

## RESIDENT EDUCATION IN UROGYNECOLOGY

### OVERVIEW:

Resident education in Urogynecology will occur during the outpatient Urogynecology and the inpatient Gynecology rotations. Teaching will consist of both clinical care and didactic teaching sessions. During the 4 weeks of the third year spent on the Urogynecology rotation, residents will gain experience with the ambulatory care of patients with urogynecologic conditions. During the inpatient gynecology rotation, third and fourth year residents will gain experience with the surgical management of patients with these conditions.

In addition to hands on clinical care, learning will be facilitated through several didactic activities during the third year urogynecology rotation. Residents will participate in the clinical review sessions and fellowship lecture series, journal club and divisional research meetings every Monday afternoon from 5:30 PM – 7:00 PM. Because of work hour restrictions and the limited time actually spent on service, a significant amount of learning will occur through independent study in the evenings. To encourage and augment this self directed learning, residents will be given a reading list and participate in a weekly review session with one of the urogynecology attendings. Throughout the entire rotation residents will be expected to demonstrate appropriate professional attitudes towards their learning, their patients and their interactions with hospital staff, nurses and attending physicians.

Following ACGME teaching guidelines, all teaching activities will focus on developing the six major competencies: patient care, medical knowledge, Practice-based learning and improvement, interpersonal and communication skills, professionalism and systems-based practice.

### LEARNING OBJECTIVES:

#### MEDICAL KNOWLEDGE:

These topics have been derived from the 2005 CREOG objectives, 8<sup>th</sup> Ed (unit 4 gynecology sections II.F; II.G and VI.A).

By the end of the fourth week of the rotation, the resident will be expected to:

- 1) Demonstrate basic knowledge of pelvic anatomy and embryology by:
  - a) Describing the normal development of the bladder, urethra, vulva, vagina rectum and anal canal.
  - b) Explaining the normal anatomic supports of the vagina, rectum, bladder, urethra and uterus (or vaginal cuff) including the bony pelvis, pelvic floor nerves and related musculature and connective tissue.
  - c) Describing the anatomy of the retropubic, paravaginal, pararectal and presacral spaces and identifying structures such as: Cooper's ligament, the obturator nerve, ureters, ischial spine, sacrospinous ligament, obturator foramen, middle sacral artery, bladder neck
- 2) Demonstrate basic understanding of the pathophysiology of female pelvic floor dysfunction by:

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- a) Describing the static and dynamic interrelationships and function of the pelvic organs and support mechanisms
  - b) Summarizing the normal function of the lower urinary tract during the filling and voiding phases and the mechanisms responsible for continence
  - c) Describing the principle etiologies of pelvic support defects, urinary incontinence and fecal incontinence, including the effects of pregnancy and delivery
  - d) Describing the symptoms that may be experienced by a patient with pelvic support defects, urinary incontinence or fecal incontinence.
  - e) Summarizing the potential psychological, social and sexual consequences of urogynecologic disorders
  - f) Identifying the anatomic defects associated with various aspects of pelvic support defects.
  - g) Characterizing the major types of urinary incontinence
  - h) Describing abnormal urethral conditions such as urethral syndrome, urethritis, and diverticula
  - i) Describing the pathophysiology related to urinary tract infections including:
    - i) Organisms in lower and upper tract infections
    - ii) Host factors affecting the risk of upper and lower tract disease
  - j) Describing the presenting symptoms, diagnostic strategies and treatment approaches for interstitial cystitis.
  - k) Characterizing and explaining the various types of urinary voiding disorders
  - l) Describing the etiologies, prevention, diagnostic techniques and approaches to repairing fistulae that may involve pelvic organs
- 3) Describing both a conservative and surgical treatment plan for patients with urogynecologic disorders and the appropriate follow-up.
  - 4) Summarizing and describing the risks, benefits and expected outcomes of different surgical and non-surgical approaches to the management of pelvic support and incontinence disorders.
  - 5) Describing the types of complications related to medical and surgical treatments of urogynecologic disorders and the approaches for managing them
  - 6) Distinguishing the diagnostic methods for and treatment of urinary tract infections including: bacteruria, urethritis, cystitis, pyelonephritis, Persistent UTI, Recurrent UTI

