital. During these twelve months the resident is expected to further expand their clinical knowledge and refine their surgical skills. They will build on the previously stated goals and objectives as outlined for the URO-1 resident.

1. PATIENT CARE

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Rotation specific readings
4. Direct faculty mentorship
5. Daily supervised care of surgical patients
6. Presentations in clinic
7. Rotation specific conferences
8. Supervised on-call experiences
9. Checklists-surgical checklist
10. Observed clinical examination
11. Simulation

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Examination-in-service
5. Teaching rounds
6. Biannual review with residency program director
7. Surgical simulators
8. Patient surveys
9. Case logs and procedure logs
10. Laparoscopy lab
11. Observed clinical examination
12. Medical records review on the wards
13. Surgical evaluation form.

Goal 1: During the senior urology year, the resident will perform a detailed and appropriately focused urologic physical examination.

Objectives:

1. Discuss and demonstrate ability to perform a detailed examination of the following genitourinary organ systems: (1-5,10,11)
 - a. Abdominal examination of the kidneys (inspection, palpation, and percussion)
 - b. Inspection, percussion and palpation of the bladder
 - c. Inspection and palpation of the penis
 - d. Inspection, palpation of the scrotum contents including the testis, testicular tunics and adnexa, spermatic cord and vas deferens.
2. Discuss and demonstrate ability to perform a detailed male rectal examination. (1-5,10,11)
3. Discuss and demonstrate an appropriate vaginal and recto-vaginal examination in the female. Be able to evaluate and grade pelvic organ prolapse (1-5,10,11)
4. Be able to perform and interpret a focused neuro-urologic examination. (1-5,10,11)
5. When performing physical examination, be sensitive and responsive to the patients' culture, age and gender. (1-5,10,11)

Goal 2: During the senior urology year, the resident will be able to accurately perform and interpret commonly performed urologic laboratory studies

Objectives:

1. Routine urinalysis (1,3-5,10,11)
2. Residual urine measurements (1,3-5,10,11)
3. Expressed prostatic secretions (EPS) (1,3-5,10,11)
4. Semen analysis (1,3-5,10,11)
5. Serum PSA level and free/total PSA (1,3-5,10,11)
6. Urinary electrolyte studies (1,3-5,10,11)
7. Serum electrolyte studies and acid-base analysis (1,3-5,10,11)
8. Serum creatinine and BUN (1,3-5,10,11)
9. Creatinine clearance (1,3-5,10,11)

Goal 3: During the senior urology year, the resident will perform and accurately interpret radiographic studies performed in the outpatient clinic

Objectives:

1. Be able to competently and/or interpret the following radiographic studies: (1,3-5,8,10,11)
 - a. Plain films of the kidney, ureters and bladder (KUB)
 - b. Intravenous pyelogram (IVP)
 - c. Retrograde pyelogram
 - d. Retrograde urethrogram
 - e. Voiding cystourethrogram (VCUG)
 - f. Transrectal prostatic ultrasound
 - g. Abdominal/pelvic CT scan, MRI scan, renal ultrasound and radionuclide studies of the genitourinary tract

Goal 4: During the senior urology year, the resident will perform diagnostic and therapeutic procedures encountered in the urology outpatient clinic

Objectives:

1. Transrectal ultrasound guided prostate biopsy (1,2,4-5,8,11)
2. Flexible and rigid cystoscopy (1,2,4-5,8,11)
3. Suprapubic tube placement (1,2,4-5,8,11)
4. Vasectomy (1,2,4-5,8,11)
5. Spermatic cord and penile block (1,2,4-5,8,11)
6. Circumcision (1,2,4-5,8,11)
7. Intravesical administration of chemotherapeutic or immunotherapeutic agents (1,2,4-5,8,11)
8. Urethral dilation (1,2,4-5,8,11)

Goal 5: During the senior urology year, the resident will competently care for and evaluate the preoperative and postoperative urologic patient

Objectives:

1. Perform and write clear, legible and an appropriately detailed history and physical examination on all preoperative patients. (1,2,4-5,8,11)
2. Prepare and write clear and detailed admission orders (1,11)
3. Assess and discuss the operative and anesthetic risks of surgical procedures.(1,3,4,6,8,9-11)
4. Obtain informed consent for all surgical procedures. (1,4,10)
5. Understand the indications for obtaining consultation with other health care specialists prior to the surgical procedure in select patients. (1-2)
6. Discuss the physiologic response of the normal patient to surgical procedures and factors that modify these responses.(1-4)
7. Discuss and evaluate wound healing as it relates to surgical incisions (1-4)

8. Treat and evaluate pain in a safe and effective manner in the post-surgical patient. (1,4,7)
9. Discuss and evaluate the role of pharmacological agents, singly or in combination, and apply this knowledge to the care of the surgical patient. (1-4)
10. Understand the influence of other diseases and co-morbidities upon surgical care.(1-4)
11. Recognize and correct nutritional defects in the surgical patient. (1-4)
12. Recognize and deal effectively with the psychological and emotional problems associated with anxiety imposed by urologic surgery (1-4)

Goal 6: In the senior year of Urology, the resident will demonstrate proficiency in independent evaluation of the surgical patient.

Objectives:

1. Establishing criteria for admission, and managing a patient in the hospital environment, to include urologic trauma, pediatric urology, and general inpatient and outpatient urological services. (1,3,4,8,11)
2. Demonstrate management skills required to independently evaluate the adult and pediatric Urology inpatient consultation and acute care emergency room patient. (1-4)
3. Develop a management plan that is effectively communicated with the next level of supervision. (1-4)
4. Assure implementation and follow-up of all management plans. (1-4)
5. Formulate the organizational and administrative skills required to manage a surgical service while intermittently acting as the "chief resident" in their absence. (1-4)

Goal 7: In the senior year of Urology, the resident will further advance their technical skills, both open and laparoscopic.

Objectives:

1. Advance on to more technically difficult procedures. (1,2,5,6,8,9,12)
 - h. Major index reconstructive procedures
 - i. Laparoscopic procedures
 - j. Urethral reimplantations
 - k. Urethral reconstruction
 - l. Female urology
 - m. Cancer procedures.
2. Continue to develop skills as a first assistant/ teaching assistant in the operating room by proctoring medical students on minor procedures such as wound closure, excisions, circumcisions, and scrotal cases. (1,2,5,6,8,9,12)
3. Demonstrate correct surgical techniques of incising, dissecting, suturing, knot tying and video-endoscopic technique in the operating room through operative experience tutored by experienced attendings. (1,2,5,6,8,9,12)

Goal 8: In the senior year of Urology, the resident will become proficient in clinical based procedures.

Objectives:

2. The resident will become proficient in: (1,2,5,8,10,12)
 - a. Cystoscopy
 - b. Prostate ultrasound and biopsy
 - c. Vasectomy
 - d. Circumcision
 - e. Ureteral catheterization and retrograde pyelography
 - f. Ureteral stent placement
 - g. Clinical based radiographic procedures.

Goal 9: During the senior year of urology, the resident will become proficient in the evaluation and management of a patient with urologic injuries.

Objectives:

1. Be able to take a medical history from a trauma victim, describe the physical signs associated with urologic injuries and understand the mechanism of injury. (1,4,6)
2. Demonstrate an understanding of the evaluation of a patient with urologic trauma. The resident is expected to understand the indications for imaging, the type of study to be performed and how to perform the exam. This will include but not be limited to: (1-4)
 - a. Indications for imaging in the setting of hematuria
 - b. When and how to perform a retrograde urethrogram
 - c. Indications and proper technique for cystography
 - d. Indication for imaging in pediatric patients with hematuria
 - e. Indications, how to perform and interpret a one-shot IVP
3. Understand the management of blunt and penetrating renal trauma. (1-5)
4. Be able to discuss the evaluation, diagnosis and the management options for ureteral injuries and the indications and contraindications of each. (1-5)
5. Discuss the presentation and management of bladder injuries. (1-5)
6. Discuss the evaluation, diagnosis and management of urethral injuries. (1-5)
7. Be able to diagnose and manage injuries to the scrotum and its contents. (1-5)
8. Develop an understanding of the management of the total trauma patient and the role of a urologist as a consultant. (1-5)

Goal 10: During the senior year of urology, the resident will become proficient in the evaluation and management of a patient with urologic injuries.

Objectives:

1. Be able to take a medical history from a trauma victim, describe the physical signs associated with urologic injuries and understand the mechanism of injury. (1,3,4,6)
2. Demonstrate an understanding of the evaluation of a patient with urologic trauma. The resident is expected to understand the indications for imaging, the type of study to be performed and how to perform the exam. This will include but not be limited to: (1-4)
 - a. Indications for imaging in the setting of hematuria
 - b. When and how to perform a retrograde urethrogram
 - c. Indications and proper technique for cystography
 - d. Indication for imaging in pediatric patients with hematuria
 - e. Indications, how to perform and interpret a one-shot IVP
3. Understand the management of blunt and penetrating renal trauma. (1-5)
4. Be able to discuss the evaluation, diagnosis and the management options for ureteral injuries and the indications and contraindications of each. (1-5)
5. Discuss the presentation and management of bladder injuries. (1-5)
6. Discuss the evaluation, diagnosis and management of urethral injuries. (1-5)
7. Be able to diagnose and manage injuries to the scrotum and its contents. (1-5)
8. Develop an understanding of the management of the total trauma patient and the role of a urologist as a consultant. (1-5)

2. MEDICAL KNOWLEDGE

Teaching Methods:

1. Rotation specific readings
2. Direct faculty mentorship
3. Presentations in clinic
4. Rotation specific conferences
5. Simulation

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Chart stimulated recall
5. Examination-in-service
6. Teaching rounds
7. Biannual review with residency program director
8. Laparoscopy lab

▪ GENERAL

Goal 1: During the senior year, the resident will build on the knowledge base gained in the PGY-2 academic year.

Objectives:

1. Re-read selected chapters from Campbell's Urology 8th Ed. and Gillenwater's 6th Ed, per the academic syllabus. (1,2,4,6)
2. Demonstrate proficiency in accessing and applying information technology and the surgical literature to research a given topic, instead of only textbook information (1-2,4,6)
3. Refer to primary literature in the clinical situation rather than relying on textbooks. (1,4-6)
4. Complete the Annual AUA Urology In-Service exams and score above the 30th percentile. (4)

Goal 2: During the senior urology year, the resident will improve understanding of the pathophysiology, presentation, evaluation, treatment and management of common urologic conditions.

▪ BENIGN PROSTATIC ENLARGEMENT**Objectives:**

1. Benign Prostatic Hypertrophy (BPH) (1-6)
2. Surgical and minimally invasive management of BPH. Show an understanding of how to manage the complications of these treatments. (1-6)
3. Demonstrate proficiency in the evaluation of microscopic and gross hematuria (1-6)
4. Demonstrate proficiency in the evaluation and diagnosis of acute and chronic scrotal pain. Be able to discuss the presentation and differentiate epididymitis, testicular torsion, appendiceal torsion, orchitis, hernia, hydrocele, varicocele, spermatocele, testis mass and referred pain. (1-6)
5. Demonstrate proficiency in the management of acute and chronic urinary retention. (1-6)
6. Demonstrate proficiency in the ability to place a foley catheter in the setting of altered anatomy or previous traumatic catheterization. (1-6)
7. Become proficient in the diagnosis and management of acute and chronic prostatitis.(1-6)
8. Demonstrate proficiency in the management of phimosis and paraphimosis (1-6)

▪ ERECTILE DYSFUNCTION AND INFERTILITY

Goal 1: During the senior urology year, the resident will become proficient in the diagnosis, evaluation and treatment of patients with erectile dysfunction.

Objectives:

1. Describe the normal development and demonstrate the anatomy and function of the penis and male urethra. (1-6)

2. Describe the normal physiology of penile erection (1-6)
3. List the etiologies of erectile dysfunction (1-6)
4. Discuss common medical and psychological disorders associated with erectile dysfunction (1-6)
5. Describe in depth the evaluation of patients with erectile dysfunction including sexual history, medical history, surgical history, physical examination, laboratory evaluation and specialized testing. (1-6)
6. Describe in detail the various treatments of erectile dysfunction to include the following: (1-6)
 - f. Medical treatment
 - g. Intracavernosal injection
 - h. Vacuum constriction devices
 - i. Psychological and sexual therapy
 - j. Surgical procedures
 - h. Implantation of penile prosthesis
 - ii. Microvascular arterial bypass procedures
 - iii. Venous ligation procedures
7. Be able to describe the pathophysiology and management of Peyronie's Disease. (1-6)
8. Demonstrate proficiency in the diagnosis and management of a penile fracture. (1-6)

Goal 2: During the senior urology year, the resident will demonstrate ability to diagnose, evaluate and treat patients with idiopathic priapism and prolonged penile erection secondary to intracavernosal injection of vasoactive drugs

Objectives:

1. Describe the normal development and surgical anatomy of the penis. (1,3-7)
2. Discuss disturbances in the mechanism of normal erection resulting in priapism. (1,3-6)
3. List and describe the various etiologic factors in priapism. (1,3-6)
4. Demonstrate the ability to take a pertinent history and physical examination in patients with idiopathic or PIP induced priapism. (1,3-6)
5. Demonstrate knowledge of the diagnostic studies that are helpful in establishing the etiology of priapism. (1,3-6)
6. Given a patient of patient history with supportive data, select and defend alternative methods for the management of priapism. (1,3-6)
7. Describe the vascular shunting procedures used in the treatment of priapism. (1,3-6)
8. Discuss the complication of each therapeutic method and appropriate treatment of these complications. (1,3-6)

Goal 3: During the senior urology year, the resident will understand the basic science of male reproductive physiology and infertility

Objectives:

1. Demonstrate an understanding of the hypothalamic-pituitary-gonadal (HPG) axis and its endocrine control of testicular function. (1,3-6)
2. Identify the hormones involved in the HPG axis, their origins, function, reciprocal interrelationships and feedback control (1,3-6)
3. List the endocrinopathies, both exogenous and endogenous, that may interfere with the normal testicular axial relationship and specify the nature of these alterations. (1,3-6)
4. Describe the anatomy, physiology and pathophysiology of the male reproductive tract, spermatogenesis, sperm transport and capacitation. (1,3-6)
5. Identify the sequence of sperm maturation, the cell types found within and between the seminiferous tubules and the time sequence of spermatogenesis. (1,3-6)

6. Describe the mechanism of ejaculation including neurologic control and the anatomic structures involved. (1,3-6)
7. Identify disease states that interfere with ejaculation and the manner in which these states disrupt normal ejaculatory mechanisms. (1,3-6)
8. Describe the difference between emission and ejaculation. (1,3-6)

Goal 4: During the senior urology year, the resident will be able to competently diagnosis, evaluate and treat patients with male infertility.

Objectives:

1. List the important components of a historical review in males presenting with infertility. (1,3-6)
2. Describe the components of the physical examination of infertile males. (1,3-6)
3. List the specific laboratory studies that should be obtained as part of the male infertility evaluation and the manner in which abnormal results may contribute to or reflect the extent of infertility. (1,3-6)
4. Select the surgical diagnostic techniques used in patients with male infertility including vasography, rectal sonography and testicular biopsy. (1,3-6)
5. Identify exogenous drugs that may suppress fertility, ejaculation and erectile function. (1,3-6)
6. Identify the appropriate surgical or medical therapies for patients with male infertility and defend the rationale and indications for clinical application of these modalities. (1,3-6)
7. List and describe in detail the assisted reproductive techniques commonly used in patients with male factor infertility. (1,3-6)

▪ UROLITHIASIS

Goal 1: During the senior urology year, the resident will know the etiology and pathophysiology of urinary tract stone disease

Objectives:

1. Understand the epidemiology of urolithiasis to include the following: (1,3-6)
 - a. Geographic distribution of urinary calculus incidence in this country and the world
 - b. Incidence in relation to race, sex, age and climatic factors
 - c. The effects of dietary and fluid intake on occurrence
2. Describe the crystalline architecture of urinary calculi and theoretical factors affecting crystallization. (1,3-6)
3. Describe the part played by matrix in the architecture and possible prevention or initiation of stone formation. (1,3-6)
4. Describe the role of urinary tract obstruction in the etiology of urolithiasis. (1,3-6)
5. Present a working classification of the etiology of stone disease to include at the least the following: (1,3-6)
 - a. Renal tubular syndromes
 - b. Enzyme disorders
 - c. Hypercalcemic conditions
 - d. Hypercalciuric states
 - e. Uric acid lithiasis
 - f. Secondary urolithiasis
 - g. Iatrogenic urolithiasis

Goal 2: During the senior urology year, the resident will become proficient in the evaluation and diagnosis of a patient with urolithiasis

Objectives:

1. Elicit a history compatible with stone disease from a patient including a list of pertinent problems referable to stone formation. (1,2,6)
2. Discuss the information to be gained from urinalysis including the appearance of typical crystals. (1,3-6)
3. Know the relationship of stone formation to urinary bacteria and pH. (1,3-6)
4. Select appropriate serum studies in the evaluation of stone disease including assessment of serum creatinine, calcium, phosphate and uric acid. (1,3-6)
5. Describe the role of stone analysis in the diagnosis and treatment of patients with stone disease. (1,3-6)
6. Have an in depth knowledge of the radiographic evaluation of patients with stone disease including the use of both plain film radiography and Spiral Computed Tomography. (1,3-6)

Goal 3: During the senior urology year, the resident will select appropriate management strategies for patients with stone disease

Objectives:

1. Describe the role of dietary restriction and fluid intake modifications (1,3-6)
2. Discuss in detail the medical therapy of patients with metabolic stone disease. (1,3-6)
3. Discuss in detail and perform various procedures used in the treatment of stone disease to include at least the following: (1,4-6)
 - a. ESWL
 - b. Percutaneous nephrolithotomy
 - c. Pyelolithotomy
 - d. Ureteroscopy
 - e. Cystolithotomy
 - f. Litholopaxy
4. Given a patient with recurrent stone disease, develop a plan for follow-up care including metabolic evaluation, appropriate treatment by diet, fluid intake or medications and subsequent evaluation by radiographic studies. (1-6)

