



Beth Israel Deaconess  
Medical Center



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL

# **Beth Israel Deaconess Medical Center Urology Residency Program**

## **Educational Goals and Objectives**

### **Post Graduate Year 3**

## ***PGY 3 Educational Goals & Objectives***

### **Adult Clinical Rotation**

**Length: 6 months**

**Location: BIDMC**

During the adult clinical rotation a progressive increase in cognitive and clinical skills in urologic patient care will be obtained. By the end of the year the resident should have completely read the entirety of one of the major urologic textbooks. This is an integral part of the curriculum which is designed so that the entire domain of didactic urology is covered in a two-year period of time. Thus, the resident is exposed to each subject in urology at least twice during his/her training. The resident will be supervised in inpatient care and will have responsibility for participating in teaching of junior urology residents, interns, and medical students. The resident will attain proficiency in cystoscopic, diagnostic and therapeutic techniques, and will be exposed to all aspects of urologic pathology and will show competence in urologic imaging modalities. The resident will be introduced to advanced endoscopy including ureteroscopic and laparoscopic diagnostic and therapeutic methods. Continued improvement in decision-making and exposure to complex major operations will occur. Scholarly activity combined with outpatient urology will occur. There will be continued progress in communication, attitudinal, professional and ethical standards. The resident will be capable of appropriately obtaining informed consent for most urologic procedures. The resident will evaluate methods of treatment through assessment of the literature, use information technology to optimize learning and set learning improvement goals with the help of the in-service examination. The resident will be able to work effectively in a system-based practice to place patients appropriately and provide for appropriate care and support services. The resident will be proficient in computer-based documentation of patient care for both in- and outpatients. The resident will understand quality of care measures and provision of quality care in a cost effective manner. The resident will understand methods of assessing patient safety, quality of care and outcomes.

Six months are spent at BIDMC in both inpatient and outpatient care of the adult urology patient. Residents will become confident in managing consults. He/she is responsible for the inpatient unit. The resident serves as the operating surgeon for most open and endourologic procedures. The resident is also responsible for oversight of junior residents when on call and participates in medical student education. The resident gains exposure to inpatient consultation and is mentored in this by faculty and senior residents. The resident accesses support facilities for patient benefit.

The trainee is tutored for one month at the outset of the rotation in outpatient urology by the attendings of different specialties as well as the chief resident and then is assigned patients in the outpatient clinic which he/she attends one day a week.

By the end of this rotation, residents are expected to:

**Patient Care: Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.**

### **PGY 3 Educational Goals & Objectives**

1. To gain familiarity with our clinical pathways and learn optimal inpatient management and cost-effective medicine

#### Methods of Assessment:

1. Direct observation
2. Evaluation by other providers and staff

#### **Medical Knowledge: Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care.**

1. Basic assessment of the urologic patient
2. Introductory level knowledge base regarding pathophysiology of common urologic conditions including obstructive uropathy, urologic malignancy, urologic trauma, voiding dysfunction, stone disease and reproductive medicine
3. Understand proper workup of common office based urologic diseases – lower urinary tract symptoms, testicular pain and interpretation of urodynamics tracing
4. Have a working knowledge of the necessary preoperative work-up and postoperative management of the urologic patient
5. Have a working knowledge of urologic cancers, their evaluation and clinical staging and the options for treatment and follow-up
6. Read a CT scan and renal ultrasound

#### Methods of Assessment:

1. Direct observation
2. Evaluation by other providers and staff
3. Case log review
4. In-service scores
5. The resident is evaluated on knowledge of common urology office practice visits (e.g.: lower urinary tract symptoms, testicular pain, renal colic). The resident will be evaluated on these topics by faculty mentors to PGY3 residents. In addition, the resident will be evaluated on his/her knowledge of assessment of urodynamics tracing.