### CLINICAL SKILLS:

- 1) By the end of the fourth week of the rotation, the resident should have acquired the following ambulatory clinic skills:
  - a) Be able to perform a basic evaluation of a patient with all of the following:

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- i) Pelvic organ prolapse including:
  - (1) Elicit a pertinent history including pertinent positive and negative ROS
  - (2) Perform a focused physical exam and characterize pelvic support defects in the anterior, posterior and apical compartments and identify urethral hypermobility
- ii) Urinary/fecal incontinence, including:
  - (1) Elicit a pertinent history including pertinent positive and negative ROS
  - (2) Perform a focused physical exam and assess bladder and urethral support, perineal, levator and sphincter strength and neurologic status
- b) Perform and interpret the results of tests to characterize urinary incontinence including:
  - i) Assessment of residual urine volume
  - ii) Simple cystometry
  - iii) Q-tip test
  - iv) Urinalysis
  - v) Urine culture
- c) Describe the indication for and interpret the results of diagnostic tests including:
  - i) Cystourethoscopy
  - ii) Multichannel cystometry
  - iii) Uroflowmetry
  - iv) Radiologic tests
  - v) Electromyography
  - vi) Assessment of anal sphincter integrity (e.g. manometry, radiologic imaging, neurologic testing)
- 1) By the end of the resident's fourth year, the resident should have acquired the following surgical skills:
  - a) Demonstrate proper patient positioning
  - b) Demonstrate proper use of surgical instruments
  - c) Able to identify ureters by cystoscopy
  - d) Demonstrate appropriate post operative care with particular consideration for the elderly
  - e) Be able to perform or discuss in detail the surgical procedures listed below in the section describing operating room procedures.

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### RESIDENT RESPONSIBILITIES:

#### CLINICAL RESPONSIBILITIES:

##### OUTPATIENT CLINICAL RESPONSIBILITIES.

###### 1) Faculty Urogynecology clinic sessions:

Teaching will be accomplished in a one on one hands-on teaching environment in the urogynecology outpatient clinics and the urodynamic laboratory. During this time, residents will acquire skills in patient care and participate in practice based learning activities to gain greater understanding of disorders of the female pelvic floor.

Residents are assigned to the service Monday through Friday for the 4 weeks on the Urogynecology rotation. Each week they will be assigned to clinic seeing patients with the attendings, nurse practitioner or in the resident urogynecology clinic. The remaining sessions are reserved for the Thursday morning protected time for didactic teaching and the resident's continuity clinic. On Fridays that outpatient surgeries are scheduled at the ambulatory surgery center, the resident will be excused from Urogyn clinic for the morning session or for day (depending on the schedule).

Patients are seen daily at the Red Creek office from 8:15AM to 5:00 PM. **Residents are expected to be present unless they have other residency related conflicts that take priority.** In the clinic, residents will participate in the care of faculty private patients and will evaluate these patients together with one of the attending physicians, fellows and/or the nurse practitioner. Initially, the resident will see patients along side one of the attending physicians and/or the Urogynecology fellows so that the resident may learn how to take an effective history relative to common urogynecologic conditions and perform a directed urogynecological examination. After this initial introduction, resident are expected to see patients for the initial history and present the patient to the attending. It is during this time that residents can expect to hone their interpersonal and communication skills as they elicit a comprehensive history and exam of patients with pelvic floor disorders. The attending and resident together will then examine the patient and discuss the management plan. It is during this time that residents will be exposed to some of the system-based practice issues that affect the care of patients with pelvic floor disorders. This may include communication with primary care and referring physicians as well as arranging for appropriate follow-up evaluation and care for nursing home and other patients.

###### 2) Resident Urogynecology clinic sessions:

The resident Urogynecology clinic session is currently Monday AM and consists of patients referred for evaluation and treatment of pelvic floor dysfunction. This clinic offers an opportunity for the resident to utilize their practice-based learning skills to care for these clinic patients. It is expected that the residents will view these patients as their own "private" patients and take charge of all aspects of their care under the supervision of the attending physician, including follow-up of any imaging studies, pathology reports, or labs ordered. (When there is no resident rotating on the urogynecology service, tasks generated by the urogynecology clinic are monitored by the OPD Chief.) Patients that require surgical intervention will be followed until they

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are admitted for surgery at which time they fall into the purview of the inpatient gynecologic team.