Goal 4: During the senior urology year, the resident will demonstrate competence in the use of ESWL in the treatment of urolithiasis

Objectives:

1. List the types of ESWL machine available including the sources of energy, methods of coupling energy to patient, and the methods for imaging and targeting stones. (4,5)
2. Describe the physics of shock wave stone fragmentation including the absorption of energy at the acoustical interface, internal reflections of shock wave within the stone and cavitation bubbles. (4,5)
3. List the indications and contraindications for the use of ESWL. (4,5)
4. Be familiar with pre-lithotripsy management including the indications for pre-treatment stents and selection of methods of anesthesia. (4,5)
5. Demonstrate ability to treat various stone types and describe initial energy levels used, total energy delivered and the use of contrast to assist stone targeting. (4,5)
6. Discuss the post-treatment management of patients treated with ESWL. (4,5)
7. List the complications and risks of ESWL. (4,5)

Goal 5: During the senior urology year, the resident will develop competence in the use endourologic techniques to treat upper urinary tract stones

Objectives:

1. Describe the surface relationships of the kidney and the structures traversed when a needle is passed into the renal pelvis through a posterior calyx. (4,7)
2. Know the intrarenal anatomy important to percutaneous renal access. (4,7)

3. Discuss the equipment used commonly in endourology including guide wires, balloon dilators, stents, stone baskets and lithotriptors. (4,7)
4. Demonstrate knowledge of the various types of fluoroscopy equipment and the risks of fluoroscopy. (1,4,5)
5. Understand the technique of percutaneous nephrostomy placement, the use of fluoroscopy or ultrasound for guidance and the potential complications of this access procedure. (1,4,5)
6. Know the methods and instruments used for stone removal including forceps, baskets, and various grabbers, and know which stones can be removed with each. (1,4,5)
7. Discuss various methods of power lithotripsy including ultrasound, electrohydraulic and laser lithotripsy. (1,4,5)
8. Know the complication of percutaneous stone removal and understand methods for their management (1,3-5)
9. Discuss the appropriate selection of patients for percutaneous lithotripsy as compared to ESWL. (1,3-5)
10. Discuss in detail the use of percutaneous stone dissolution and describe various chemolytic agents including Renacidin, Suby's solution and THAM. (1,3-5)
11. List the complications specific to various types of stone dissolution techniques. (1,3-5)

Goal 6: During the senior urology year, the resident will develop competence in the use endourologic techniques to treat lower urinary tract stones

Objectives:

1. Demonstrate ability to perform both rigid and flexible ureteroscopy in the treatment of ureteral and renal stones. (1)
2. Understand the use of baskets, forceps and other devices for ureteroscopic stone removal. (1)
3. Have a thorough knowledge of lithotripsy methods used via the ureteroscope to fragment ureteral stones. (1,3-5)
4. Describe the immediate and long-term complications of ureteroscopy including extravasation, ureteral stricture and avulsed ureter. (1,3-5)
5. Discuss the indications for ureteroscopic stone extraction as compared to the use of ESWL in the treatment of ureteral stones. (1,3-5)

▪ **UROLOGIC ONCOLOGY**

Goal 1: During the senior urology year, the resident will know how to diagnose, evaluate and treat patients with kidney cancer

Objectives:

1. Understand the normal development, function and surgical anatomy of the kidney. (1,3-5)
2. Identify and discuss the gross and histopathologic features of the various types of renal tumors. (1,3-5)
3. Discuss the natural history and epidemiology of kidney cancer. (1,3-5)
4. Know the paraneoplastic syndromes that may be associated with renal cell carcinoma. (1,3-5)
5. Know and discuss the clinical and pathological staging systems used for renal cancer, and identify the prognosis as a function of the TNM stage of disease. (1,3-5)
6. Discuss the evaluation and plan a course of therapy for selected patients with various stages of renal cell carcinoma. (1,3-5)
7. Demonstrate the ability to select the best surgical approach (radical versus partial versus laparoscopic nephrectomy) in patients with kidney cancer. (1,3-5)

8. Discuss adjuvant therapy for patients with renal cancer including the roles of radiotherapy, chemotherapy and use of biologic response modifier therapies. (1,3-5)
9. Identify and discuss the appropriate follow-up, including the role of radiographic imaging, of patients after radical or partial nephrectomy for renal cancer. (1,3-5)

Goal 2: During the senior urology year, the resident will competently diagnose, evaluate and treat patients with cancer of the renal pelvis and ureter.

Objectives:

1. Understand the normal development, function and anatomy of the ureter and renal pelvis. (1,3-5)
2. Discuss the theories regarding the etiology of cancer of the renal pelvis and ureter, and know the natural history and risk factors for tumor progression. (1,3-5)
3. Know the histopathologic features of transitional cell carcinoma of the upper urinary tract, including evaluation of urinary cytology. (1,3-5)
4. Demonstrate ability to elicit a history compatible with cancer of the upper urinary tract and discuss findings on physical examination. (1,3-5)
5. List and be able to interpret the appropriate laboratory studies necessary to diagnose and stage cancer of the renal pelvis and ureter. (1-2,3-6)
6. Accurately select and interpret imaging studies of the upper urinary tract. (1,3-5)
7. Demonstrate competence in evaluation of the ureter and renal pelvis using endoscopic techniques. (1-6)
8. Discuss the rationale for various surgical procedures used in the treatment of patients with ureteral or renal pelvic cancer. (1,3-5)
9. Discuss the rationale, methodology, agents used and potential toxicities of intracavitary agents used in the treatment of superficial tumors. (1,3-5)
10. For patients with invasive or metastatic tumors of the upper urinary tract, discuss the role and potential toxicities of systemic chemotherapy. (1,3-5)

Goal 3: During the senior urology year, the resident will competently diagnose evaluate and treat patients with cancer of the bladder.

Objectives:

1. Understand the embryology, normal development, function and anatomy of the bladder. (1,3-5)
2. Discuss the epidemiology of the various forms of bladder cancer, the concepts of initiation and promotion of carcinogenesis and risk factors for bladder cancer development. (1,3-5)
3. Know the natural history of superficial and muscle invasive bladder cancer. (1,3-5)
4. Know and discuss the clinical and pathological staging systems used for bladder cancer, and identify the prognosis as a function of the TNM stage of disease. (1,3-5)
5. Demonstrate the ability to recognize the signs and symptoms of patients with bladder cancer and be able to perform a bimanual examination of the bladder under anesthesia. (1,3-5)
6. Demonstrate the ability to interpret the results of laboratory and imaging studies in the diagnosis and staging of bladder cancer. (1,3-5)
7. Demonstrate competence in the performance of urethroscopy and cystoscopy in the evaluation and follow-up of patients with bladder cancer. (1,3-5)
8. Describe the endoscopic approaches to treatment of bladder cancer. (1,3-5)
9. Know and discuss the indications, efficacy and complications associated with the use of intravesical therapies. (1,3-5)
10. Know and discuss the role of open surgical therapy for patients with bladder cancer, and discuss the role of lymph node dissection. (1,3-5)
11. Describe the various types of urinary diversion and considerations of their suitability in the context of extent of disease and patient preferences. (1,3-5)

12. Discuss the role of radiotherapy and chemotherapy in the treatment (adjuvant and therapeutic) of advanced bladder cancer. (1,3-5)

Goal 4: During the senior urology year, the resident will become proficient in the diagnosis, evaluation and treatment of patients with prostate cancer.

Objectives:

1. Understand the embryology, normal development, function and anatomy of the prostate. (1,3-5)
2. Discuss the pathophysiology and theories regarding the etiology of prostate cancer. (1,3-5)
3. Know the gross and microscopic histopathology of prostate cancer and be able to differentiate these from other common histologic entities. (1,3-5)
4. Discuss the natural history and epidemiology of prostate cancer. (1,3-5)
5. Elicit a detailed and appropriate history from patients with prostate cancer. (1,3-5)
6. Demonstrate ability to perform a digital rectal examination, including location and size of induration or nodules, pelvic sidewall and seminal vesicle extension of cancer. (1,3-5)
7. Discuss the appropriate diagnostic and staging studies used to evaluate cancer of the prostate and interpret their results. (1,3-5)
8. Demonstrate ability to perform an adequate transrectal ultrasound and biopsy of the prostate, and understand the rationale for various biopsy strategies. (1,3-5)
9. Discuss the risks, complications and benefits of the various treatment options for prostate cancer, and demonstrate the ability to select appropriate patients for each treatment modality. (1,3-5)
10. Discuss with patients and families the prognosis and complications associated with prostate cancer treatment and understand the medical and psychological management of these complications. (1,3-5)
11. Know the appropriate follow-up regimens for patients after radical prostatectomy and radiation therapy for prostate cancer. (1,3-5)
12. Discuss the indications and controversies surrounding the use of adjuvant therapy after definitive therapy (radical prostatectomy or radiotherapy). (1,3-5)

Goal 5: During the senior urology year, the resident will competently diagnose, evaluate and treat patients with testicular cancer.

Objectives:

1. Understand the embryology, normal development, function and surgical anatomy of the testis and paratesticular structures.(1,3-6)
2. Know and discuss the lymphatic drainage of the testicle and the pattern of lymphatic progression of disease to the retroperitoneum. (1,3-6)
3. Discuss various factors in the possible etiology of testis cancer. (1,3-6)
4. Know and differentiate the gross and histopathologic features of seminomatous, nonseminomatous and nongerml cell tumors. (1,3-6)
5. Demonstrate the ability to elicit a history compatible with testicular cancer. (1,3-6)
6. Perform a complete and accurate physical examination of patients with testicular cancer including evaluation for lymphadenopathy and gynecomastia. (1,3-6)
7. List the appropriate diagnostic and staging studies used to evaluate cancer of testicle and be able to interpret the results of these studies. (1,3-6)
8. Discuss the use of serum tumor markers in patients with testis cancer. (1,3-6)
9. Interpret testicular ultrasound and abdominal/pelvic CT findings in patients with testis cancer. (1,3-6)
10. Discuss the relative roles of retroperitoneal lymph node dissection and surveillance in patients with Stage I nonseminomatous testis cancer. (1,3-6)
11. Understand and discuss the selection of radiotherapy for the treatment of patients with testis cancer. (1,3-6)

12. Discuss various chemotherapeutic agents used in the treatment of advanced testis cancer and their relative value, depending on tumor type and stage. (1,3-6)

Goal 6: During the senior urology year, the resident will competently diagnose, evaluate and treat patients with penile cancer

Objectives:

1. Understand the embryology, normal development, function and surgical anatomy of the penis and urethra. (1,3-6)
2. Discuss the incidence, epidemiology and potential etiologic factors of penile cancer. (1,3-6)
3. Identify and discuss treatment and follow-up of premalignant penile lesions. (1,4-6)
4. Know and use the TNM staging system for squamous cell carcinoma of the penis. (1,3-6)
5. Demonstrate an appropriate examination of the penis and inguinal lymph nodes in patients diagnosed with penile cancer. (1,3-6)
6. Describe the surgical treatment options and their applicability to various stages of penile cancer. (1,3-6)
7. Discuss the strategies and indications for inguinal lymph node dissection. (1,4-6)
8. Discuss the roles of radiotherapy and chemotherapy in the treatment of local and advanced penile cancer. (1,3-6)

Goal 7: During the senior urology year, the resident will understand the role of chemotherapeutic agents in the treatment of genitourinary malignancies.

Objectives:

1. Classify the commonly used chemotherapy agents used in urologic cancers. (1,3-6)
2. Discuss the pharmacology of the various types of chemotherapeutic drugs used in the treatment of urologic cancers. (1,3-6)
3. Describe the current chemotherapeutic regimens for genitourinary cancers. (1,3-6)
4. Know the specific complications of chemotherapy, both immediate and long-term, and the treatment of these complications. (1,3-6)
5. Discuss the treatment results and expected response rates of chemotherapy regimens used for the treatment of various genitourinary malignancies. (1,3-6)

Goal 8: During the senior urology year, the resident will understand the role of radiotherapy in the treatment of genitourinary malignancies.

Objectives:

1. Discuss the physical properties of ionizing radiation, including the fundamental units used to describe the interaction of radiation with matter and the differences in penetration and absorption between different types of radiation. (1,3-6)
2. Know the differences between external beam and interstitial radiotherapy. (1,3-6)
3. Discuss the isotopes used for interstitial radiotherapy including differences in energy emitted, half-lives and the clinical utilization of each. (1,3-6)
4. Discuss the biologic factors impacting the effectiveness of radiotherapy. (1,3-6)
5. Demonstrate a basic understanding of radiotherapy treatment principles as it relates to genitourinary malignancy. (1,3-6)
6. Discuss the commonly employed curative and palliative radiotherapeutic doses, schedules and fields for urologic tumors. (1,3-6)
7. Demonstrate knowledge of potential complications of radiotherapy both in general and those associated with the treatment of specific urologic tumors. (1,3-6)

▪ FEMALE UROLOGY AND VOIDING DYSFUNCTION

Goal 1: During the senior urology year, the resident will understand the normal development, function and surgical anatomy of the female urethra, bladder and pelvis.

Objectives:

1. Describe and explain the developmental processes by which the urethra progresses to tubular form and the hormonal influences on urethral development. (1,3-6)
2. Describe female urethral function by which urinary continence is maintained and the functional role of secondary structures such as striated muscle. (1,3-6)
3. Know the blood, lymphatic and nerve supply of the female bladder and urethra. (1,3-6)
4. Understand the normal anatomy and support of the female pelvis including all involved organs and the supporting ligaments, muscles and fascias. (1,3-6)

Goal 2: During the senior urology year, the resident will competently evaluate, diagnose and treat females presenting with urinary incontinence.

Objectives:

1. Perform and demonstrate a complete medical history applicable of female patients presenting with urinary incontinence (1,3-6)
2. Demonstrate an appropriate and complete physical examination of women with incontinence. (1,3-6)
3. Describe the laboratory studies that may assist with the diagnosis of women with incontinence. (1,3-6)
4. Demonstrate the ability to chose and carryout the appropriate therapy for the following conditions associated with female incontinence: (1,3-6)
 - a. Stress incontinence due to anatomical changes
 - b. Stress incontinence due to sphincteric damage
 - c. Urge incontinence and bladder instability
 - d. Neurogenic bladder dysfunction
 - e. Urinary retention and obstruction
 - f. Urethral diverticula
5. Understand the role of pelvic floor neuromodulation in the treatment of patients with refractory voiding dysfunction due to pelvic floor dysfunction. (1,3-6)

Goal 3: During the senior urology year, the resident will understand the evaluation, diagnosis and treatment of women with pelvic prolapse syndromes

Objectives:

1. Perform and demonstrate a complete medical history applicable of female patients presenting with pelvic floor prolapse. (1,3-6)
2. Demonstrate an appropriate and complete physical examination of women pelvic prolapse. Be able to grade pelvic organ prolapse. (1,3-6)
3. Describe any adjunctive studies that may assist in the diagnostic workup of women with pelvic floor prolapse to include any radiologic studies and urodynamics. (1,3-6)
4. Demonstrate the ability to choose and carryout the appropriate therapy, both surgical and nonsurgical, for the following conditions associated with pelvic floor prolapse: (1,3-6)
 - a. Anterior compartment relaxation with or without associated urinary incontinence
 - b. Middle compartment relaxation with or without associated urinary incontinence
 - c. Posterior compartment relaxation with or without associated urinary incontinence

Goal 4: During the senior urology year, the resident will know how to perform urodynamic studies in patients with voiding dysfunction.

Objectives:

1. Discuss the value and indications for urodynamic evaluation of the lower urinary tract. (1,3-6)
2. Have an in depth knowledge of the relationship of specific parts of the urodynamic study to the filling/storage and emptying phases of micturition. (1,3-6)
3. Demonstrate the ability to independently set up and perform filling and voiding cystometry and be able to identify and interpret all of the following: (1,3-6)
 - a. Urinary flow rate
 - b. Residual urine volume
 - c. Flow patterns
 - d. Bladder compliance
 - e. Involuntary bladder contractions
 - f. Abnormal bladder sensation
 - g. Leak point pressures
 - h. Pressure/flow studies
4. Demonstrate the ability to independently set up and perform videourodynamics. (1,3-6)
5. Demonstrate the ability to independently set up and perform electromyography utilizing both needle and patch electrodes. (1,3-6)

Goal 5: During the senior urology year, the resident will know how to evaluate, diagnose and treat patients with pelvic pain syndromes including interstitial cystitis

Objectives:

1. Demonstrate an understanding of the epidemiologic aspects of interstitial cystitis. (1,3-6)
2. Be familiar with the common theories regarding the pathogenesis of interstitial cystitis. (1,3-6)
3. List the typical symptoms of interstitial cystitis in men and women. (1,3-6)
4. Discuss the differential diagnosis of the symptoms of interstitial cystitis. (1,3-6)
5. Be familiar with the cystoscopic findings in patients with interstitial cystitis and the indications and limitations of bladder biopsy. (1,3-6)
6. Explain the therapeutic rationale for the various treatments used in interstitial cystitis and be familiar with their benefits, efficacy and side effects. (1,3-6)
7. List the systemic and intravesical pharmacotherapies used to treat interstitial cystitis. (1,3-6)
8. Know the role of bladder hydrodistention in patients with interstitial cystitis. (1,3-6)
9. Know the role of pelvic floor neuromodulation in the treatment of patients with interstitial cystitis and other pelvic pain syndromes. (1,3-6)
10. Know the role of surgical therapy for patients with refractory interstitial cystitis. (1,3-6)
11. Demonstrate proper selection of interstitial cystitis patient for surgical therapies. (1,3-6)

Goal 6: During the senior urology year, the resident will become competent in the diagnosis and treatment of patients with vesico-vaginal and uretero-vaginal fistulae.