#### **Patient Care/Medical Knowledge**

1. Perform a complete urologic history and physical examination, and based on this information, the resident should be able to order appropriate diagnostic procedures in a cost-effective manner
2. Perform and assess a urodynamic evaluation in the context of the patient's urologic complaint
3. Perform a thorough cystoscopic examination with a rigid and flexible cystoscope
4. Perform urethral catheterization and suprapubic cystostomy
5. Perform retrograde pyelogram, ureteral stent placement, uretero-rensoscopy and lithotripsy
6. Assist in percutaneous endourologic procedures such as renal access and nephrolithotomy

### ***PGY 3 Educational Goals & Objectives***

7. Perform all scrotal surgery including vasectomy and varicocelelectomy
8. Perform an adult circumcision
9. Assist with a simple or radical nephrectomy and radical orchiectomy
10. Assist with female incontinence procedures
11. Assist with endoscopic procedures on the bladder, prostate and urethra
12. Assist in laparoscopic surgery
13. Learn the regulatory requirements for proper documentation of office based patient encounters.
14. Function independently for inpatient and outpatient care, with attending oversight

Methods of Assessment: As listed above

**Practice-based Learning and Improvement: Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:**

1. Identify strengths, deficiencies, and limits in one's knowledge and expertise;
2. Set learning and improvement goals;
3. Identify and perform appropriate learning activities;
4. Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement;
5. Incorporate formative evaluation feedback into daily practice;
6. Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems;
7. Use information technology to optimize learning; and,
8. Participate in the education of patients, families, students, residents and other health professionals.

Methods of assessment:

1. Portfolio review
2. The PGY 3 resident will be introduced to the required office based documentations (e.g.: electronic documentation of medicine reconciliation, problem list, family history, visit summary report, smoking history)

**Interpersonal and Communication Skills: Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:**

1. Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;
2. Communicate effectively with physicians, other health professionals, and health related agencies;

### ***PGY 3 Educational Goals & Objectives***

3. Work effectively as a member or leader of a health care team or other professional group;
4. Act in a consultative role to other physicians and health professionals; and,
5. Maintain comprehensive, timely and legible medical records, if applicable.

Methods of assessment:

1. Direct observation
2. 360 degree evaluation
3. Review of medical records

**Professionalism: Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:**

1. Compassion, integrity, and respect for others;
2. Responsiveness to patient needs that supersedes self-interest;
3. Respect for patient privacy and autonomy;
4. Accountability to patients, society and the profession; and,
5. Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

Methods of assessment:

1. Direct observation
2. 360 degree evaluation

**Systems-based Practice: Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:**

1. Work effectively in various health care delivery settings and systems relevant to their clinical specialty;
2. Coordinate patient care within the healthcare system relevant to their clinical specialty;
3. Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate;
4. Advocate for quality patient care and optimal patient care systems;
5. Work in inter-professional teams to enhance patient safety and improve patient care quality; and,
6. Participate in identifying system errors and implementing potential systems solutions.

Methods of Assessment

1. Structured case discussion (M&M conferences)
2. Direct observation
3. Evaluation by other providers and staff

## ***PGY 3 Educational Goals & Objectives***

### **Pediatric Urology**

**Length: 3 months**

**Location: Boston Children's Hospital**

Three months are spent at the Boston Children's Hospital gaining experience in the diagnosis and treatment of pediatric urologic patients. The resident is responsible for inpatient care, emergency room consults, and outpatient clinical activity. The trainee is exposed to most pediatric urologic procedures and is able to perform simple pediatric urological procedures. Conference attendance is an integral part of this rotation and is mandatory. The resident will be exposed to urologic pathology and to all domains of pediatric urology.

By the end of the three-month rotation in pediatrics, residents are expected to:

**Patient Care: Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.**

1. Assist with basic pediatric urologic surgery including surgical correction of testicular maldescent, hernia and hydrocele
2. Assist with performance of ureteral implantation
3. Assist and perform pediatric circumcision
4. Assist with reconstructive procedures pertaining to the kidneys and ureters

Methods of Assessment:

1. Direct observation
2. Evaluation by other providers and staff

**Medical Knowledge: Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care.**

1. To gain an understanding of the pathophysiologic diseases in the pediatric population
2. To understand the specific disease entities including:
  - a. Hypospadias
  - b. Exstrophy
  - c. Congenital anomalies of the bladder, testis, and penis
  - d. Voiding dysfunction
  - e. Urinary tract dysfunction
  - f. Urologic malignancies in the pediatric population
3. To gain a better understanding of radiologic and pathologic diagnostic tests and their interpretation through regular attendance of the pediatric urology conference
4. Develop an understanding of pediatric urodynamics and the interpretation of a set of studies

Methods of Assessment:

1. Direct observation
2. Evaluation by other providers and staff

### ***PGY 3 Educational Goals & Objectives***

3. Case log review
4. In-service scores

**Practice-based Learning and Improvement: Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:**

1. Identify strengths, deficiencies, and limits in one's knowledge and expertise;
2. Set learning and improvement goals;
3. Identify and perform appropriate learning activities;
4. Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement;
5. Incorporate formative evaluation feedback into daily practice;
6. Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems;
7. Use information technology to optimize learning; and,
8. Participate in the education of patients, families, students, residents and other health professionals.

Methods of assessment:

1. Portfolio review
2. One-on-one evaluation by program director

**Interpersonal and Communication Skills: Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:**

1. Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;
2. Communicate effectively with physicians, other health professionals, and health related agencies;
3. Work effectively as a member or leader of a health care team or other professional group;
4. Act in a consultative role to other physicians and health professionals; and,
5. Maintain comprehensive, timely and legible medical records, if applicable.

Methods of assessment:

1. Direct observation
2. 360 degree evaluation
3. Review of medical records

### ***PGY 3 Educational Goals & Objectives***

**Professionalism: Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:**

1. Compassion, integrity, and respect for others;
2. Responsiveness to patient needs that supersedes self-interest;
3. Respect for patient privacy and autonomy;
4. Accountability to patients, society and the profession; and,
5. Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

Methods of assessment:

1. Direct observation
2. 360 degree evaluation

**Systems-based Practice: Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:**

1. Work effectively in various health care delivery settings and systems relevant to their clinical specialty;
2. Coordinate patient care within the healthcare system relevant to their clinical specialty;
3. Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate;
4. Advocate for quality patient care and optimal patient care systems;
5. Work in inter-professional teams to enhance patient safety and improve patient care quality; and,
6. Participate in identifying system errors and implementing potential systems solutions.

Methods of Assessment

1. Structured case discussion (M&M conferences)
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## ***PGY 3 Educational Goals & Objectives***

### **Research**

**Length: 3 months**

**Location: BIDMC**

Goals: Develop the skills needed to conduct and interpret scientific studies in the literature. These include the fundamentals of the scientific method, the basics of clinical trial design, and an introduction to biostatistics and epidemiology. It is intended that the basic skill sets introduced as part of this rotation will inform the physician's ongoing future learning and development as a clinician and scientist. It is anticipated that each resident at the conclusion of the three month rotation will have made substantive progress in the design and/or implementation of a research project under the guidance of a mentor and the head of the research rotation. It is anticipated that the resident may have other ongoing projects as well however there must be one that is designated as a focal point for the rotation. The resident will be responsible for presenting his/her work at a 45 minute research seminar (30 minute presentation, 15 minutes for questions/discussion) at the end of the rotation as part of the Urology Grand Rounds Series.

### **Objectives**

1. The resident shall be responsible for at least one project that shall be chosen by the resident as the central one to their three month rotation. The project can be on any topic relevant to genitourinary disease and may have its focus as a laboratory or clinical based project, depending on the resident's individual interests. The resident may collaborate with any faculty of their choosing in order to facilitate completion of the project, and is free to use as many mentors as is required for the project in question. In addition, the head of the research resident rotation will assist in the completion of this project as outlined below. The project can be of any reasonable scale, even if it may not be completed by the end of the rotation. The purpose is to learn the principles and methodology of completing the project and to make substantial progress in its implementation. It is not mandatory that the project to "completed" by rotation end. Indeed, it is fully recognized that a laboratory based project, as an example, is unlikely to be completed in a three month time frame and therefore it is more critical to demonstrate the appropriate principles and methodology of approaching and implementing the project rather than have a polished and finished project, per se.
2. The resident shall demonstrate an understanding of the systematic steps to the development, implementation, completion, and presentation of a scientifically sound study. These may vary to some degree depending on the project in question but at a minimum should consist of the following:
  - a. Formulation of a hypothesis
  - b. Review of the existent literature pertinent to that hypothesis
  - c. Development of a research plan to test the hypothesis
  - d. Implementation of the research plan
    - i. Data acquisition

