**UROLOGY**

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**General Description**

**Elective Rotation**

Urology is a four (4) week rotation during which the student will be given opportunities to further develop clinical skills as described for the rotation. Students taking this rotation will be in their third or fourth year of osteopathic medical school. Clinical rotation experiences are intended to further develop the student’s decision-making, cognitive skills, and ability to apply didactic material in a clinical setting. The student should also develop fundamental psychomotor skills by performing routine basic procedures in a supervised setting.

**Purpose**

Clinical experiences are intended to assist the students’ transition from didactics to integrated clinical evaluation, decision-making and management of patients with medical problems. In addition to gaining specific skills in medicine during this rotation, the student should also develop skill in systematic medical problem solving, patient management abilities, establish or reinforce patterns of independent learning and self-evaluation and improve skills in communication and medical record keeping.

At the completion of this rotation, the student should have reinforced certain broad goals, including:

- improved basic skills in physical diagnosis;
- familiarity with ancillary diagnostic procedures (e.g., radiographic, endoscopy, etc.);
- an understanding of indications for appropriate laboratory and diagnostic tests.

Students are expected to assist in the management of acute and chronic problems, under supervision. The student should also develop fundamental psychomotor skills by performing routine basic procedures under direct supervision.

**Objectives**

We recognize that four weeks is an insufficient amount of time to cover a comprehensive list of objectives in any area of practice. Clearly, subjects addressed in any clinical rotation are dependent on the number of patients and kinds of disease entities presenting to a particular service. Nevertheless, certain minimum content must be addressed, either by clinical exposure or by didactic materials so that students are prepared for Board examinations and other testing. Broad goals listed above are a minimum; the following learning objectives for Urology are listed below. The College depends on the supervising physician to establish more specific objectives dealing with the scope of the particular specialty and the more common acute and chronic diseases and disorders that present.

Upon completion of the Urology Rotation the student will:

1. have acquired the basic skills necessary to evaluate a patient presenting with problems related to the genitourinary system, including history taking, physical examination, and the recording of data.
2. have acquired the ability to develop an appropriate differential diagnosis.
3. have developed the skills to prepare an appropriate sequence of laboratory, radiological, and other diagnostic tests and demonstrate familiarity with their interpretation.
4. have observed and/or acquired the technical skills needed to manage a urological patient in an office, clinic or hospital setting.
5. have developed the ability to integrate basic science knowledge in a clinical setting.
6. be able to present a case, both orally and in writing, in a logical and coherent manner so that the listener or reader is able to assess the patient.
7. be familiar with the integration of osteopathic principles and practice as it relates to urological patients.
8. have developed the skills necessary to be a respectful, attentive, empathetic and a compassionate physician.
9. be aware of the medical, legal and ethical issues of a physician’s actions.
10. be able to demonstrate a basic knowledge and understanding of the following:
    a. Computerized tomography of the abdomen and pelvis.
b. Renal, bladder, testicular and prostate ultrasound

c. Intravenous Pyelogram

d. Flat plate (KUB) of the abdomen

e. Renal scan

f. Urologic laboratory testing

g. MRI/MRA

**Affective Objectives**
The student should gain understanding of the psychomotor, cognitive, and affective skills that are especially relevant to Urology. The student should be able to apply osteopathic principles and practices to:

1. Understand the scope of Urology as a specialty.
2. Discuss disease processes, particularly common diseases, chronic diseases, and those which endanger life or have serious complications or consequences
3. Understand the doctor/patient relationship
4. Discuss the major problems of Urology.
5. For the major problems of Urology,
   a. obtain an accurate history
   b. perform an appropriate physical examination
   c. develop a reasonable differential diagnosis
   d. describe a logical program of investigation
6. Affective Skills
   a. Patient's rights
   b. Informed consent
   c. Understanding preoperative anxieties and concerns
   d. Quality Assurance
   e. Empathy toward patient (listening skills)
   f. Understanding family's role in dynamics of surgery

**Basic Psychomotor Objectives**
At the completion of the Urology rotation, the student should demonstrate development of competence in the following:

1. History and Physical examinations
2. Osteopathic Structural examinations
3. Osteopathic Manipulative treatment
4. Urinary Catheterizations
5. Dressing changes
6. Suture removal
7. Interpretation of digital rectal examination
8. Recording of notes on medical records
9. Reviewing and recording laboratory notes

**Basic Cognitive Objectives**
At the completion of the Urology rotation experience, the student should be able to understand, and/or demonstrate the following:

1. Genitourinary anatomy and physiology
2. Diagnostic Imaging (ie. IVP, CT scan, Ultrasound, Renal scans, flat plate (KUB) of abdomen
3. Interpretation of laboratory studies
4. Benign and malignant disorders of the prostate
5. Benign and malignant disorders of the bladder
6. Benign and malignant disorders of the kidney (RCC and TCC)
7. Urolithiasis
8. Diseases of the external genitalia
9. Urological emergencies (ie. Torsion, Acute urinary retention, Priapism, Trauma)
10. Disorders of the bladder
11. Pediatric urology (ie. UTI, cryptorchidism, Wilms' Tumor, reflux, hypospadius)
12. Testicular cancer
13. Sexually transmitted infection
14. Erectile dysfunction
15. Dermatological disorders (ie. condyloma, balanitis, yeast infections, molluscum contagiosum)
16. Familiarity with basic urological procedures (ie. circumcision, vasectomy, cystoscopy, transrectal ultrasound with prostate biopsy, urodynamics, transurethral resection of the prostate, radical Prostatectomy, transurethral resection of bladder tumor, nephrectomy, ureteroscopy and stone extraction, stone lithotripsy (ie, ESWL) placement of ureteral stents, reduction of torsion)

**Implementation**

Course objectives are to be accomplished in a College affiliated hospital or clinical facility, under supervision. Basic objectives must be covered during the rotation to assure adequate student preparation for Board examinations and other evaluations such as post-rotation examinations. The use of diverse methods appropriate to the individual and the clinical site are encouraged, but patient-centered teaching is optimal.

Didactic methods to achieve required objectives include:
- reading assignments
- lectures
- computer-assisted programs (if available)
- student attendance at/participation in formal clinical presentations by medical faculty

Clinically oriented teaching methods may include:
- assignment of limited co-management responsibilities under supervision
- participation in clinic visits, daily patient rounds and conferences
- supervised and critiqued clinical work-ups of patients admitted to the service
- assigned, case-oriented reading case presentations

Three levels of achievement are identified:
- familiarity with a variety of medical procedures through observation and assisting
- proficiency in clinical procedures through actual supervised performance
- awareness of the availability of various medical procedures and their use

At the beginning of the rotation, the attending physician should review expectations/guidelines of performance with the student. On the last day of service, the supervising physician should review the student’s performance with the student. A student’s signature on any evaluation form simply indicates that the student has received a grade directly from the attending; it does not indicate agreement with the grade. Evaluations of students should be completed in the E*Value on-line system within one week of completion of the rotation.

**Texts and Resources**

**Required Assignment Texts:**


**Required Referenced Texts:**


**Assignments**

While specific assignments have not been selected, the student is advised to study not only those patient management problems encountered daily during the rotation, but other problems associated with Urology.. Be prepared for daily discussion at the direction of the preceptor physician.