Objectives:

1. List the signs and symptoms commonly associated with vesico-vaginal (VVF) and ureterovaginal (UVF) fistulae. (1,3-6)
2. Describe the pathogenesis of VVF including iatrogenic, post-irradiation and obstetric trauma induced fistulae. (1,3-6)
3. Describe the important components of the history and physical examination in patients with VVF and UVF. (1,3-6)
4. Distinguish between VVF and UVF using historical and diagnostic techniques. (1,3-6)
5. Discuss the surgical principles involved in repair of these fistulas including the biology of wound repair and the preparation of tissues for surgery. (1,3-6)

6. Describe the conservative management of VVF and UVF. (1,3-6)
7. Discuss in detail the surgical repair options for patients with VVF or UVF. (1,3-6)

▪ NEURO-UROLOGY

Goal 1: During the senior urology year, the resident will know the appropriate evaluation, diagnosis and treatment of various neurogenic bladder disorders in patients with spinal cord injury.

Objectives:

1. Describe the normal innervation and neuromuscular physiology of the bladder, urethra and surrounding striated musculature of the bladder and urethra. (1,3-6)
2. Discuss the expected lower urinary tract sequelae of injuries to the peripheral innervation of the bladder, spinal cord at various levels, and supraspinal pathways. (1,3-6)
3. Describe the pathophysiology of lower urinary tract dysfunction associated with the following neurogenic bladder (NGB) disorders: (1,3-6)
 - a. Diabetes mellitus
 - b. Multiple sclerosis
 - c. Spinal cord tumors and vascular insults
 - d. Cerebrovascular accidents and brain tumors
 - e. Parkinson's disease
 - f. Radical pelvic surgery
 - g. Myelomeningocele
 - h. Shy-Drager syndrome
4. Discuss the significant aspects of the history in the evaluation of neurogenic bladder dysfunction. (1,3-6)
5. Perform an adequate physical examination to aid in the diagnosis of patients with NGB including neurologic exam and bulbocavernosus reflex. (1,3-6)
6. Discuss the use and indications as well as the results of urinalysis, serum creatinine, excretory urography, VCUG, ultrasound and cystoscopy in the evaluation of the NGB. (1,3-6)
7. Select and carry out appropriate therapy for patients with NGB including nonsurgical and surgical management options. (1,3-6)
8. Describe the potential long-term sequelae and complications of NGB including deterioration of renal function, autonomic dysreflexia and development of bladder malignancy. (1,3-6)

Goal 2: During the senior urology year, the resident will perform and interpret a complete and appropriate urodynamic study in patients with spinal cord injury.

Objectives:

1. Describe the use of urine flow rates and patterns, and residual urine volumes, in patients undergoing urodynamic study. (1,3-6)
2. Describe the critical aspects of filling cystometry including: (1,3-6)
 - a. Appropriate methodology and conduct of the examination
 - b. Phases of filling cystometry
 - c. Concept of bladder compliance
 - d. Significance of involuntary bladder contractions
 - e. Significance of normal or absent bladder sensation
 - f. Differences between classical and valsalva leak point pressures
 - g. The role and significance of the bethanochol supersensitivity test
3. Describe the methodology and significance of the pressure/flow phase of a urodynamic study (1,3-6)
4. Describe the role of videourodynamics and recognize findings in situations where videourodynamics is specifically helpful. (1,3-6)

5. Discuss the primary value of electromyography (EMG) in urodynamic assessment. (1,3-6)
6. Understand the role of urethral profilometry (UPP) in patients undergoing urodynamic study. (1,3-6)

▪ PEDIATRIC UROLOGY

Goal 1: During the senior urology year, the resident will develop a sound understanding of the examination, diagnosis and management of the Urologic pediatric patient.

Objectives:

2. Be able to discuss the pathophysiology, evaluation and treatment for the following disorders: (1,3-6)
 - a. Cystic diseases of the kidney
 - b. Obstructive uropathy
 - c. Enuresis
 - d. Uretero-pelvic junction obstruction
 - e. Wilm's tumor and other genitourinary malignancies
 - f. Neurogenic bladder
 - g. Urinary incontinence
 - h. Anterior and posterior urethral valves
 - i. Epispadias and bladder exstrophy
 - j. Hypospadias
 - k. Urologic problems associated with imperforate anus
 - l. Intersex disorders
 - m. Vesico-ureteral reflux
 - n. Megaureter
 - o. Ureteral duplication and ureterocele
 - p. The acute scrotum
 - q. Cryptorchidism
 - r. Pediatric urinary tract infection
 - s. Pediatric urinary tract trauma
 - t. Neonatal emergencies
 - u. Management of the myelomeningocele patient

▪ UROLOGIC TRAUMA AND RECONSTRUCTION

Goal 1: During the senior year the residents will become proficient in operative and non-operative management of Urologic trauma.

Objectives:

1. Develop knowledge of current indications for and implementation of a strategy of damage control surgery. (1,4-7)
2. Develop knowledge of current indications for radiological and operative staging of urologic injuries and provide an accurately staged diagnosis consistent with the currently accepted staging format. (1,4-6)
3. Develop knowledge of current indications and implementation of acute surgical management of urologic injuries (e.g., renorrhaphy, nephrectomy, ureterorrhaphy, ureteral stent placement, cystorrhaphy, urethral realignment, scrotal exploration). (1,4-6)
4. Develop knowledge of current indications for and application of interventional radiological services where appropriate (e.g., angioembolization, percutaneous drain placement). (1,4-6)
5. Develop knowledge of current indications for and implementation of injury surveillance for delayed sequelae, including knowledge of imaging techniques used to make these diagnoses. (1,4-6)

6. Develop knowledge of indications for and techniques used for delayed reconstruction of urologic injuries. (1,4-6)
7. Develop knowledge of the complex interplay of urologic injuries as they pertain to concomitant orthopaedic, gastrointestinal, vascular, and gynecologic injuries. (1,4-6)

Goal 2: During the junior year the residents will understand the principles of and gain skills pertaining to complex genital reconstructive surgery, employing plastic surgical techniques, and understand the particular advantages and limitations to their use.

Objectives:

1. Participate in the multidisciplinary diagnosis and management of diseases of the genitalia/perineum which can result in the need for complex reconstruction following initial stabilization (e.g., necrotizing infections/Fournier's, pelvic trauma, ionizing radiation, thermal injury/burns). (1,4-6)
2. Demonstrate an understanding of plastic surgical reconstructive techniques and principles as they apply to traumatic genitourinary injuries, genital skin loss/deficiency, and complex pelvic wounds involving the genitalia and lower urinary tract. Such techniques includes: surgical debridement, dressing care, urinary diversion, skin grafting, graft bed preparation). (1,4-6)
3. Demonstrate an understanding of the current indications and imaging modalities relevant to diagnosis, surveillance and preoperative planning as they apply to urologic reconstructive surgery: Peyronie's disease, urethral stricture, ureteral stricture, UPJ obstruction. (1,4-6)
4. Acquire an understanding of the physical, psychological and social implications that may be associated with complex genital/perineal reconstruction. (1,4-6)

Goal 3: During the junior year the residents will acquire a basic understanding of complex urethral reconstructive surgery with an understanding of the benefits and the technical limitations of surgical procedures.

Objectives:

1. Participate in the clinical evaluation, diagnosis, radiological evaluation and decision-making process of patients with urethral stricture disease, urethrocutaneous fistulae or failed prior reconstruction. (1,4-6)
2. Demonstrate knowledge of indications for minimally invasive procedures for urethral stricture disease, such as urethral dilatation, urethrotomy, suprapubic (open, percutaneous) catheter insertion, and be able to perform these procedures. (1,4-6)
3. Participate in open urethral reconstructive cases as they pertain to the lesion and become familiar with the techniques of: (1,4-6)
 - a. Anastomotic urethroplasty
 - b. Graft or flap onlay techniques
 - c. Staged urethral reconstruction
 - d. Perineal urethrostomy
 - e. Posterior stricture repair
4. List the adjunctive surgical maneuvers that may be required to facilitate successful urethral reconstruction for anterior and posterior strictures: (1,4-6)
 - a. Corporal splitting
 - b. Corporal rerouting
 - c. Urethral mobilization
 - d. Inferior pubectomy
5. Participate in all aspects of postoperative care for these patients, including dressing care, catheter care, clinical assessment and evaluation for complications and participate in their management. (1-6)

3. PRACTICE-BASED LEARNING AND IMPROVEMENT

Teaching Methods:

1. Clinical performance with direct observation
2. Direct faculty mentorship
3. Daily supervised care of surgical patients
4. Presentations in clinic
5. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluations
4. Biannual review with residency program director

Goal 1: During the senior urology year the resident will develop a working knowledge of the regular conferences needed to provide excellent urological care.

Objectives:

1. Participate in weekly department conferences and apply knowledge learned to your patients. (1-3)
2. Participate in weekly hospital-based conferences and apply knowledge learned to your patients. (1-3)
3. Prepare, document, and present regular M&M Rounds. (1-3)
4. Become familiar with complication and consent issues regarding surgery and investigate ways to prevent adverse outcomes. (1-3)

Goal 2: During the senior Urology year the resident will gain become proficient at contributing to education of those around them.

Objectives:

1. Demonstrate proficiency in the teaching of medical students and junior residents. (1-3)
2. Demonstrate proficiency at training paraprofessional care givers, technicians and nursing staff in clinic and OR. (1-3)

4. INTERPERSONAL SKILLS AND COMMUNICATION

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Chart stimulated recall
5. Observed clinical examination
6. Patient surveys
7. Teaching rounds
8. Biannual review with residency program director
9. Review of medical records on the ward

10. Laparoscopy lab

Goal 1: During the senior urology year, the resident will develop presentation skills, and healthy study habits.

Objectives:

1. Present cases to faculty at conferences, on rounds, on call and in clinic. It is through these presentations that the resident develops skills in taking a history, putting the facts together and developing a treatment plan. (1-3,6-8)
2. Learn to speak and present effectively in front of their peers and faculty. Be able to handle questions and prepare well thought out responses. (1-3,6-8)
3. Develop study habits and a regular reading schedule so that they are prepared for rounds, conferences and the In-Service exam. (1-3,6-8)
4. Pick or be assigned a faculty who will mentor them and serve as their advisor for the research endeavors. (1-2,6-8)

Goal 2: During the senior resident year the resident will demonstrate proficiency in the management and leadership of a ward service, utilizing the cooperative skills of medical students, junior residents, nurses, consult staff, and ancillary personnel.

Objectives:

1. Demonstrate skill and sensitivity for appropriately counseling and educating patients and their families in a variety of clinical situations. (1,2,4,5,7,8)
2. Demonstrate effective documentation of practice activities with proper operative/procedure note dictations, clinic visit dictations, discharge summary dictations, daily progress notes and event notes. (1-3, 6-8)
3. Demonstrate how to properly consult a specialty service (radiology, GI, PT, etc.) by correctly formulating the specific question to be answered. Follow through with consultant's suggestions after appropriate discussion with the attending staff. (1-3, 6-8)
4. Demonstrate a kind, thoughtful, understanding and helpful attitude to consulting services. (1-3, 6-8)
5. Demonstrate ability to independently manage the Urology service, to include administrative, clinical and academic responsibilities while acting as the chief resident. (1-8)
6. Present all patient and conference material in a concise, organized, logical and knowledgeable manner. (1-4,6,7)
7. Demonstrate leadership by assuring the attendance of team members at all rounds and conferences. (1,6,7,9)

5. PROFESSIONALISM

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Observed clinical examination
5. Patient surveys

6. Case logs and procedure logs
7. Teaching rounds
8. Biannual review with residency program director
9. Laparoscopy lab

Goal 1: During the senior resident urology year, the resident will demonstrate respectful, altruistic and ethically sound behavior with patients and all members of the health care team.

Objectives:

1. Wear proper attire at all times. Maintain a professional bearing at all times. (1,4,6-8)
2. Adhere to all hospital-specific policies. (1-3,7,8)

Goal 2: During the senior resident Urology year, the resident will maintain professional bearing and behavior at all times.

Objectives:

1. Record duty hours every week on the ACGME web site to ensure compliance with the 80 hour work week limit. (1,8)
2. Attend all resident and hospital-specific conferences. (1,8)
3. Demonstrate leadership by assuring the attendance of team members at all rounds and conferences. (1,6-8)
4. Maintain a current unrestricted medical license. (7)
5. Maintain daily/weekly updates of your Surgical Operative Log on the ACGME web. (5,7)
6. Treat each patient, regardless of social or other circumstances with the same degree of respect they would afford to their own family members. (1-4,6,7)
7. Demonstrate administrative skill in preparation of the weekly M&M reports and presentation at conferences. (1,6,7)
8. Educate and incorporate medical students, sub-interns into the service. (1,2,6-8)
9. Continue work on research project, with goal of one publication in a peer-reviewed journal or presentation at a national meeting prior to graduation (8)

6. SYSTEMS-BASED PRACTICE

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Morbidity/Mortality Reports, Tumor Board Reports
5. Observed clinical examination
6. Case logs and procedure logs
7. Biannual review with residency program director

Goal 1: During the senior resident urology year, the resident will demonstrate effective interaction with referring physicians throughout the Mid-Atlantic Region.

Objectives:

1. Demonstrate effective and safe patient care which minimizes delays in discharge (1,2,4,6)
2. Demonstrate effective time management and adherence to work hours regulations. (1,2,6)
3. Demonstrate an understanding of the larger system of hospital care by: (1-3,5, 6)
 - a. Participating in weekly multidisciplinary rounds.
 - b. Participating in daily patient care rounds.
4. Demonstrate an understanding of how patients are properly referred, scheduled, and approached for surgery. (1-5)

PGY-5 UROLOGY RESIDENT (URO-4)

The URO-4 year is divided into two separate six-month blocks. One six-month segment is dedicated to research at NIH in Bethesda, MD, and the other six months is dedicated to pediatric urology, at the Children's National Medical Center in Washington, DC.

The URO-4 year in urology is traditionally the time for the active pursuit of clinical research, reading and reflection of clinical work. This year has a dedicated research rotation that is 6 months in length. Residents are expected to begin the year having identified a research project in association with a research advisor. Residents at this level are involved in basic and/or clinical urological research in one of the laboratories or clinical facilities.

The URO-4 year also has six months focused in pediatric urology which is performed at Children's National Medical Center in Washington, DC.

The 80-hour work week applies to this group of residents, just like any other year level. The research resident is not exempt from clinical practice in that he/she may intermittently cover the clinical service as needed to cover other residents' leave (i.e. vacation, maternity/paternity leave, sick leave, or unexcused absences). He/she also maintains the resident continuity clinic in conjunction with appropriate faculty supervision.

CHILDREN'S NATIONAL MEDICAL CENTER (CNMC) WASHINGTON, DC

1. PATIENT CARE

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Rotation specific readings
4. Direct faculty mentorship
5. Daily supervised care of surgical patients
6. Presentations in clinic
7. Rotation specific conferences
8. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. Oral examination at Pediatric Urology Grand Rounds/Conference
4. 360 degree evaluation
5. Examination-in-service
6. Teaching rounds

7. Biannual review with residency program director
8. Case logs and procedure logs

Goal 1: While on the CNMC rotation, the resident will provide compassionate and safe pediatric urology patient care.

Objectives:

1. Perform a focused pediatric urology history and physical examination. (1-3,5-7)
2. Develop an understanding for the differences between adult and pediatric urology patients. (1-7)
3. Develop management strategies for continuity of care for complex pediatric urology patients. (1-7)
4. Learn about patient specific pediatric urology medications and dosing regimens. (1-6)

Goal 2: While on the CNMC rotation, the resident will enact best practices for acute care of pediatric patients.

Objectives:

1. Learn specific aspects of acute neonatal ICU care. (1-6)
2. Management of acute care pediatric urology patients in the ER. (1-7)
3. Division of labor and team building in patient care. (1-6)
4. Perform all consults in a timely fashion and communicate with on-call attendings. (1-3,5-6)
5. Attend to all in-patient management. (1-3,5,6)

Goal 3: The resident will be able to discharge all patients safely and efficiently.

Objectives:

1. Complete documentation and dictations in a timely fashion. (1,3,6)
2. Educate parents and patients regarding management. (1-3,5,6)
3. Communicate with the team members including attendings, nurses, and ancillary staff about patient care plans. (1-3,5,6)
4. Learn about post-operative management and follow-up. (1-7)
5. Develop communication skills with nurses and educate ancillary staff in order to allow them to be a part of appropriate patient discharge. (1,3,5-7)

2. MEDICAL KNOWLEDGE

Teaching Methods:

1. Rotation specific readings
2. Direct faculty mentorship
3. Presentations in clinic
4. Rotation specific conferences
5. Simulation

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. Oral examination at Pediatric Urology Grand Rounds/Conference
4. 360 degree evaluation
5. Chart stimulated recall
6. Examination-in-service
7. Teaching rounds
8. Biannual review with residency program director
9. Surgical case logs and procedure logs

Goal 1: While on the CNMC rotation, the resident will diagnose pediatric urology problems and manage them appropriately

Objectives:

1. Become educated about common pediatric urology. (1-7)
2. Learn proper management and documentation. (1-7)
3. Learn and demonstrate skills in OR training with respect to congenital reconstruction. (1-7)
4. Develop accurate knowledge of neonatal workup (1-7)
5. Know about Latex precautions/allergies. (1,7)
6. Prepare Pre-operative conference. (1-3,6,7)
7. Develop differential diagnoses during rounds and conferences. (1-7)

Goal 2: While on the CNMC rotation, the resident will develop OR skills with regard to:

Objectives:

1. Proper tissue handling, consent, radiologic assessment (1,8)
2. Reconstructive cases (1-8)
3. Basic principles of pediatric urologic surgery (1,2,5,6,8)
4. Cystoscopy indications (1,2,5-7)

Goal 3: While on the CNMC rotation, the resident will develop effective management skills of the following pediatric disease entities

Objectives:

1. Undescended Testicle (UDT), ectopic (1-8)
2. Hernias (1-8)
3. Circumcisions (1-8)
4. Ureteral reimplants (1-8)
5. Hypospadias (1-8)
6. Hydroceles (1-8)
7. Posterior urethral valves (1-8)

Goal 4: While on the CNMC rotation, the resident will develop skills in open, laparoscopic and robotic congenital pediatric disease processes including orchiopexy/orchiectomy, vesicoureteral reflux and pyeloplasty.