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- ii. Identification of obstacles
  - iii. Trouble-shooting, alternative methods
  - iv. Data interpretation and analysis
  - v. Conclusions
  - vi. Presentation of results:
    - 1. Urology Division Grand Rounds (see below)
    - 2. Regional & national meetings
    - 3. Written publication
3. At the completion of the rotation the resident will be expected to give a 45 minute presentation at Urology Divisional Grand Rounds. The presentation will be 30 minutes, with 15 minutes for questions and discussion. The goal will be to present the work done over the course of the rotation on the chosen project. At a minimum the presentation should demonstrate: a brief review of the relevant background for the study, a statement of the hypothesis to be tested, the experimental design to test that hypothesis, and the data/experimental results acquired by the end of the rotation and their interpretation to that point, specifically with respect to the initial hypothesis. Depending on the scope and design of the chosen project, the study may or may not be completed by the end of the rotation. Therefore, the presentation does not necessarily have to reflect a fully completed study if that is not appropriate for the project that was chosen. It is expected, however, that the presentation and progress will demonstrate an understanding of the scientific method, a firm grasp of the background pertinent to the project in question, a clear statement of the hypothesis to be tested, a logical and well thought out experimental design, and a presentation of the data/results obtained, the obstacles encountered, how these obstacles were managed, and interpretation of the available data to that point. If the project was able to be completed, the conclusions of the study should be presented and well supported by the evidence. If the study could not be completed, then an outline should be given of the future experiments planned and the rationale for these. Any change in the initial hypothesis in response to the data acquired should also be presented along with the rationale for the change.
4. The resident should meet with any mentors important to the project as often as needed and deemed appropriate. In addition, the resident and the research rotation head will meet at a minimum at the beginning of the rotation and on a monthly basis thereafter (four meetings in total). The resident will also be encouraged to meet more often if the need arises. The resident may also meet prior to start of the rotation if it is anticipated that the resident's rotation will be spent in whole or in part in a laboratory based project that will require up front preparation to ensure a productive and rewarding experience. At these meetings the goals shall be:
- a. Meeting One (at the start of the rotation): Discuss the resident's proposed project for the rotation. This discussion should include a specific statement regarding the projects hypothesis, what is known or needs to be explored

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regarding the known literature pertinent to that hypothesis, and the proposed methodology to test that hypothesis.

- b. Meeting Two (end of month one): Assess progress in experimental design, data acquisition, and interpretation of results. Questions to review include, what impediments are being encountered, strategies to overcome these impediments, data analysis, preliminary results (if appropriate), designing the next set of experiments and data acquisition.
  - c. Meeting Three (end of month two): Review of experimental results and data acquired. Interpretation of results, relating these back to the initial hypothesis. Plans for final experiments and data analysis. Preparation and outline of end of rotation presentation.
  - d. Meeting Four (some point prior to presentation at end of rotation): Overview of experimental results, interpretation and analysis of data, and preparation of final presentation.
5. During the research rotation, the resident is required to attend the weekly Urology Laboratory lab (*date and time to be determined*). During this meeting the resident is exposed to journal articles in the format of a formal journal club presentation that cover basic science and translational science. The resident will have the opportunity to present during the journal/data club. When the resident presents during the data club portion of the meeting, the resident will obtain feedback from the research group about his/her progress, obtain insight into alternative research strategy approaches.

#### Competencies Addressed:

Medical Knowledge

Practice-based Learning and Improvement

#### Methods of Assessment:

1. Direct observation
2. Portfolio review