### 3) Outpatient Clinical Skills and Procedures:

Residents should expect to perform:

- a) Pessary fitting and follow-up care
- b) Simple cystometrograms

Residents will be given the opportunity to observe and, depending on the resident's skills and clinical case availability to perform:

- a) Urethral dilation
- b) Complex multi-channel urodynamics

### INPATIENT RESPONSIBILITIES:

While on the Urogynecology rotation, residents will have no inpatient responsibilities. However, during their time on the inpatient gynecology service, third and fourth year residents should expect to participate in the perioperative and surgical care of patients on the urogynecology service.

#### 1) Operating room:

Based on case availability, resident preparation, and resident experience, senior residents will have the opportunity to perform basic pelvic reconstructive procedures listed below. They will also observe and assist in the more complex procedures, which, in general are performed by the fellow or attending. **While not formally on the urogynecology service, residents participating in surgical cases will be expected to have reviewed the patient's history and physical and some of the relevant literature about the management of the patient's problem.** Preoperatively and intra-operatively the attending will discuss with the resident the rational for the management decisions.

#### 2) Postoperative care:

**It is expected that the resident assisting in the surgery will also participate in the postoperative care.** In the care of these patients, residents will show an understanding of the appropriate postoperative management of this group of predominantly elderly patients who have very different requirements than younger postoperative patients often seen on the general gynecology service. Residents should recognize that the postoperative care of elderly patients is an important part of the surgical experience and **unless work requirements clearly preclude their participation**, residents are expected to round on these patients until discharge.

#### 3) Operating Room Procedures:

These will occur during the resident's rotation on the inpatient gynecology service. Depending on the resident's skill level, resident's preparation for the case, and the complexity of the case, residents can expect to perform or first assist many of the following procedures if they are performed during the rotation:

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- a) Total vaginal hysterectomy
- b) Culdoplasty
- c) Simple anterior and posterior repairs
- d) Perineoplasties
- e) Simple cystoscopy
- f) Cystotomy repairs
- g) Hydro distention
- h) Burch procedure (in part)
- i) Colpocleisis (in part)
- j) Minimally invasive sling (in part)

Residents should recognize that the patients seen on this service are complex and the resident will be the first or second assistant for the procedures listed below. In addition, individual residents may find themselves doing more or less of these procedures depending on their surgical skills and the progression of those skills while on the Gynecology service. Finally, operating room time constraints and patient stability may affect a resident's participation in a surgical case that he or she would ordinarily be allowed to execute. In all cases, the attending physician will determine the extent of an individual's participation in a case. Regardless of their level of participation in a case, residents need to be familiar with these techniques and procedures and will be expected to have read about them preoperatively:

- 1) Sacral colpopexy
- 2) Paravaginal repair (abdominal and vaginal)
- 3) Vesico- vaginal fistula repair
- 4) Urethral vaginal fistula repair
- 5) Urethral diverticulum repair
- 6) Placement of cadaveric grafts for complex colpoplastic repairs
- 7) Sacral spinous fixation
- 8) Uterosacral ligament suspension
- 9) Recto-vaginal fistula repair
- 10) Rectal sphincter repair
- 11) Minimally invasive slings (vaginal, abdominal and trans obturator approaches)
- 12) Urethral collagen injections
- 13) Bladder biopsies

On occasion, a resident may perform a part or all of one of these procedures. The decision to allow a resident will be made on a case-by-case basis depending on the

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nature of the surgical procedure, the condition of the patient, the skills of the individual resident and the availability of appropriate surgical assistants.

### DIDACTIC RESPONSIBILITIES:

#### 1) Conferences:

In addition to the Thursday morning departmental teaching, didactic teaching will occur throughout the rotation. Not only are residents expected to increase their medical knowledge by direct patient interaction but there will be a significant emphasis on self directed learning. As part of the fellowship, the division has regular didactic sessions that the resident is expected to attend. Residents will attend the urogyn fellow lecture, journal club, or research meeting that occurs **every Monday afternoon at 5:30 at the Red Creek office.**

#### 2) Independent study:

Besides these two scheduled lectures, residents will also be responsible for independent study. Residents are expected to actively review the literature on problems of female pelvic floor dysfunction that are seen during their time in clinic. It is expected that the resident read all of the reading materials on the reading list posted on Blackboard. This reading list covers much of the learning that is required by ACGME. The reading is broken down by week and the materials are available on the blackboard site.