Objectives:

1. Demonstrate a thorough understanding of the retroperitoneum and true pelvis (1,2,5,8)
2. Develop surgical skills required for pelvic surgery (1,2,5,8)
3. Compare and contrast skills used to become competent at open, laparoscopic, endoscopic and (where appropriate) robotic surgery for orchiopexies, vesicoureteral reflux and pyeloplasties. (1,2,5,8)

Goal 5: While on the CNMC rotation, the resident will become proficient in evaluating the acute pediatric ER patient with an acute scrotum.

Objectives:

1. Demonstrate a thorough understanding of scrotal anatomy. (1,2,5,6)
2. Describe the differential diagnoses associated with pediatric acute scrotum including spermatic cord torsion, epididymo-orchitis, appendix testis torsion, hydrocele, and testis tumors. (1,2,5,6)
3. Discuss the uses of Doppler ultrasound in the setting of an acute scrotum. (1,2,5,6)

Goal 6: While on the CNMC rotation, the resident will develop knowledge regarding hydronephrosis, including pre-natal and post-natal evaluation and management strategies.

Objectives:

1. Demonstrate a thorough understanding of the retroperitoneum and renal anatomy. (1,2,5,6)
2. Discuss the differential diagnoses involved in hydronephrosis, including ureteropelvic junction obstruction, vesicoureteral reflux disease, posterior urethral valves, multicystic dysplastic kidney, ureterocele and megaureters. (1-7)
3. Demonstrate a thorough knowledge of the evaluation of a patient with hydronephrosis, including the differences between sexes. (1-7)
4. Discuss the appropriate and sequential radiographic evaluation of the child with hydronephrosis. (1-7)
5. Understand the difference between treatment and prophylaxis and how to manage patients with hydronephrosis. (1-7)
6. Develop surgical skills required for retroperitoneal surgery (1-8)

Goal 7: While on the CNMC rotation, the resident will develop a clear understanding of embryogenesis as it relates to development of the genitor-urinary organs and the pathophysiology involved in disorder of sex development (intersex) states.

Objectives:

1. Describe the gestational genito-urinary stages of embryo and the fetal development. (1-7)
2. Evaluate the child with ambiguous genitalia and the various congenital syndromes associated with ambiguous genitalia (1-7)
3. Determine a reasonable differential for the child with ambiguous genitalia and the appropriate counseling to the family and management of the patient (1-7)
4. Order the appropriate ancillary tests and radiographic evaluation of the child with a disorder of sex development (1-7)
5. Consult with the team members to determine the best management of the child with a disorder of sex development. (1-3,4,6,7)

Goal 8: While on the CNMC rotation, the resident will Understand the neuroanatomy and the neurophysiology of normal micturition and differentiate that from the pathophysiology of voiding dysfunction, with regard to constipation, urinary tract infections.

Objectives:

1. Describe the normal innervation and neuromuscular physiology of the pediatric bladder, urethra and rhabdosphincter mechanisms. (1,2,5,6)
2. Compare and contrast normal voiding with the voiding dysfunction syndrome. (1,2,5,6)
3. Discuss the appropriate indications for urodynamics testing in children. (1,2,5,6)
4. Discuss the benefit, risks and limitations of urodynamics in children. (1,2,5,6)
5. Manage patients with voiding dysfunction. (1-7)
6. Perform a urodynamics study, as indicated, with assistance. (1-8)

Goal 9: While on the CNMC rotation, the resident will learn the basics of pediatric genitor-urinary tumors, including testicular, renal, adrenal and pelvic.

Objectives:

1. List the common pediatric genitor-urinary tumors, including seminomatous and nonseminomatous testicular tumors; Wilms' tumor, neuroblastoma and rhabdomyosarcoma. (2,4-7)
2. Discuss the associated patterns with the various genitorourinary pediatric tumors (eg., Beckwith-Wiederman syndrome with Wilms' tumor). (2,5-8)
3. Obtain the proper laboratory and radiographic evaluation on all genitor-urinary pediatric tumors. (1-7)

3. PRACTICE-BASED LEARNING AND IMPROVEMENT

Teaching Methods:

1. Clinical performance with direct observation
2. Direct faculty mentorship
3. Daily supervised care of surgical patients
4. Presentations in clinic
5. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluations
4. Biannual review with residency program director

Goal 1: While on the CNMC rotation, the resident will broaden knowledge about improving health-care.

Objectives:

1. Learn about and become part of the Pediatric Urology team (1-3)
2. Learn about the daily operations of a children's hospital (1-3)

Goal 2: While on the CNMC rotation, the resident will become proficient at presenting pertinent information regarding pediatric cases and practices.

Objectives:

1. Present one or two lectures at a Saturday morning Pediatric Urology conference followed by discussion of a relevant/current/classic pediatric urology journal article or equivalent. (1-3)
2. Develop case-coordinated management with attendings for patients. (1-3)
3. Prepare and document the M&M for Children's every month. (1)

4. INTERPERSONAL AND COMMUNICATION SKILLS

Teaching Methods

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. Oral examination at Pediatric Urology Grand Rounds/Conference
4. 360 degree evaluation
5. Chart stimulated recall
6. Patient surveys
7. Teaching rounds
8. Biannual review with residency program director

Goal 1: While on the CHMC rotation, the resident will develop exceptional communication between and among team members.

Objectives:

1. Coordinate call schedules with fellows and call residents. (1,7)

2. Communicate effectively with attending and ancillary staff about preoperative care, consent forms and efficiency of clinical practice. (1-7)
3. Communicate effectively and daily with attendings about O.R. dictation and postoperative management. (1-7)
4. Encourage medical students to interact as team members. (1-7)
5. Incorporate medical students in all activities with adequate supervision and graduated responsibility. (1-7)

Goal 2: While on the CNMC rotation, the resident will distinguish the difference in communication between adult and pediatric care.

Objective: Compare and contrast differences between CNMC and other hospitals and incorporate best practices. (1,2)

5. PROFESSIONALISM

Teaching Methods

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Checklists-surgical checklist
5. Case logs and procedure logs
6. Teaching rounds
7. Biannual review with residency program director

Goal 1: While on the CNMC rotation, the resident will develop professionalism through graded experience and focused reading.

Objectives:

1. Develop personal goals. (1,6)
2. Develop professional goals. (1,6)
3. Construct ways of self-education and self-reflection (4,5)
4. Log and monitor index adult cases on the ACGME website (4)
5. Maintain excellent patient-centered relationships (1,2,6)

Goal 2: While on the CNMC rotation, the resident will gain experience with a diverse patient population and learn how to provide care for this population

Objectives:

1. Build relationships with patient families and team members (1,2,6)
2. Learn about diverse patient populations, including age, culture, religion, gender and disabilities (1,2,5,6)
3. Develop skills and sensitivities that assist in patient care of non-English speaking patients and their families (1,2,5,6)

6. SYSTEMS-BASED PRACTICE

Teaching Methods

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Morbidity/Mortality Reports, Tumor Board Reports, and Medical Evaluation Board dictations.
5. Biannual review with residency program director

Goal 1: While on the CNMC rotation, the resident will develop skills on the CHMC computer system

Objectives:

1. Demonstrate skills on the Children's computer system. (1-4)
2. Utilize computer and library research facilities for safe patient care. (1-4)

UROLOGY RESEARCH

The URO-3 resident is assigned to six months of clinical research at the National Cancer Institute (NCI) on the campus of the National Institutes of Health (NIH) in Bethesda, MD. The resident is involved in the initiation and maintenance of research protocols with faculty guidance. He/she will conceptualize, design and write these research protocols using the required IRB format and present these protocols before the institutional IRB committee. In this forum, the study design, research methods, statistical considerations, and human use issues are discussed.

The URO-3 resident is required to submit an abstract of his/her research for presentation at regional and national urology meetings. The resident is also required to publish at least one paper in a peer-reviewed urology journal and/or present at least two research projects at a national meeting before completion of his/her urology residency.

In addition, the resident is required to meet weekly with his/her faculty supervisor to ensure progress is being made and to provide guidance.

GOALS AND OBJECTIVES FOR UROLOGY RESEARCH

1. PATIENT CARE

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Rotation specific readings
4. Direct faculty mentorship
5. Daily supervised care of surgical patients
6. Presentations in clinic
7. Rotation specific conferences
8. Supervised on-call experiences
9. Checklists-surgical checklist
10. Observed clinical examination

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Examination-in-service
5. Teaching rounds
6. Biannual review with residency program director
7. Patient surveys
8. Case logs and procedure logs

Goal 1: During the research rotation, the 4th year resident will demonstrate caring and respectful behaviors (verbal and nonverbal).

Objectives:

1. The 4th year resident will demonstrate respectful behavior with patients in clinic and be enrolled in clinical studies. (1,2,4-5)
2. The 4th year resident will demonstrate respectful behavior with patient's families. (1,2,4-5)
3. The 4th year resident will demonstrate respectful behavior with colleagues, and ancillary staff. (1,2,4-6)

Goal 2: During the research rotation, the 4th year resident will demonstrate safe and effective transfer of patient care any time you are covering a service.

Objectives:

1. The 4th year resident will ensure continuity of care with appropriate face-to-face sign-outs. (1,2,5)
2. Demonstrate a commitment to continuity of patient care and be a role model to junior residents. (1,2,4-5)
3. Take primary responsibility for developing these skills with all team members when in the role of the senior resident on-call. (1,2,4-5)
4. Demonstrate proficiency in teaching of medical students and junior residents. (1,2,4-5)

2. MEDICAL KNOWLEDGE**Teaching Methods:**

1. Rotation specific readings
2. Direct faculty mentorship
3. Presentations in clinic
4. Rotation specific conferences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Chart stimulated recall
5. Examination-in-service
6. Teaching rounds/Weekly Departmental Conference
7. Biannual review with residency program director

Goal 1: During urology research, the senior resident will gain an understand of current basic and clinical research methodologies.

Objectives:

1. Gain a strong grounding in hypothesis driven research. (1,2,4,6)

2. Understand the scientific method and how to test a cause and effect relationship in biomedical research. (1,2,4,6)
3. Learn to critically appraise the literature in order to improve the ability to evaluate scientific studies, patient populations. (1-6)
4. To develop an understanding of a specific scientific area in urology. (1-6)
5. Develop the ability to write a clinical protocol based on previous research and the presentation of this protocol in the setting of an IRB meeting, compile data and present the results. (1-2,6)
6. Discuss the differences between Phase I, II and III clinical studies. (1,5,6)
7. Describe the relevant issues surrounding the design of clinical trials including: (1-2,4-6)
 - a. Principles of sample size computation
 - b. Appropriate selection of the patient population
 - c. The use of control groups
 - d. Differences between various trial designs
 - e. Difference between statistical and clinical significance
 - f. Demonstrate and understanding of experimental methods, data analysis, and statistics.
8. Prepare a manuscript for submission. (1-6)

Goal 2: During urology research, the senior resident will competently review and critique the basic science and clinical papers published in the urologic literature.

Objectives:

1. Demonstrate ability to appropriately critique articles reviewed at the monthly Urology Journal Club meeting. (1-3,5,6)
2. Be able to analyze literature in the process of preparation of research proposals. (1-3,5,6)
3. Demonstrate proficiency in accessing and applying information technology and the surgical literature to research a given topic instead of relying only on textbook information. (1-3,5,6)

Goal 3: During urology research, the senior resident will formulate research questions, devise research projects and complete all aspects with culmination in publications/presentation.

Objectives:

7. Demonstrate an understanding of how to formulate a research question. (1-6)
8. Perform a literature search. (6)
9. Design a study with attention to basic statistics and how to prepare a manuscript and poster for presentation. (1,6)
10. Demonstrate an understanding of the protection of human and animal subjects, regulatory compliance, legal issues involved in research and Principal Investigator responsibilities. (1,6)
11. Demonstrate an understanding of the following subjects in molecular biology: (1,4-6)
 - a. DNA isolation
 - b. Polymerase Chain reaction
 - c. Electrophoresis
 - d. DNA sequencing
 - e. Protein analysis
 - f. Immunocytochemistry/histochemistry
 - g. Recombinant DNA technology
 - h. Core cell biology

3. PRACTICE-BASED LEARNING AND IMPROVEMENT

Teaching Methods:

1. Clinical performance with direct observation

2. Direct faculty mentorship
3. Daily supervised care of surgical patients
4. Presentations in clinic
5. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluations
4. Biannual review with residency program director

Goal 1: During urology research, the senior resident will continue to improve on participation in conferences.

Objectives:

1. The resident will attend and participate in weekly department conferences (Grand Rounds, Morbidity & Mortality Rounds, Tumor Conference, Chapter Review sessions). (1-3)
2. The resident will continue to apply knowledge learned to clinical practice. (1-3)
3. Attend and participate in weekly hospital-based conferences and apply knowledge learned to your patients. (1-3)

Goal 2: During urology research, the senior resident will develop surgical literature foundation.

Objectives:

1. The resident will be able to discuss pertinent literature as it relates to particular clinical problem. (1-3)
2. Incorporate broad topics introduced by invited preceptors and apply the principles intelligently to improve daily medical practice. (1-3)

4. INTERPERSONAL SKILLS AND COMMUNICATION

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Observed clinical examination
5. Teaching rounds
6. Biannual review with residency program director

Goal 1: During urology research the senior resident will be able to review and critique basic science and clinical papers published in the urologic literature.

Objectives:

1. Demonstrate ability to appropriately critique articles reviewed at the monthly Urology Journal Club meeting. (1,4,5)

2. Be able to analyze literature in the process of preparation of research proposals.(1,4,5)

Goal 2: During urology research, the senior resident will develop the skills to present research in the form of publications/presentations.

Objectives:

1. Design a study with attention to basic statistics and how to prepare a manuscript and poster for presentation. (1-5)
2. Demonstrate an understanding of the protection of human and animal subjects, regulatory compliance, legal issues involved in research and Principal Investigator responsibilities. (1,3,5)
3. Present a research project at a local and/or national meeting. (1,2,5)

5. PROFESSIONALISM

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Teaching rounds
5. Biannual review with residency program director

Goal 1: During urology research, the senior resident will complete all aspects of a research project with culmination in publications/presentation.

Objectives:

1. Design a study with attention to basic statistics and how to prepare a manuscript and poster for presentation. (1,2,4)
2. Abide by laws and regulations for the protection of human and animal subjects, regulatory compliance, legal issues involved in research and Principal Investigator responsibilities. (1-4)

Goal 2: During the research rotation, the resident will continue to build on the knowledge base set up in the third year.

Objectives:

1. Complete the AUA Urology In-Service Exam and score above the 30th percentile. (1,3,4)
2. Continue to read the core literature and participate in all conferences. (1-4)

6. SYSTEMS-BASED PRACTICE

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance

3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Weekly Tumor Board conference
5. Biannual review with residency program director

Goal 1: During urology research, the senior resident will devise research projects and complete all aspects of that project.

Objectives:

1. Demonstrate an understanding of how to formulate a research question. (1,3,4)
2. Work with library services to perform a literature search. (3,4)
3. Work with research personnel with attention to basic statistics. (1-4)
4. Demonstrate an understanding of the protection of human and animal subjects, regulatory compliance, legal issues involved in research and Principal Investigator responsibilities. (1-4)
5. Work with research personnel to develop an understanding of the subjects listed above under medical knowledge. (1-4)

PGY5-UROLOGY CHIEF RESIDENT (URO-4)

The chief urology resident (URO-4) spends 2 separate 3-month rotations at GWUMC (6 months total), and 2 separate 3-month rotations at Sibley Memorial Hospital (6 months total). During this year, the resident will spend two days per week seeing patients in the outpatient clinic setting and three days in the operating room. The chief resident is responsible for the management of the inpatient urology service and supervises twice daily rounds on all urologic inpatients. The chief resident supervises junior residents, interns and students in the clinic setting and inpatient setting. Patients requiring follow up are scheduled with this resident over the year so that continuity of care can be preserved. He/she completes the history and physical exam on the patients on which he/she will operate and performs all of the more complicated urological operative procedures with faculty supervision.

The chief resident is responsible for organization of the operative schedule, delegation of surgical cases to more junior residents, adherence to the academic schedule and team attendance at teaching conferences and rounds. The chief resident is also responsible for developing the resident call schedule. The resident at this level assumes a key role in the teaching and education of the more junior residents. At the end of this year, the URO-4 resident will be fully competent in the management of outpatient, surgical and postoperative patients.

1. PATIENT CARE

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Rotation specific readings
4. Direct faculty mentorship

5. Daily supervised care of surgical patients
6. Presentations in clinic
7. Rotation specific conferences
8. Supervised on-call experiences
9. Checklists-surgical checklist
10. Observed clinical examination
11. Simulation

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Examination-in-service
5. Teaching rounds
6. Biannual review with residency program director
7. Surgical Simulators
8. Patient surveys
9. Case logs and procedure logs
10. Laparoscopy lab
11. Observed clinical examination
12. Medical records review on the wards
13. Surgical evaluation form

Goal 1: During the chief resident year the resident should become competent in all aspects of clinical and surgical treatment of patients with urological disease.

Objectives:

1. The chief resident should be proficient in all of the previously listed goals and objectives.
2. Demonstrate proficiency in instructing the junior residents on all the standard procedures. (1,4-6,9,11)
3. Be able to manage all inpatient and outpatient urological problems and be able to function independently. (1-6,8-11)
4. Become an effective manager of the operating room schedule, resident schedules, and academic schedule. (1-5)
5. Complete and present any research started during the previous years. (5)

Goal 2: During the chief resident year the resident will demonstrate proficiency with the independent evaluation of all surgical patients.

Objectives:

1. Develop a management plan that is effectively communicated with the next level of supervision. (1,2,4,5)
2. Assure implementation of this plan. (1,2,5)
3. Round on all patients at least twice a day to ensure continuity of patient care. Communicate with attendings daily and at any time regarding problems or sudden changes in status of patients. (1,2,4,5)
4. Demonstrate safe and effective transfer of patient care. Ensure continuity of care with appropriate face-to-face sign-outs. Demonstrate a commitment to continuity of patient care and be a role model to junior residents. Take primary responsibility for ensuring this commitment to continuity of patient care with all team members as chief resident on-call. (1,2,4,5)

Goal 3: During the chief resident year the resident will demonstrate gradual familiarity with difficult surgical procedures.

Objectives:

1. Become comfortable with redo surgery, open prostatectomies (open, laparoscopic), bladder augmentations, nephrectomy, lymphadenectomies, cystectomies with immediate reconstruction. (1,2,5,6,8,9,12)
2. Continue to develop technical skills, both open and laparoscopic - should now master and be capable of independently completing indexed procedures. (1,2,5,6,8,9)
3. Demonstrate proficiency with assistant/teaching assistant skills and exposure techniques. (1,2,5,9,12)
4. Proctor junior residents on minor procedures such as wound closure and excisions. (5,9,12)
5. Concentrate on operative exposure, set-up, retraction and thinking several steps ahead in the conduct of an operation. (1,2,5,9,12)

2. MEDICAL KNOWLEDGE

Teaching Methods:

1. Rotation specific readings
2. Direct faculty mentorship
3. Presentations in clinic
4. Rotation specific conferences
5. Simulation

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Chart stimulated recall
5. Examination-in-service
6. Teaching rounds
7. Biannual review with residency program director
8. Laparoscopy lab

Goal 1: During the chief year, the resident will build on the knowledge base gained in the URO-1, URO-2 and URO-3 resident academic years with a focus on Selected Readings and literature reviews rather than textbook knowledge.

Objectives:

1. Demonstrate proficiency in accessing and applying information technology and the surgical literature to research a given topic instead of only textbook information. (1-3,5,6)
2. Complete the AUA Urology In-Service Exam and score above the 30th percentile. (4)
3. Be a model in attending and actively participating in all resident conferences. (1,2,5-7)

3. PRACTICE-BASED LEARNING AND IMPROVEMENT

Teaching Methods:

1. Clinical performance with direct observation
2. Direct faculty mentorship
3. Daily supervised care of surgical patients
4. Presentations in clinic
5. Supervised on-call experiences
6. Simulation

Evaluation Methods:

1. Milestone evaluation

2. Global faculty evaluation
3. 360 degree evaluations
4. Biannual review with residency program director

Goal 1: During a chief resident year the resident will demonstrate the leadership, organizational and administrative skills required to manage a surgical service as the chief resident:

Objectives:

1. Assure that all residents are prepared and on time for all ORs, conferences and clinics by completing morning rounds in a timely fashion. (1,3)
2. Make resident assignments for the next day's OR cases. (1,3)
3. Assist junior residents and students in preparation for weekly M&M conference. (1,3)
4. Ensure an educational environment on the services and provide instruction to the junior residents and students. Provide copies of relevant literature to those on the team. (1-3)
5. Be available to junior residents to assist in evaluation of consults and ER patients. (1,3)
6. Take the lead in managing junior residents and organizing the time: consults, ER, OR. (1,3)
7. Oversee the clinical care of all in-patients on the service and all surgical consults. (1,3)
8. Provide initial introductory counseling and orientation to the rotating interns on the service within 24 hours of starting Urology. Provide the mid-month counseling and final evaluation for these interns. (1,3)

Goal 2: During the chief resident year the resident will continue to advance knowledge through experience with practice-based learning opportunities.

Objectives:

1. Demonstrate a commitment to continuity of patient care and be a role model to junior residents. (1,3)
2. Take primary responsibility for ensuring this role modeling with all team members as chief resident on-call. (1,3)
3. Attend and participate in weekly department conferences and apply knowledge learned to your patients. (1-3)
4. Attend and participate in weekly hospital-based conferences and apply knowledge learned to patients. (1-3)
5. Attend special structured courses on Medical Informatics, Ethics, Coding, and Statistical Methods and apply knowledge gained to your critical appraisal of the literature and patient care. (1,3)
6. Continue to develop surgical literature foundation. Chief resident should be able to discuss pertinent literature as it relates to particular clinical problems; apply this knowledge to patient management. (1-3)
7. Prepare document and present at monthly M&M Rounds. (1-3)
8. Become progressively familiar with consent issues regarding surgery and research literature for methods of improving surgery and effective surgical care. (1-3)
9. Review the Resident Policies for the Urology service so as to give informed guidance to junior residents. (1,3)
10. Review the current residency program well enough to initiate and organize (in association with the Program Director) an enduring improvement plan for the residency program. (1,3)

4. INTERPERSONAL SKILLS AND COMMUNICATION

Teaching Methods:

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Simulation
8. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Chart stimulated recall
5. Observed clinical examination
6. Patient surveys
7. Teaching rounds
8. Biannual review with residency program director
9. Review of medical records
10. Laparoscopy Lab

Goal 1: During the chief resident year the resident will demonstrate proficiency in the management and leadership of a ward service, utilizing the cooperative skills of medical students, junior residents, nurses, consult staff, and ancillary personnel.

Objectives:

1. Demonstrate skill and sensitivity for appropriately counseling and educating patients and their families in a variety of clinical situations. (1,2,4-7)
2. Demonstrate effective documentation of practice activities with proper operative/procedure note dictations, clinic visit dictations, discharge summary dictations, daily progress notes and event notes. (1-4,7,8)
3. Demonstrate how to properly consult a specialty service (radiology, GI, PT, etc.) by correctly formulating the specific question to be answered. Follow through with consultant's suggestions after appropriate discussion with the attending staff. (1,2,7)
4. Demonstrate a kind, thoughtful, understanding and helpful attitude to consulting services. (1,2,7)
5. Demonstrate ability to independently manage the Urology service, to include administrative, clinical and academic responsibilities. (1,2,6,7)
6. Present all patient and conference material in a concise, organized, logical and knowledgeable manner. (1-4,6,7)
7. Demonstrate leadership by assuring the attendance of team members at all rounds and conferences. (1,2,6,7,9)
8. Communicate effectively (and often) with the program director regarding any issues (big or small). (1,2,7)

5. PROFESSIONALISM

Teaching Methods

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Simulation
8. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Observed clinical examination
5. Patient surveys
6. Case logs and procedure logs
7. Teaching rounds
8. Biannual review with residency program director
9. Laparoscopy lab

Goal 1: During the chief resident year, the resident will demonstrate respectful, altruistic and ethically sound behavior with patients and all members of the health care team.

Objectives:

1. Treat each patient, regardless of social or other circumstances with the same degree of respect they would afford to personal family members. (1-4,6-8)
2. Demonstrate administrative skill in preparation of the weekly M&M reports, presentation at conferences, and assignment of cases to students and junior residents on services where you are the acting chief resident. (1-3,6-8)
3. Maintain daily/weekly updates of your Surgical Operative Log on the ACGME web. (5,7)
4. Demonstrate equanimity and fair judgment in the role as chief resident. (1-4,6-8)

Goal 2: During the chief resident year, the resident will demonstrate administrative proficiency in organizing the service.

Objectives:

1. Delegate service responsibilities (OR assignments and other work). (6,7)
2. Manage the annual call schedule. (7)
3. Demonstrate administrative proficiency as the senior leader ultimately in charge of organizing and maintaining the operating room schedule. (1,2,7)
4. Be punctual in the role as leader of the service and also ensure other team members are on time and present in the OR (prior to patient intubation) and for clinic and conferences. (1,2,7)
5. Demonstrate maturity and proficiency in conflict resolution, modeling behaviors that will gain respect. (1,2,6-8)
6. Admit errors, address them, and credit the work of others.(1,2,7)
7. Demonstrate altruism and responsibility toward patients, families and society; be accountable for quality of care, best practices. (1,-4,6,7)
8. Demonstrate self-reflection and remediation of behaviors unbecoming of a professional and beyond standards. (1,2,6,7)
9. Continue work on a research project, with goal of one paper of publishable quality and one abstract publication in a peer-reviewed journal or presentation at a national meeting prior to graduation. (1,2,7)

6. SYSTEMS-BASED PRACTICE**Teaching Methods:**

1. Clinical performance with direct observation
2. Operating room with observed performance
3. Direct faculty mentorship
4. Daily supervised care of surgical patients
5. Presentations in clinic
6. Rotation specific conferences
7. Simulation
8. Supervised on-call experiences

Evaluation Methods:

1. Milestone evaluation
2. Global faculty evaluation
3. 360 degree evaluation
4. Morbidity/Mortality Reports, Tumor Board Reports
5. Observed clinical examination
6. Surgical case logs and procedure logs
7. Biannual review with residency program director

Goal 1: During the chief resident year the resident will continue to expand and perfect the use of systems within the hospital to expedite care.

Objectives:

1. Demonstrate effective communication with referring physicians throughout the Mid-Atlantic region. (1,2,6)
2. Demonstrate effective and safe patient care which minimizes delays in discharge. (1,2,6)
3. Demonstrate effective time management and adherence to work hour regulations. (1,2,5,6)
4. Teach junior residents about proper coding and documentation. (5,6)
5. Review and analyze the literature for comparative urological management. Share this information with attendings and colleagues. (1-3,6)
6. Demonstrate an understanding of the larger system of hospital care by participating in weekly multidisciplinary rounds. (1,2,6)

CONFERENCES

GWUMC

Academic conferences are an integral part of the teaching program and require the active participation of urology faculty and residents. The bulk of the conferences are held on Wednesday mornings from 0700-1100 hours. All conferences are required for residents and attendance is mandatory. Conferences are designed to be interactive with input from faculty and residents. Documentation of attendance for faculty and residents occurs by directly signing the Urology sign-in sheet and is maintained by the program coordinator.

The following is a description of the various conferences conducted by the Urology Service.

Morbidity and Mortality Conference

This conference is held on the first Wednesday of every month. Each complication or adverse event that occurs on a urologic patient is presented. The resident involved in the patient's care presents the case, the care provided, the complication, management and outcome. The resident is expected to discuss the complication and review the literature on the subject. Specific focus is given to the general competencies of practice-based learning and systems based practice. The resident completes a write-up of the discussed complication to include cited references and the aspects of the case that are relevant to practice-based learning and systems based practice on the standard "M+M" format. This write up will be placed in the resident's portfolio with all of the accompanying data, literature and learning points for future reference. This will be stored without any identifying patient data as part of the QA process.

Grand Rounds

This conference runs from 0700 am to 0800 on the second and / or fourth Wednesday of every month and is mandatory for faculty and residents. The hour is dedicated to a formal lecture from a visiting professor, in the visitor's area of expertise. This is also the time that the residents will periodically present a well prepared lecture to the entire department. It is the expectation that a resident will present at least one lecture per year. This lecture should be saved in the resident's portfolio.

Genitourinary Tumor Board Conference

On the third Wednesday of each month, GU Tumor board conference is held from 0700 to 0800. This is a multidisciplinary conference attended by members from the Urology, Medical Oncology, Radiology, Radiation Oncology, and Pathology. Case presentations are conducted by the residents with discussion from the entire audience. Residents may be called upon to discuss the radiologic findings, differential diagnosis, or treatment algorithm for the diagnosis or condition. A radiologist and pathologist are present to complement discussions. The format consists of case presentations by the resident, pathology slides projected by the pathologist and the x-rays and other imaging studies reviewed on an overhead projector by the radiologist. Generally, difficult management problems are discussed, and the resident will present the recent literature related to the care of the patient's malignancy. The residents are evaluated through verbal feedback. This presentation should be saved in the resident's portfolio.

Resident Case Conferences

This conference occurs from 0700 until 0800 on Wednesday roughly once every month. This allows the residents the opportunity to present patient cases followed by discussion of salient

points regarding the disease process emphasized in the patient presentation. It is organized by the chief resident. Residents present these cases to other residents in a format similar to Part II of the American Board of Urology (ABU) oral board examination. Approximately two to three cases are discussed in depth and are presented for diagnosis, management, or for interest. After presenting a case, the residents are expected to give a five-minute review of the topic with handouts, reprints or a reference list. These presentations are saved in the resident's portfolio.

Campbell's Club/AUA Self Assessment Review

This conference is held weekly during the Wednesday academic schedule. At this conference the residents will review a chapter of Campbell's Urology. The format depends upon the chapter but will usually involve a directed review of the chapter for one hour and review of questions from the study guide or review of questions from the American Urological Associations Self Assessment Exam. The schedule for chapter review will allow complete coverage of the text over approximately two years and thus ensure all domains of urology as outlined in the program requirements. This ensures that the important basic science as well as the clinical aspects of urology of Urology will be addressed. Residents, interns and medical students are expected to have read and reviewed the assigned chapter prior to the conference.

Genitourinary Pathology Conference

This conference is held every quarter on a Wednesday. This conference is designed to review the essential aspects of genitourinary pathology to better provide the residents an understanding of the pathologic basis of urologic disease and prepare them for the American Board of Urology Qualifying Exam-Part I. Pertinent pathologic slides are presented and important pathologic findings discussed. The residents can be expected to be quizzed in order to assess their comprehensions and preparation. To prepare for this conference the residents are expected to utilize urology texts, Internet based resources and a comprehensive CD covering GU Pathology.

Journal Club

This conference is held monthly. All faculty, residents, interns, medical students and community urologists attend this conference. Each resident is assigned an article to review by the Chief Resident. Approximately five to eight articles are reviewed. The articles are predominantly assigned from the Journal of Urology and Urology, but may come from any peer reviewed medical journal with an article that pertains to care of urological disease. The resident is expected to review the article summarizing the article, statistical methods, results and discussion using a standardized outline. They are also expected to present a critique of the article with specific attention to practice-based learning and systems based practice.

Children's National Medical Center

All City Pediatric Urology Grand Rounds (First Saturday of the Month, September through June, 9:00 a.m. – 10:30 a.m.): The resident rotating in pediatric urology is expected to prepare and discuss pediatric cases. The format follows an oral boards style presentation where a resident who had completed his/her pediatric urology rotation is asked to read films, generate a diagnosis and suggest a treatment course. A single case is selected for general didactic presentation that is given by one of the rotating residents. The conference is attended by all of the residents from the primary institution as well as residents and faculty from affiliates that send residents to CNMC. Talks from this conference presented by the residents should be saved in their portfolio.

Pediatric Uroradiology Conference (Tuesday, 4:30 p.m. – 6:00 p.m.): This conference is mandatory for residents rotating at CNMC, and optional for all other residents. The pediatric urology faculty and radiology faculty attend this conference. The format is of informal presentation of cases to a senior radiologist with discussion of pertinent findings. In general, the cases are pre-surgical and the discussion that ensues covers surgical indications. This follows the format of preoperative case management and allows the residents to participate in planning of care prior to definitive treatment.

Pediatric Journal Club (Tuesday, 6:30 p.m. – 8:30 p.m.): Held in addition to Journal Club, this meeting occurs quarterly in order to focus on pediatric urological articles from the Journal of Urology.

Pediatric Urology Didactic Conference (Thursday 9:00 a.m. – 10:00 a.m.): This conference is mandatory for residents on rotation at CNMC and optional for all other residents. The Thurs. AM topic oriented conference is designed to cover the full scope of pediatric urology over a 2 year period (although the resident training program is one clinical year, the resident is actually present for two consecutive years, one being unaccredited and in the laboratory. The conference schedule is thus designed with this in mind). Chapters from Clinical Pediatric Urology are covered sequentially during this time. Presentations are given by the various residents on the service, including both pediatric urology and general urology residents. At least one attending pediatric urologist is present at these meetings to add depth and supervise the learning process.

1. Embryology of genitourinary tract.
2. Fetal urology and prenatal diagnosis
3. Pediatric endourology
4. Urinary tract infections
5. Neurourology and the neuropathic bladder
6. Dysfunctional elimination; evaluation and treatment
7. Treatment of bladder outlet obstruction and urinary incontinence
8. Bladder augmentation
9. Urinary Diversion
10. Renal and ureteral anomalies; evaluation and treatment
11. Cystic kidney disease
12. Anomalies of the urinary bladder
13. Vesicoureteral reflux and prune belly syndrome
14. Urogenital sinus, cloaca and imperforate anus
15. Urethral valvular anomalies
16. Hypospadias and epispadias
17. Ambiguous genitalia and gender assignment
18. Testicular and scrotal abnormalities
19. Tumors of the kidney and retroperitoneum
20. Tumors of the lower urinary tract and genitalia
21. Urinary trauma and stone disease

SCHOLARLY ACTIVITY REQUIREMENTS

The Urology Service requires resident and faculty research. Each resident is required to participate in a research project and present and/or publish the research. Currently, residents are given dedicated research time for six months during their URO-3 year at NCI/NIH.

REQUIREMENT:

RESIDENTS ARE REQUIRED TO PUBLISH ONE ORIGINAL RESEARCH PROJECT IN A PEER REVIEWED SCIENTIFIC JOURNAL AND OR PRESENT TWO ORIGINAL RESEARCH PROJECTS AT A NATIONAL UROLOGIC MEETING DURING THEIR RESIDENCY. FAILURE TO DO SO MAY RESULT IN FORFEITURE OF A FAVORABLE ACTION, PROGRAM LEVEL REMEDIATION, PROBATION, OR EXTENSION OF THE TRAINING PROGRAM IN ORDER TO ACCOMPLISH THIS REQUIREMENT.

Resources for Scholarly Activity:

GWU

The residents are provided with an Office/Library at GWUMC. The library has text-books on adult and pediatric urology and has the Journal of Urology, Urology, the British Journal of Urology and access to Urologic Clinics of North America. They have a computer with high speed access to internet along with scanner, digital camera and CD burner to prepare talks on power point. The Medical School and University Library are also accessible to the residents. Please note the following on the Himmelfarb Library open to all residents at GW:

Himmelfarb Health Sciences Library

Web: <http://www.gwumc.edu/library>

Reference Desk: (202) 994-2850

Circulation Desk: (202) 994-2962 (open 24 hours)

Email: library@gwumc.edu

Text: text "himlib: your question" to 265010

Hours: 24/7. Please note: limited circulation functions between midnight and 8:00 am; hours modified during university breaks and holidays.

Himmelfarb Health Sciences Library is located in Ross Hall and provides extensive online, print and audiovisual collections, as well as access to computers and study areas. The Library's print collections include approximately 100,000 volumes, selected print journals for browsing, and access to extensive journal backfiles. The Library's online collections include more than 3,300 online journals, more than 800 online books, and more than one hundred databases. The Library's audiovisual collections include more than 400 current DVD and CD titles as well as access to the Microsoft Office Suite, Internet Explorer and Adobe Acrobat Professional and dozens of specialized software titles focused on medicine and the health sciences and statistical analysis.

Clinical Information Resources

- Available resources include AccessSurgery, DynaMed, Essential Evidence Plus, and FirstConsult/MDCConsult. A complete list is available on the E-Databases webpage under Clinical/Evidence-Based Medicine.
- Drug information tools include Lexi-Comp, DynaMed, and Natural Standard. A complete list is available on the E-Databases webpage under Drugs/Pharmacology.
- Himmelfarb Library provides access to mobile apps and mobile-optimized websites to support clinical information needs. The Mobile/Handheld research guide (<http://libguides.gwumc.edu/mobile>) describes available resources and platforms and download instructions.

Research Resources

- Available databases include PubMed, MEDLINE, and Scopus.
- Extensive full-text journal collection is accessible via 'Full-Text @ Himmelfarb' links/icons integrated in all research databases.
- Interlibrary loan and document delivery are integrated into research databases via 'Find It @ Himmelfarb' links/icons.
- RefWorks, a citation management program, allows residents to create and organize a personal citation library. RefWorks also functions with MS Word to format in-text citations and bibliographies.

CNMC

The residents have access to a computer with internet connection and have access to the Pediatric Urology Library of the department which contains the Journal of Urology and Urology as well as a variety of textbooks purchased by the departmental faculty on general and pediatric urology expressly for use by the fellow, residents and medical students, and the Medical Library of the Hospital.

Children's Research Institute

Children's National Medical Center boasts a state of the art, free-standing research center, Children's Research Institute. CRI, is comprised of five major research centers (Center for Genetic Medicine, Center for Cancer Research, Center for Neurosciences Research, Center for Health Service and Community Research and Center for Clinical Research and Experimental Therapeutics). The division of pediatric urology is allied with the Center for Genetic Medicine through a training grant that funds Dr. Hans Pohl's research. This affiliation allows Dr. Pohl access to technology and support staff within the CRI that is specialized in molecular biological applications.

The CRI an adjunct facility located atop Children's National Medical Center. As such, it provides access to the clinical floors and departmental offices where the trainee may be involved in clinical research in addition to the basic science research. The mission statement of the Center for Genetic Medicine/CRI is "to promote translational research on human disease using genome-wide approaches". In order to accomplish this goal, a molecular genetics core facility exists.

The role of this core is to provide CRI investigators with both basic and advanced molecular biology and molecular genetics tools to enhance research studies. In addition to providing direct research support to investigators, the core provided training in state-of-the-art molecular methods for young investigators, residents and fellows. More specifically, the core provides access to extensive expertise and technology in molecular diagnosis, microarray analyses (both Affymetrix and spotted cDNA arrays), automated sequencing (both capillary, and gel-based systems), quantitative nucleic acid analyses (TaqMan, QMF-PCR), robotics for high throughput assays, laser capture microdissection (both Arcturus and Leica systems), and high-pressure liquid chromatography (DHPLC, multiple platforms). A recent addition of state of the art proteomics technology is the MALDI-TOF/TOF mass spectrometer (see below), with an electrospray machine (Q-TOF) planned for purchase. One full time technician runs the combined PCRC, Mental Retardation and Developmental Disabilities Research Center, and Child Health Development Center Genetics Core, although many trans-center collaborations are fostered through other groups within the Center (Programs in Genomic Applications, Spinal Cord Trauma, and others).

A computing network and bioinformatics facility exists as well. The role of this core is to provide CRI investigators with a research-only computer network, hardware and software support, personnel, web site design and hostings, and database development and management. The network was built independently of the main Hospital MIS system, so as to serve research in a focused manner, with an eye towards maintenance and access to large postgenomics processing.

NCI / NIH

To sustain its mission, which includes training the next generation of physician researchers, it is in the best interest of the intramural program of the National Institutes of Health (NIH) to provide a learning environment that will support the needs of its residents. NIH sponsors Accreditation Council for Graduate Medical Education (ACGME)- accredited training programs through the NIH Clinical Center. In recognition of the role that NIH plays in biomedical research and in educating academic physicians/clinical researchers for the nation, the leadership of NIH and its member Institutes give a high priority to clinical training. It is the responsibility of the NIH to provide residents with sound education and training that is responsive to concerns for both patient safety and resident well-being.

MEETINGS

Urology residents participate actively in regional and national academic urology meetings by presentation of research performed at GWUMC. Residents are required to submit their research for presentation at these academic forums. In general, residents attend the annual **Mid-Atlantic AUA Meeting**, the **National AUA Meeting** and the **Winter Meeting of the Society of Urologic Oncology**, if abstracts to these meetings are accepted for presentation. On occasion, other national or regional meetings are attended to present research abstracts. Travel and attendance at these meetings is supported through funding obtained from the department.

In addition, residents participate in several other scheduled conferences and events outside of the MAMC program including the following:

- **Visiting Professors** – Throughout the academic year, the Urology Service will host several visiting professors. These visitors, who are national leaders in Urology, usually spend the morning in our department. This is an excellent opportunity for residents to meet and learn from some of the nationally recognized thought leaders in urology. All residents are required to be present and participate in these visiting professorships.
- **Washington Urologic Society** - The Washington Urological Society has a quarterly dinner meeting with a presentation by a visiting professor. This is another opportunity for residents to learn and interact with some nationally recognized academic urologists. Attendance is strongly encouraged for residents.
- **Basic Science Conference** - The URO-1 resident is required to attend Dr. Jay Gillenwater's Basic Science Conference hosted by the University of Virginia in Charlottesville. The conference, which is given over one week, focuses on review of basic science concepts for the junior urology resident. This conference is funded by the GWUMC Graduate Medical Education Committee.
- **GU Pathology/Radiology Review Course** - The Chief resident each year is encouraged to attend this course to aid in their preparation for Part I of the American Board of Urology's (ABU) Certifying Exam. This course is a weeklong course given in Washington D.C. and is a comprehensive review of Genito-urinary pathology and radiology. Residents are funded by Urology service funds.
- **AUA Annual Review Course**- The Chief resident each year is encouraged to attend this four day course given annually by the AUA. This course serves as an important review prior to sitting for Part I of the ABU Certifying Exam. The course is free and travel and lodging may be supported by Urology Service funds or GME funds.
- **Industry Sponsored Educational Meetings**- Throughout the year various educational conferences are sponsored by private industry and residents are encouraged to attend if their schedule permits.

IN-SERVICE EXAMINATION

All Urology residents will take the annual AUA In-service Examination.

The AUA Office of Education conducts the annual in-service examination each November (usually the second week). No absences are allowed during this time. Residents will be excused from call the evening prior to the exam to ensure proper rest. The exam is given to all

urology residents in the United States. Scores are reported as absolute number correct (raw score) and percentile ranking within each resident level cohort. The following requirements are important for you to remember.

- 1) **INDIVIDUAL SUBJECT SCORES MUST ALL BE ABOVE THE 25TH PERCENT (raw score).**
- 2) **THE COMPOSITE SCORE (all individual subjects combined) MUST BE ABOVE THE 30TH PERCENTILE (compared to the resident's year group).**

Failure to meet these minimal standards will result in counseling and program level remediation. This training is up to the discretion of the program director and may include mandatory reading assignments, self-assessment tests (available from the AUA Office of Education), oral examinations, etc. Failure to show improvement may result in academic probation.

SECTION 4

LEVELS OF RESPONSIBILITY FOR THE UROLOGY SERVICE

INTERNS (PGY-1)

Rotating interns assigned to the Urology Service will undergo orientation to the service by the Chief Resident and the faculty responsible for their evaluation. All patients that they evaluate will be presented to a supervising faculty. The exam will be repeated by the faculty as indicated and all notes will be reviewed and countersigned by the supervising faculty. The intern may write orders on patients including admission orders. These orders will be reviewed by the more senior supervising resident or faculty. The intern may assist a faculty member in performing procedures in the clinic and operating room. They may not perform any procedure on a patient without a supervising faculty or senior resident present.

PGY-2 (URO-1)

The PGY-3 (First year Urology or URO-1) resident will be oriented to the Urology service by the Chief Resident and the Program Director. The URO-1 resident will independently evaluate patients in the clinic, emergency room and inpatient consults. They will gather a history, perform a physical exam, develop a differential diagnosis, and propose a treatment plan. The resident will then present this to a designated supervising faculty. In most cases this is the faculty on call at the time of the visit. There will be no patient disposition without the approval of a faculty member. The URO-1 resident may obtain advice and guidance from a more senior resident but still must present the case to the designated faculty member. The URO-1 resident will perform procedures in the clinic and emergency room. They will at first be directly supervised by a faculty member, as the resident progresses in training and experience; they will be given more independent responsibility by the Program Director to perform procedures without a faculty member being present. The resident will be informed of these increasing responsibilities in writing in the form of evaluations. The resident is still required to discuss the indications for the procedure with faculty prior to starting. The resident will be notified of their progression in writing intermittently and at their semiannual evaluation with the Program Director. They URO-1 will be directly supervised by a faculty member in all operating room cases. With faculty approval, supervision in the operating room may be provided by the Chief Resident on select cases. The supervising faculty is required to be readily available. The URO-1 will be expected to provide guidance and supervision of medical students, and interns. They are to review orders written by the previously mentioned as well as provide instruction on patient care.

PGY-3 (URO-2)

The URO-2 resident while at GWUMC and INOVA Sibley Hospital will serve as the senior resident and be oriented by the Chief Resident and Program Director. As such the URO-2 resident will be able to evaluate patients in the outpatient and inpatient settings. They are given more autonomy in that each patient need not be examined by a supervising faculty but they are required to discuss each case with the faculty member and annotate this in the note prior to disposition of the patient in clinic or the emergency room. They may perform procedures in the clinic or emergency room without direct supervision but must discuss the indication for the procedure with a faculty member prior to starting the procedure. In the operating room the URO-2 will be directly supervised by a faculty member. On select cases and per the supervising faculty's discretion, the senior resident may be allowed to perform specific operative procedures without direct faculty supervision. The URO-2 will be expected to provide supervision and instruct the more junior members of the Urology team. The URO-2 resident is primarily responsible for the urology consults on patients on the other clinical services.

PGY-4 (URO-3)

The URO-3 resident while at The National Cancer Institute (NCI) at NIH will serve as the senior resident and be oriented by Dr. Marston Linehan and Dr. Peter Pinto. As such the URO-3 resident will be able to evaluate oncology patients in the outpatient and inpatient settings. They are given more autonomy in that each patient need not be examined by a supervising faculty but they are required to discuss each case with the faculty member and annotate this in the note prior to disposition of the patient in clinic or the emergency room. They may perform procedures in the clinic without direct supervision but must discuss the indication for the procedure with a faculty member prior to starting the procedure. In the operating room the URO-3 will be directly supervised by a faculty member. This time is also dedicated to pursuing a clinical research project in Urologic Oncology. While on research, the URO-3 resident will work only on research projects under direction of the Program Director and Dr. Linehan. They will take call as appropriate.

The URO-3 resident will serve as the senior resident under the direction of Dr. Rushton and be responsible for initial evaluation of, surgical care of and follow up of all pediatric patients with complex pediatric Urologic diseases. They will be expected to expand their pediatric urology exposure with an emphasis on more complex cases. They will be responsible for management of the consult service. They will participate in the call schedule and cover all emergency calls. They will take call for the night as appropriate.

PGY-5 (URO-4)

The Chief Resident will be granted the responsibility of managing the inpatient and outpatient Urology services. They will be oriented as to their duties and level of responsibility by the Program Director. They will be responsible for providing supervision of the more junior members of the Urology team. In the outpatient resident clinic setting they will see their own patients and develop treatment plans. They will be required to present and discuss each case with a faculty or fellow and the faculty will interview and examine the patient when deemed necessary. Each note will identify the involved faculty. The chief resident may perform procedures in clinic without direct supervision but is required to have identified a supervising faculty prior to performing the procedure. The Chief Resident will continue to be supervised in the operating room by a faculty member. The responsible faculty member may allow the Chief Resident to act as Teaching Assistant and perform procedures with a more junior resident on select cases and with prior approval. The involved faculty member will be readily available should this be necessary.

RESIDENT REVIEW AND PROMOTION PROCESS

The decision to promote a resident to the next level of post-graduate training is done annually by the Program Director. This is done upon review of the resident's performance during the past year.

The Urology resident is expected to make and maintain satisfactory progress in appropriately developing sound surgical and non-surgical treatment plans, good communication skills, patient management for surgical and non-surgical care, and effectively and completely assuring the role of Urological Consultant to a wide variety of referring physicians and mastery of technical skills for performing required procedures independently (with faculty support).

Any resident pending promotion due to academic performance will be placed on either remediation or institutional probation.

The residency program uses a multi-faceted assessment process to determine a resident's progressive involvement and independence in providing patient care. Residents are observed directly by the attending staff and their performance is discussed regularly. Formal assessments are generally obtained multiple times throughout the year from supervising physicians, nursing and other staff, and peers. These assessments include evaluation of the residents' clinical judgment, medical knowledge, technical skills, professional attitudes, behavior, and overall ability to manage the care of a patient. Annually, the whole faculty determine if the trainee possess sufficient training and the qualifications necessary to be promoted to the next level at the annual faculty meeting.

Residents meet with the Program Director twice per academic year during the semi-annual review, a requirement of the ACGME. The Program Director considers the following factors in the decision to promote a resident to the next level of training:

1. All evaluations of the resident's performance will be reviewed. The resident must make satisfactory progress in the program as documented by semi-annual evaluations from faculty, peers, nursing staff, and support staff. Progress must be made in acquiring didactic and surgical knowledge.
2. Demonstration of progressive growth in surgery as evidenced by timely planning for each case, proficiency in the individual case type, and the ability to perform each surgical procedure independently of the supervising attending physician.
3. Current projects and papers
4. Up-to-date Curriculum Vitae
5. ACGME Resident Operative Log
6. Faculty evaluations
7. 360 degree evaluations
8. AUA in-service scores
9. Any other criteria deemed appropriate by the Program Director.

Each resident must have their logs up-to-date upon meeting with the Director for each of the semi-annual reviews. Any resident who is delinquent will not be allowed to attend the OR pending proper completion of their required operative case logs. Further, residents who are delinquent may risk probationary measures if the op logs continue to be incomplete.

Moreover, if at any time a resident's performance is judged to be below expectations by attending or ancillary staff, the Program Director will meet with the trainee to develop a remediation plan. If the trainee fails to follow that plan or the intervention is not successful in a prescribed time period, the trainee may be placed on probation and failure to comply with a prescribed improvement plan may result in dismissal from the program.

All residents are encouraged to review the Core Competencies, as each resident is responsible for knowing how they will be evaluated and promoted.

SECTION 4

PATIENT CARE RESPONSIBILITIES

Inpatient (Ward) Management

1. The urology house staff is a team that takes care of our patients and consults together. Patients belong to the team, not just the resident surgeon who did the case or who admitted the patient.
2. The intern follows all patients and acquires all pertinent information for morning and afternoon rounds. The chief resident is responsible to ensure history & physical and daily notes are completed. Resident admission and counseling notes are required for each admission. Staff notes are written for each admission and major events in patient care.
3. The junior resident has primary responsibility of all ward patients and teaching the intern and medical students. The junior resident will be expected to be fully knowledgeable about the patients and to present the pertinent physical findings, laboratory data, interpret radiographic studies if indicated to the attending. They should be able to present and defend a treatment plan.
4. The involved faculty and/or the “on call faculty” will round once a day with the residents.
5. In-patient consults will be seen the same day by the house staff under supervision of the chief resident.
6. All charts from Medical records must be signed weekly. Failure to do so will result in disciplinary action.
7. All patients on the consult service (i.e., non-urology patients) must have a daily note with a plan of care clearly outlined until the case is signed off.

Call

The resident on call will be available by telephone or pager at all times and will respond promptly. The resident on call will remain no further than 30 minutes from the hospital while on call. All cases will be discussed with the staff physician on call. A resident will never be faulted for calling the staff physician for assistance. The on-call resident is responsible for triaging, coordinating, and completing the urologic care and follow-up of the consults received during his/her call. The call schedule must be submitted in a timely fashion.

Should it be needed, the call room for residents is located on the 5th floor of the GWU Hospital.

Answering Pages

All residents need to answer their pages. Pages must be answered within five minutes. It is particularly important that the resident on-call promptly answer pages. If the resident on-call is in the operating room, he/she is still responsible for answering pages in a timely fashion, as outlined above, and must listen and be aware of pages. If the operative case is of the level or intensity where pages cannot be answered in a timely fashion, the pager should be transferred to another resident prior to the start of that case. Residents on call should stay out of areas known not to transmit to the pagers. Deviation from this policy can result in disciplinary action.

Surgery

1. Surgeons have the rare privilege and responsibility to operate on patients. The bond created with patients lasts a lifetime. The faculty expects you to adopt an attitude of “ownership” of your patients, assuming primary responsibility of the patient’s entire well being from the moment of initial introduction until you leave the program.
2. **YOU ARE EXPECTED TO READ ABOUT EACH PROCEDURE AND TO KNOW THE COMPLETE PATIENT HISTORY.** Assume the staff has no information about the patient. Evidence of incomplete information or lack of knowledge may relegate the resident to the role of assistant or requested to leave the OR.

3. Residents will be approved by the staff to perform operative procedures in accordance with their skill levels. Until certified at the appropriate skill level, no resident will perform or supervise an operation without being directly supervised.
4. **OPERATIVE REPORTS MUST BE DICTATED WITHIN 24 HOURS!**
5. **Each resident maintains a log of all procedures performed by entering each into the ACGME web-based program.** This will be done in accordance with ACGME guidelines every week. At no time is a resident to fall more than one week behind in entering their cases into the ACGME website. Failure to do so may result in forfeiture of OR time.
6. The resident performing the surgery will see the patient preoperatively and complete the preoperative documentation.
7. The resident performing the case will be responsible for the information on the chart, reviewing the radiographs and ensuring all necessary equipment has been requested through the proper channels.
8. All resident surgeons are required to be present in the operating room prior to induction of anesthesia in order to facilitate patient care.

Urology Clinic

1. All patients seen by the house staff (at any level, medical student through chief resident) must be supervised by a staff member. The staff member's name will be entered into the note of every patient as, "patient seen with", "discussed with", or "sent to Dr. -- for review."
2. All notes will be entered into Touchworks.
3. The on-call resident is responsible for triaging walk-in patients.
4. Procedures must be supervised by a staff member. If a resident is approved to perform a procedure, he may proceed with indirect supervision but after discussing the case and the proposed procedure with the involved faculty.
5. Complete all dictations, notes and required paperwork by the completion of the work day. Failure to do so will result in suspension of privileges and inability to take leave.
6. Residents are not to change scheduled clinics without approval of the Program Director or Service Chief.
7. Unprofessional conduct will not be tolerated.
8. All clinic add-ons should be cleared with the Urology Head Nurse.

Professional Conduct

1. Personal conduct (behavior, speech and appearance) reveals much about one's character. Ultimately, it is character that determines whether patients and colleagues can trust their physician. This program expects the highest degree of moral character from the residents.
2. Having a teachable attitude is a vitally important character trait.
3. Keep a positive attitude at all times, and be an example to others. Some examples of unprofessional conduct include:
 - a. Dishonesty or misleading information in any form (verbal, non-verbal, or written).
 - b. Lack of courtesy to patients, staff, or colleagues.
 - c. Failure to respond to emergency calls.
 - d. Exceeding one's level of professional competence by performing acts beyond his/her level of expertise and without staff consultation and/or participation.
 - e. Late arrival to, or inappropriate absence from, the operating room, the clinic, rounds or scheduled conferences.
 - f. Failure to be a team player, not assisting fellow residents with patient care, and academic workload.
4. Actions perceived by the staff to represent unprofessional or undesirable conduct will be called to the resident's attention. If the conduct is of sufficient magnitude or frequency, the staff may recommend action such as probation or dismissal from the program.

SECTION 5

UROLOGY RESIDENCY PERFORMANCE EVALUATIONS

An evaluation of resident performance and academic progress is completed every six months. This evaluation is reviewed and discussed with the resident by the Program Director and summarized in a formative evaluation. Both the resident and Program Director will sign the evaluation form after the evaluation has been reviewed and discussed with the resident. The resident must achieve an overall global evaluation of pass or higher to progress in the program. For residents who get overall conditional evaluations, a remedial study program (in program remediation) will be initiated and monitored by the Urology faculty. If substandard progress is documented, the resident may be referred to the GWUMC Graduate Medical Education Committee (GMEC) for consideration of formal probation. Prior to a resident being placed on probation or separated from the residency position, a due process policy established by the GMEC will be adhered to. At the end of this probationary period, performance will be reassessed. If no improvement is seen, the resident will not be allowed to progress further in the program.

Resident evaluation is based on progress toward meeting the goals and objectives of the six general competencies listed previously. To this end, several evaluation methods are currently being utilized:

Global Staff Evaluation

Urology faculty will assess each resident every three months using a global evaluation tool that assesses resident performance in the 6 general competencies. The global evaluation tool is a password protected web based program on E*Value. The system requires each faculty member to rate residents separately without input from other faculty members allowing unbiased assessment of resident performance. Faculty evaluations of resident performance are averaged giving each resident a total score for that three-month block. Total and competency specific evaluation scores and comments are accumulated by the residency coordinator so that resident performance can be tracked over the duration of their residency.

In-service/Written Examination

A written examination will be used to assess resident fund of knowledge. The American Urological Associations (AUA) In-Service examination will serve as the written examination. In addition, the AUA's Self Assessment Examination (SASP) is available for study and evaluation for the residents. Written examination performance will be considered in the Medical Knowledge score on the resident evaluation.

360° Evaluation

Annually a 360° evaluation and Peer to Peer evaluation will be given to evaluate resident professionalism and interpersonal skills. The residents are evaluated by their peers and nursing staff from each of the areas the residents interact with hospital staff i.e. the Urology Clinic, the Operating Room and the wards. In addition, the residents are evaluated by inpatients and outpatients with the Patient Resident Performance Questionnaire.

Certification of Program Completion

At the end of the Chief Resident year, the Program Director reviews the resident's training file to ensure completion of all training requirements. An end of training evaluation is completed for each Chief Resident at the completion of their residency. A graduation certificate is prepared and signed by the Program Director and the GWUMC Dean. In addition the Program Director will complete an evaluation of clinical privileges in which the Program Director will certify that

the resident has demonstrated patient management abilities appropriate to the discipline of Urology, and his/her competence to perform the various technical skills and procedures.

Faculty Evaluations

Every 12 months, the residents are required to anonymously evaluate faculty performance in the areas of teaching ability, commitment to the educational program, clinical knowledge and scholarly activities and research. They are also encouraged enter specific comments about individual faculty members. These evaluations are done anonymously by entering these evaluations and comments from the resident's office using E*Value. The faculty evaluations are presented to and reviewed with the faculty member by the Program Director. These evaluations are also presented and discussed with the faculty during the morning staff meetings that occur daily during morning report.

Program Evaluations

Every 12 months, the residents will be required to provide an anonymous assessment and critique of the residency program. Residents are asked to honestly critique the training program with regard to the academic program, surgical experience and quality of rotations at participating institutions. These evaluations are done anonymously by entering these evaluations and comments from the resident's office computer using E*Value. These evaluations are reviewed annually by the program Director and faculty during Staff Meetings.

After reviewing the program and faculty evaluations, the Program Director and faculty discuss the results and how to make the necessary changes to ensure improvement in the program's educational effectiveness. This is done during the periodic and annual Staff Meetings.

SECTION 6

PERSONAL REQUIREMENTS

Each resident is expected to read the Institutional Resident Manual at the beginning of each academic year when they sign their Resident Contract. The booklet will be provided to each resident by the GWUMC Graduate Medical Education Office.

Dress Code

Your clothes must display professionalism. During work hours it is mandatory for you to wear professional clothing to and from work. OR scrubs are suitable while working in the hospital and the Urology clinic. Scrubs must be covered by a fully buttoned coat when outside the designated areas.

During weekends, appropriate attire for patient rounds includes shirt with collar, long pants and closed shoes. Shorts and sandals are not permitted when seeing patients.

State Licensure

Any resident not in compliance with these requirements will be referred under the Due Process policy. The circumstances surrounding failure to obtain an active, current, valid, unrestricted license will be documented and forwarded by the Program Director, through the Graduate Medical Education Committee to GWUMC Dean. At a minimum, the resident will be placed on probation. Being placed on probation may require the resident to report this to licensing agencies in the future. Failure to obtain or maintain a valid license carries very serious potential consequences for the resident, the program director, and this institution.

Basic Life Support/Advanced Cardiac Life Support (BLS/ACLS)

All residents must obtain and maintain certification in Basic Life Support. Program directors will direct whether residents must be certified in ACLS. BLS and ACLS are offered through the Department of Emergency Medicine.

MEETING ATTENDANCE

As funding permits, residents will be allowed to attend at least one meeting an academic year where they have papers, presentations or posters accepted. All other meetings will be at the discretion of the Director, Urology Residency.

Primary meetings should include the AUA annual meeting and the AUA Mid Atlantic Section. All other meetings will be at the approval of the Director, Urology Residency.

In the absence of an accepted paper or presentation, the PGY 6 resident (only) will be allowed to attend the annual AUA meeting with the Urology Service covering airfare, hotel, registration, and per diem for the duration of the meeting.

If a resident chooses to attend a meeting not specified above it must be approved by the Program Director as well as fall into their allotted time off for leave. The resident will be responsible for funding their own travel and all associated expenses

The order of precedence for submission of work for presentation should be as follows:

- AUA National Meeting
- Washington Urologic Society Resident's Day
- Mid Atlantic Section AUA

Urology Teaching Service Patient Sign-Out/Hand Off

The following are standard guidelines pertaining to patient care sign-out for the urology teaching services at The George Washington University Hospital and Sibley Memorial Hospital.

Patient care lists at each hospital will be updated at the end of each day. Each list will be complete when the teaching service leaves the hospital at the end of each business day.

A “complete list” includes the name and location of all primary and consult patients.

Residents will convene daily and discuss patients at each hospital (“evening sign-out”). The evening sign-out process will occur before the teaching service leaves the hospital campus at the end of each business day.

There will always be someone on primary and backup call. The sign-out process will occur at the primary and backup call level. Each on-call resident will have received “appropriate sign-out”.

Appropriate sign-out will always include the following:

- *Patient name and age
- *Diagnosis
- *Procedure
- *Past medical history
- *Medications
- *Allergies
- *Relevant laboratory, imaging, and microbiology results
- *Twenty-four hour plans
- *Potential overnight events and appropriate treatment
- *Covering attending and/or which attending to call with overnight issues

Each morning, residents will convene and discuss overnight events by 6:30 a.m. (“morning sign-out”). The morning sign-out process will occur at the primary and back-up level.

SLEEP DEPRIVATION

If a resident feels that they are deprived of sleep due to call they are advised to sleep in the call room prior to operating a vehicle or if this is not possible then notify an attending. They then will be given taxi fare or reimbursed by the department at a later date for taxi fare.

RESIDENT CONFERENCE ATTENDANCE

First year urology residents (U1) will be encouraged to attend the AUA sponsored Basic Science Course.

Second year urology residents (U2) will be encouraged to attend either the SUFU Preceptorship or the AUA Robotic Preceptorship.

Third year urology resident (U3) will be allowed to attend the national AUA Conference.

Fourth year urology resident (U4) will be allowed to attend the AUA Board Review Course and Mid-Atlantic AUA.

Additionally, if a resident submits research which is accepted at a urological conference that is not noted above he/she will likely be allowed to attend the meeting but will be under the discretion of the Chairman. It is strongly encouraged that this research will then be written with the intent of submission to be published.

RESIDENT RESEARCH REQUIREMENTS

Residents will be required to participate in research, write a manuscript and submit this for publication in a peer reviewed journal yearly. This will begin first year of urologic training (U1). This can include academic essays that are submitted for publication.

APPENDIX A

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM POLICIES

- 1.** Transition of Care (same as handoff)
- 2.** Supervisory Lines of Responsibility for Residents
- 3.** Recruitment, Eligibility, Selection and Appointment of Residents
- 4.** Resident Duty Hours
- 5.** Leave of Absence for Residents and the Effect on Program Completion
- 6.** Resident Promotion
- 7.** Resident Dismissal
- 8.** Resident, Faculty, and Program Evaluation
- 9.** Clinical Competency Committee – Roles and Responsibilities
- 10.** Moonlighting
- 11.** Quality Improvement and Patient Safety
- 12.** Program Evaluation Committee-Roles and Responsibilities

Policy: Transition of Care

PURPOSE: A handoff is the process of transferring information and authority and responsibility for a patient during transitions of care. Transitions include changes in providers, either at the conclusion of a shift, change in service, or location (hospital to home, rehabilitation facility, or out-patient follow-up). Transitions also occur when a patient is moved from one location or level of service to another. The management of a transition is critical, as this is a time when important information may be lost, resulting in medical errors and adverse events. The purpose of this policy is to standardize transitions in care to ensure that excellence in patient care is provided.

Handoffs when changing shift:

Attending and resident call schedules should be designed in such a way that transitions in care are minimized. Handoff times must be standardized. This allows supervising physicians, nursing, and other ancillary staff to know when handoffs are occurring. Handoffs must take place in a private area at a specific time with limited interruptions to ensure that information is not missed. A senior resident must be present for all handoffs to ensure that residents are able to make sufficient transitions not limited by fatigue or clinical responsibilities. The handoffs are to be conducted in a standardized fashion.

Handoffs include verbal communication of all active patients on the service. All other patients must be handed off using written communication. There should be time for questions from the provider assuming responsibility for patient care.

Handoffs when discharging patients:

Dictated discharge summaries are required for all patients staying in the hospital greater than 48 hours. These should be dictated within 24 hours of discharge to ensure continuity of care. When discharging a patient to home, documentation of hospital events, discharge medications and important lab results in the outpatient chart should occur whenever possible. Supervising physicians are responsible for providing residents with feedback on the efficacy of their handoffs. This may be done in formal end of rotation evaluations or informally immediately at the conclusion of the handoff.

Approved GMEC: December 15, 2014

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Supervisory Lines of Responsibility for Residents

PURPOSE: This policy is to ensure that residents are provided adequate and appropriate levels of supervision at all times during the course of the educational training experience and to ensure that patient care is delivered in a safe manner.

INSTITUTIONAL REQUIREMENTS:

All residents in patient care settings must be supervised by qualified faculty in such a manner that permits a resident to assume progressive, increased responsibility for patient care according to their level of training, ability, and experience.

The program director must demonstrate that the appropriate level of supervision is in place for all residents who care for patients. For clinical rotations occurring at affiliate sites, the supervising physician must be approved by the program director.

To ensure oversight of resident supervision and graded authority and responsibility, the program must use the ACGME classification of supervision (CPR VI.D.3.)

Direct Supervision:

The supervising physician is physically present with the resident and patient.

Indirect Supervision:

With direct supervision immediately available – the supervising physician is physically within the hospital or other site of patient care, and is immediately available to provide Direct Supervision.

With direct supervision available – the supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide Direct Supervision.

Oversight:

The supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.

The privilege of progressive authority and responsibility, conditional independence, and a supervisory role in patient care delegated to each resident must be assigned by the program director and faculty members.

The program director must evaluate each resident's abilities based on specific criteria.

Faculty members functioning as supervising physicians should delegate portions of care to residents, based on the needs of the patient and the skills of the residents.

Senior residents or fellows should serve in a supervisory role of junior residents in recognition of their progress toward independence, based on the needs of each patient and the skills of the individual resident or fellow.

Programs must set guidelines for circumstances and events in which residents must communicate with appropriate supervising faculty members.

Faculty supervision assignments should be of sufficient duration to assess the knowledge and skills of each resident and delegate to him/her the appropriate level of patient care authority and responsibility.

PROGRAM SPECIFIC REQUIREMENTS:

1. Clinical Supervision

- a. A faculty member will supervise residents in all clinical settings, including Urology Department clinics, inpatient wards, and consultations in the Emergency Department or elsewhere in the hospital.
- b. Initial patient visits, admissions or consultations must involve appropriate timely bedside participation by a faculty member.
- c. A resident may perform subsequent simple follow-up visits alone based on level and ability, as long as the supervising faculty member approves and is available for consultation.
- d. Junior residents (R-2 and 3) will perform urgent consultations on medically unstable patients with immediate supervision and participation of the senior backup resident.
- e. The Chief Resident in urology provides back-up to residents on his/her team. The on-call Urology Attending Surgeon is continuously available at all hours on all days to the resident staff for consultation and bedside assistance. This information is provided to the resident team monthly in advance, and published in WebExchange.

2. Procedural Supervision

- a. Urology residents may perform bedside urology procedures in the hospital under *indirect supervision with direct supervision available*, only after appropriate certification of proficiency.
- b. Procedures for which residents may be certified include:
 1. cystoscopy
 2. cystoscopy, stent simple removal
 3. foleys placement
 4. complex foley placement
 5. urethral dilation
 6. percutaneous suprapubic tube placement
- c. **Certification involves:**
 - i. Didactic conference presentation of appropriate indications, procedural techniques and complication avoidance, recognition and management.
 - ii. Study of assigned readings with review by a Department clinical faculty member.
 - iii. Supervised teaching and performance of the procedures, with 'check-out' performance by clinical faculty member.
 - iv. Notification of resident certification through GME to each patient care unit.

3. Operative Supervision

- a. Members of the attending urology faculty must supervise operative procedures either *directly* or *indirectly with immediately available direct supervision*.
- b. The level of direct supervision required for a performance of a particular procedure by an individual resident is determined by the attending surgeon taking into account the residents milestone achievements, but will include at a minimum, all key portions of the procedure.
- c. During indirectly-supervised portions of the procedure, the attending surgeon remains immediately available for consultation and/or return to the operating room.

4. Attending Notification

- a. Members of the attending urology faculty must be notified immediately in the following circumstances:
 - i. Death of a Patient
 - ii. Transfer of patient to a higher level of care (ICU)
 - iii. Change in urology exam which results in urgent imaging
 - iv. Patient discharged AMA (Against Medical Advice), not formally discharged, or missing.
 - v. Rapid Response, Code Blue, Cath Attack or Brain Attack
 - vi. Any Sentinel Event (as defined by Joint Commission)

Approved GMEC: December 15, 2014

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Recruitment, Eligibility, Selection and Appointment of Residents

PURPOSE: This policy is designed to describe recruitment, eligibility, selection, and appointment of residents for the Urology residency training program at The George Washington University Medical Center, based on the criteria set forth in the ACGME Institutional Requirements and specific program requirements of the ACGME.

Selection:

The Urology residency training program at The George Washington University Medical Center selects from eligible applicants on the basis of their preparedness and ability to benefit from the residency program. The program participates in the National Resident Matching Program (NRMP) in selecting from among qualified applicants for first-year positions and AUA Match for the 4 years of urological training. The Urology residency training program uses the ERAS application to process all applications to review candidate eligibility.

Criteria:

Education:

- Schools, grades, honors
- Medical School transcript
- Copy of Medical Education Exam Scores (National Boards, FLEX, ECFMG exam and valid certificate, FMGEMS. USMLE)

References:

- Deans' Letter, if appropriate
- 3 Medical School reference letters
- Curriculum Vitae

Research experience

Publications

Preparedness for residency training

Ability and Aptitude

Communication skills

Personal qualities, such as motivation and integrity, leadership ability

Other specific requirements determined by program director

Eligibility:

Applicants with one of the following qualifications are eligible for appointment to the Urology resident program:

1. Graduates of medical schools in the U.S. and Canada accredited by the Liaison Committee of Medical Education (LCME).
2. Graduates of colleges of osteopathic medicine in the U.S. accredited by the American Osteopathic Association (AOA).
3. Graduates of medical schools outside the U.S. and Canada who meet one the following qualifications:
 - a. Have received a currently valid certificate from the Educational Commission for Foreign Medical Graduates or
 - b. Have a full an unrestricted license to practice medicine in a U.S. licensing jurisdiction
4. Graduates of medical schools outside the U.S. who have completed a Fifth Pathway program provided by an LCME-accredited medical school.

Appointment:

Upon verification by the GME Office that an applicant has met eligibility requirements, completed the application process, and has been selected according to established criteria, the resident will begin the process of appointment with the GME Office as per the institutional policy for Recruitment, Eligibility, Selection and Appointment of Residents as stated in the Resident Manual, Section IX and residents shall refer to GME website.

The Urology residency program does not discriminate with regard to sex, race, age, religion, color, national origin, disability or veteran status.

Approved GMEC: December 15, 2014

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Resident Duty Hours

PURPOSE: This policy is designed to ensure an appropriate work environment for residents of The George Washington University School of Medicine and Health Sciences Program in Urology.

Mandatory Time Free of Duty

Residents must be scheduled for a minimum of one day free of duty every week (when averaged over four weeks). At-home call cannot be assigned on these free days.

Maximum Weekly Duty Hours

1. Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities.
2. Duty periods of PGY 2 residents and above may be scheduled to a maximum of 24 hours of continuous duty in the hospital. We encourage residents to use alertness management strategies in the context of patient care responsibilities. Strategic napping, especially after 16 hours of continuous duty and between the hours of 10:00 pm and 8:00 am is strongly suggested.
 - a. Residents may be allowed to remain on-site in order to accomplish effective transitions in patient care; this period of time must not exceed an additional four hours.
 - b. Residents must not be assigned additional clinical responsibilities after 24 hours of continuous in-house duty.
 - c. In unusual circumstances, residents, on their own initiative, may remain beyond their scheduled period of duty to continue to provide care to a single patient. Justifications for such extensions of duty are limited to reasons of required continuity for a severely ill or unstable patient, academic importance of the events transpiring, or humanistic attention to the needs of a patient or family. In these circumstances, the resident must:
 - i. Appropriately hand over care of all other patients to the team responsible for their continuing care; and
 - ii. Document the reasons for remaining to care for the patient in question and submit that documentation in every circumstance to the program director, who must review each submission of additional service and track both individual resident and program-wide episodes of additional duty.

Minimum Time Off between Scheduled Duty Periods

1. Intermediate-level residents should have 10 hours free of duty, and must have 8 hours between scheduled duty periods. They must have at least 14 hours free of duty after 24 hours of in-house duty.
2. Residents in the final years of education must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods.
 - a. This preparation must occur within the context of the 80-hour, maximum duty period length, and one-day-off-in-seven standards. While it is desirable that residents in their final years of education have 8 hours free of duty between scheduled duty periods, there may be circumstances when these residents must stay on duty to care for their patients or return

- to the hospital with fewer than 8 hours free of duty.
- b. Circumstances of return-to-hospital activities with fewer than 8 hours away from the hospital by residents in their final years of education must be monitored by the program director.

At-Home Call

1. Time spent in the hospital by residents on at-home call must count towards the 80-hour maximum weekly hour limit. The frequency of at-home call is not subject to the every-third-night limitation, but must satisfy the requirement for one-day-in-seven free of duty when averaged over four weeks.
2. At home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each resident.
3. Residents are permitted to return to the hospital while on at-home call to care for new or established patients. Each episode of this type of care, while it must be included in the 80-hour weekly maximum, will not initiate a new “off-duty period”.

Moonlighting

Urology residents are not permitted to moonlight.

MONITORING AND OVERSIGHT OF RESIDENT DUTY HOURS BY THE PROGRAM DIRECTOR AND THE GMEC

Requirements:

As the sponsoring institution, The George Washington University School of Medicine and Health Sciences, through its Graduate Medical Education Committee, is responsible for promoting education and for ensuring that the working environment and duty hours are appropriate and in compliance with institutional and program requirements. This is accomplished by the GMEC through the following methods:

1. Review of programs' policies on duty hours and resident working environment as part of the GMEC Annual Program Review (APE).
2. Review of monthly duty hour reports from the MedHub system.
3. Monitoring the duty hour hotline in the GME Office which allows anonymous reporting of duty hour violations. The hotline number is 202-994-9760.
4. Review of call schedules, OR schedules, and medical records as needed.

Residents and Fellows are required to log duty hours using the MedHub system during reporting periods according to program requirements for yearly vs. sampling.

Process:

1. The Program Director and DIO (or designee) will review monthly duty hour reports from the MedHub system and address any violations. This will be reported to the GMEC at the monthly meeting.
2. The Program Director will report duty hours annually through ACGME Web Accreditation System as part of the Annual Update. The DIO will review results of the duty hour section of the ACGME Resident Survey as part of the Annual Program Evaluation. Program Directors will be required to provide a response to any areas of non compliance related to duty hours.

3. All residents/fellows, Program Directors, and designated faculty are required to complete the sleep education training program developed and adapted from the SAFER program of the American Academy of Sleep Medicine. Compliance will be monitored by the GMEC.

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Leave of Absence for Residents and the Effect on Program Completion

PURPOSE: This policy is designed to outline the effect a leave of absence may have on the completion of residency training for the Urology Program and eligibility for certification by the American Board of Urology.

At the discretion of the Department Chair or Residency Program Director, a leave of absence may be approved for personal situations. Leave of absence is always unpaid leave, and must be requested in writing. All accrued vacation leave must be exhausted prior to a request for a leave of absence, unless the absence falls within the provisions of the Family & Medical Leave Act (FMLA) or Temporary Disability Leave.

Eligibility for leave under the FMLA governs requests for period of leave of absences for the birth or adoption of a child or the serious illness of a family member. Temporary Disability Leave provides leave for any physical or mental condition, which is sufficiently incapacitating to require that the resident temporarily terminate participation in the residency training program.

Requirements:

Leave of absence of any type must be requested as far in advance as possible. Program Directors are required to notify the GME Office when a resident requests any type of leave of absence.

The American Board of Urology requires residents to satisfactorily complete 5 clinical years of Graduate Medical Education in an ACGME-accredited program with the final 12 months as a chief resident. All residents may not exceed 15% of the clinical residency training period and not more than 20% of the chief resident year for leave for vacation time, parental leave, or illness. All residents are required to extend their training to make up time away from the program if combined leave from the program exceeds the above allowance.

The Program Director will provide the resident with a written statement detailing how much time their program will be extended. The Program Director will advise the resident on how to contact the American Board of Urology for information on eligibility criteria. The resident is required to sign an addendum to his/her residency agreement covering the make-up time.

Residents are responsible for submitting the required documentation to the University Office of Human Resource Services.

Approved GMCC: December 15, 2014

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Resident Promotion

PURPOSE: This policy is to provide guidelines for resident reappointment to the next level of post-graduate training.

Decision for promotion is made at the discretion of the Program Director, considering the recommendations of the Clinical Competency Committee (CCC). (refer to Policy: Clinical Competency Committee-Roles and Responsibilities) Promotion is also dependent on the GME Institutional Requirements for Resident Promotion.

Criteria used to determine the resident's eligibility for promotion include:

- a. In-Service Exam scores – The residents must make the 20th percentile. If they do not the resident is given an official warning. During the next year, if the resident is below the 20th percentile then the program director shall notify the GME Office and they will be issued a Letter of Deficiency as outlined in the Academic Improvement Policy.
- b. Case logs – Each resident must have their logs up-to-date upon meeting with the Program Director for each of the semi-annual reviews. Any resident who is delinquent will not be allowed to attend the OR pending proper completion of their required operative case logs. Further, residents who are delinquent may risk a Letter of Deficiency if the operative logs continue to be incomplete.
- c. Faculty and Program Director evaluations completed quarterly including: patient care, system-based practice, practice based learning and improvement, interpersonal skills and communication, professionalism, and medical knowledge.
- d. The resident is expected to make and maintain satisfactory progress in appropriately developing sound surgical and non-surgical treatment plans, good communication skills, patient management for surgical and non-surgical care, and effectively and completely assuring the role of Urological Consultant to a wide variety of referring physicians and mastery of technical skills for performing required procedures independently (with faculty support).

Approved GMEC: December 15, 2014

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Resident Dismissal

PURPOSE: This policy is to provide guidelines for dismissal of residents.

Decision for dismissal is made at the discretion of the Program Director, considering the recommendations of the Clinical Competency Committee (CCC). (refer to Policy:

Clinical Competency Committee-Roles and Responsibilities) Dismissal is also dependent on the GME Institutional Requirements for Resident Dismissal.

The program director may elect to dismiss a resident prior to completion of training due to:

- a. Failure to satisfactory cure academic deficiencies.
- b. Misconduct
- c. Failure to comply with any of the terms and conditions of the resident contract and the urology resident handbook (available to all residents).

Dismissal of residents from the Urology residency training program shall be conducted in accordance with the guidelines established by the Graduate Medical Education office of the George Washington University School of Medicine and Health Sciences, and as listed in the GME residency training manual. The program director has the ultimate authority in this decision. Written documentation of the problems that led to the dismissal action must be maintained as outlined in the Resident Manual.

If the program director determines that a resident will not be reappointed, the resident should be notified no later than 4 months prior to the end of the resident's current contract. However, if the primary reason(s) for the nonrenewal occurs within the 4 months prior to the end of the contract, the resident must be provided with as much written notice of the intent not to renew as the circumstances will reasonably allow, prior to the end of the contract.

In the event a resident's performance is not satisfactory, the program director will follow the procedures outlined in the GME Policies for Resident Dismissal and Due Process.

The resident may appeal the decision of the Program Director as outlined in the GME Institutional Policies for Due Process and Academic Improvement.

Approved GMEC: December 15, 2014

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Resident, Faculty and Program Evaluation

PURPOSE: This policy is designed to establish a departmental policy on the evaluation of graduate medical education programs, residents, and faculty.

REQUIREMENTS:

The program director, with participation of members of the teaching staff, shall:

1. Formally evaluate the knowledge, skills, and professional growth of the residents on a semi-annual basis using appropriate criteria and procedures;
2. Communicate each evaluation to the resident in a timely manner;
3. Advance residents to positions of higher responsibility only on the basis of evidence of satisfactory progressive scholarship and professional growth;
4. Maintain a permanent record of evaluation for each resident, which is accessible to the resident and other authorized personnel;
5. Provide a written final evaluation for each resident who completes the program;
6. Implement fair procedures which are consistent with The George Washington University Medical Center policies regarding academic discipline and resident complaints or grievances;
7. Monitor resident stress, including mental or emotional conditions inhibiting performance or learning, and drug or alcohol related dysfunction. Program directors and teaching staff should be sensitive to the need for timely provision of confidential counseling and psychological support services to residents. Training situations which consistently produce undesirable stress on residents must be evaluated and modified.

RESIDENT EVALUATION: The residents undergo a formative evaluation every six months by the Clinical Competency Committee based on the ACGME Milestones for Urology. Residents are provided with a summary of their performance after their semi-annual review meeting with the Program Director. Residents are furnished with a final evaluation in accordance with GME policy upon completion of the training program.

The residents have unlimited access to their evaluations on request; the records are kept in a locked file by the Program Director to maintain confidentiality. Problems in performance are discussed with individual residents as necessary and efforts made to identify and resolve problems in a timely fashion. The Graduate Medical Education (GME) office is notified of any resident performance difficulties and presentations are made to the GME committee as appropriate.

FACULTY EVALUATION: The faculty are reviewed as part of the conduct of the Program Evaluation Committee (see policy on PEC). The residents formally evaluate the faculty on a quarterly basis using E-Value and are given the opportunity to submit to the program director. These evaluations are compiled and discussed with the teaching faculty.

PROGRAM EVALUATION: The Program is reviewed early summer by the Program Evaluation Committee. Each resident in the program is given the opportunity to submit to the program director, at least annually confidential online evaluations of the educational experiences using E-Value. These evaluations are compiled and used to improve the quality of the educational experience.

Approved GMEC: December 15, 2014

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Clinical Competency Committee – Roles and Responsibilities

PURPOSE: The George Washington Residency Program in Urology, as required by ACGME, utilizes a Clinical Competency Committee (CCC) in its evaluation of resident Performance. This document serves as the written description of its responsibilities. (Common Program Requirements, V.A.1.b)

Committee Membership:

The Program Director shall appoint the CCC (CPR, V.A.1) which consists of the following members:

Harold Frazier, MD – Chairman of CCC

Benjamin Compton, MD

Michael Philips, MD

Tiffany Sotelo, MD

Mary Beth Neeley, Residency Coordinator

Responsibilities:

- Semi-annual evaluation of all residents.
- Prepare and assure the reporting of Milestone evaluations for each resident semi-annually to the ACGME.
- Advise the Program Director with regards to resident promotion, remediation and dismissal.

The committee will meet each January and July and review each resident according to the applicable milestones for their performance during the previous six months.

Milestones for non-clinical core competencies are applicable to every resident on every rotation.

All deliberations of the committee will be confidential, and minutes of the committee shall record the date and time of the meeting, members present/not-present/excused, and only reflect decisions made by consensus opinion of the meeting without individually identifiable commentary.

The chairperson of the committee shall work in conjunction with the Residency Coordinator to produce:

- Minutes of the meeting
- Individual Milestone Reports for each Resident
- Report of the committee with recommendations for promotion, remediation and dismissal of residents.

Reports of progress on milestones shall represent the consensus opinion of the committee on the resident's progress. The PD will use these recommendations to report the residents' performance to ACGME.

The Program Director will share a copy of the completed Milestones assessment with the resident at their semi-annual evaluation meeting. The Resident and Program Director will countersign the ACGME milestones summary, and a copy will be retained in the resident file.

Remediation & Non-Promotion:

The CCC may recommend remediation or non-promotion based on resident performance as measured by the ACGME Milestones for Urology. In this case, the CCC will *not* prescribe the course of action for remediation of a given deficiency. The CCC will work with the Program Director in assessing if the resident fulfilled the stipulations of remediation and make a recommendation regarding promotion in the program.

Grievances & Appeals:

A resident may appeal a milestone assessment or recommendation of the CCC *only if it results in a reportable action (non-promotion, non-renewal or dismissal)*. This process is outlined in the Institutional GME Policy for Academic Improvement.

Approved GMEC: December 15, 2014

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Moonlighting

Urology residents are not permitted to moonlight.

Approved GMEC: December 15, 2014

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Quality Improvement and Patient Safety

PURPOSE: This policy is to ensure that residents and fellows of The George Washington University School of Medicine and Health Sciences participate in Quality Improvement/Patient Safety activities as part of their educational program.

DEFINITION:

In accordance with ACGME Common Program Requirements, residents must “systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement.” As such, “the program director must

ensure that residents are integrated and actively participate in interdisciplinary clinical quality improvement and patient safety programs.”

Quality Improvement/Patient Safety activities include but are not limited to the following:

- Quality Improvement/Patient Safety Conferences
- Participation in institutional Quality Improvement/Patient Safety and related committees
- Institute for Healthcare Improvement (IHI) Patient Safety Course
- Grand Rounds
- Patient Satisfaction Surveys
- Core Measures
- Utilization Management
- Scholarly activity resulting in implementation of initiatives to improve patient quality and safety of care
- Health Policy Fellowship

SCOPE:

This policy applies to all residents in the Program in Urological Surgery.

REQUIREMENTS:

1. Residents must demonstrate attendance, and complete the associated IHI Online Modules, for each QI/PS Core GME session once every two years (or a total of two times during the course of the 5 year residency).
2. PGY-2 residents must attend the Core GME session on reporting of patient safety events held at the beginning of each academic year.
3. Residents must complete one independent activity in Quality Improvement / Patient Safety by the end of their PGY-4 year in order to achieve a Level 4 Milestone in Quality Improvement and be eligible to complete the training program.
4. At any given time, one urology surgery resident will represent the department on the following committee:
 - a. Resident Committee
 - b. Program Evaluation Committee (PEC)
5. At any given time, one urology surgery resident will be appointed to assist the attending representative to the following committees:
 - a. Hospital NSQIP Committee

REPORTING:

The program director will provide, in the GME annual program report or upon request, information to GME regarding resident participation in Quality Improvement and Patient Safety Initiatives.

Approved GMEC: December 15, 2014

DEPARTMENT OF UROLOGY RESIDENCY PROGRAM

Policy: Program Evaluation Committee – Roles and Responsibilities

PURPOSE: The George Washington Residency Program in Urology, as required by ACGME, utilizes a Program Evaluation Committee (PEC) in its evaluation of Program Performance. This document serves as the written description of its responsibilities. (Common Program Requirements, V.C.1.a)

Committee Membership:

The Program Director shall appoint the PEC (Common Program Requirements, V.C.1.) which consists of the following members:

Thomas Jarrett, MD

Harold Frazier, MD

Benjamin Compton, MD

Michael Philips, MD

Tiffany Sotelo, MD

A senior (PGY-4) or chief (PGY-5) level resident. They will be appointed for a one year term.

Mary Beth Neeley, Residency Coordinator

COMMITTEE MEETINGS: The committee shall meet, at a minimum, once each late spring or early summer following publication of results of the ACGME Faculty and Resident surveys.

RESPONSIBILITIES:

1. Review the educational program and recommend to the chairman and the program director changes to improve the residents' experience and performance.
2. Review the program activities at the affiliate sites including local educational activities, the clinical experience and the engagement of each of the site faculty in the residents' experience.
3. Review the residents and attendings evaluation of the program.
4. Evaluate residents' performance on milestones, the primary written exam, postgraduate evaluation and the graduate's performance on the oral exam for board certification.
5. Review any program citations or concerns and monitor improvement measures initiated by the program director.
6. Review results of the annual ACGME Faculty and Resident Surveys.
7. Review efforts to promote faculty development including support of research activities and education development activities and clinical program development .
8. Render a written annual program evaluation, which shall be submitted to the chairman and program director and be reviewed and discussed by the faculty at a departmental meeting.

The report should include:

- (a) A summary of the findings of the program evaluation committee.
- (b) A detailed listing performance concerns which will include
 - i) a delineation of goals to improve and measure improvement.
 - ii) a timeline for evaluating the progress of any remediation efforts

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