#### 3) Review sessions:

To encourage and augment this self-directed learning the resident will meet weekly with one of the Urogyn attendings for an oral review of that week's required reading. Designed to enhance practice based learning and improvement, these sessions will be an oral review with the attendings asking the residents questions about the readings as well as about patients seen during the week.

#### 4) Web-based learning:

As part of the self-directed learning for this rotation, residents are expected to complete 6 web-based learning modules covering urogynecologic topics that may not be discussed during the oral review sessions or encountered during clinical care of patients. The modules cover: Hematuria, Female Sexual Dysfunction, Nocturia, Urinary Tract Infection, Painful Bladder Syndrome, and Fecal Incontinence. Each module consists of a powerpoint lecture and a post-test to assess learning. The modules may be accessed on Blackboard under Core Rotations-Urogynecology-Web-based Learning. Residents will have access beginning on July 1 of the 3<sup>rd</sup> year and each 3<sup>rd</sup> year resident is expected to complete the modules and pass the post-tests before the end of their Urogyn rotation. (This does result in some residents having a longer time frame for completion of the modules but this can not be avoided due to the complexity of the residency schedule.) Material from the modules may be covered in the final written examination.

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### 5) Written examination:

During the last week of the Urogyn rotation, the resident will complete a written examination. There will be a minimum passing grade.

### EVALUATION:

Final rotation grades will be based on the written examination, performance during the oral review sessions, successful completion of the web-based modules, and performance of clinical responsibilities on the Outpatient rotation only. Residents should understand the evaluations will be made on the following scale:

- 1) Unsatisfactory: The resident did not meet the requirements of the rotation
- 2) Satisfactory: The resident met all the requirements of the rotation.
- 3) Satisfactory +: The resident met all and exceeded some of the requirements of the rotation.
- 4) Exceptional: The resident met and exceeded all the requirements of the rotation. Resident's attaining this score will have performed clearly over and above that seen for a resident at that level of training and approaching the level of a first year fellow. They will demonstrate a superior knowledge and understanding of pelvic floor disorders and demonstrate initiative in self directed learning and patient care.

The final grade will be provided via E-value.

### COMPETENCY IN UROGYN PROCEDURES:

It is expected that all residents, by the end of their third year, will achieve competence in the following office procedures:

- 1) Urogyn, Conservative Management of Incontinence
- 2) Urogyn, Pessary Management
- 3) Urogyn, Prolapse Assessment
- 4) Urodynamic Eval, Office (Simple Cystometry)

Receiving a passing grade on the Urogynecology rotation includes our assessment that the resident is competent to perform these services independently. After completion of the rotation and receiving a passing grade, each resident is expected to submit a request for sign-off for these procedures via E-value in a timely manner. Requests for sign-off after graduation from the residency program will not be granted.

It is also expected that all residents will achieve competence in cystoscopy in a surgical setting. Multiple opportunities for learning cystoscopy are available on the outpatient gynecology rotation. When the resident is ready to demonstrate competence in this procedure, he or she should request sign-off from an attending at the beginning of a

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case and be prepared to execute the procedure independently and to answer any questions from the attending regarding the procedure, indications, interpretation of findings, and potential complications. After successful demonstration of competence verbally confirmed by the attending, the resident should submit a request for sign-off via E-value within 7 days. If the request is submitted later than 7 days after the procedure and the attending cannot remember the case adequately to feel comfortable completing the sign-off request, the resident may need to demonstrate the competency again. Requests for sign-off after graduation from the residency program will not be granted.

Sign-off for some other Urogynecologic surgical procedures may be obtained through demonstration of competency for that specific procedure according to the guidelines developed for the Urogynecology fellowship at the University of Rochester. Competency includes demonstration of competent independent performance of the procedure as determined by the observing attending, understanding of relevant surgical anatomy, appropriate preoperative evaluation and peri-operative care, & understanding of potential complications and management of complications. Evaluating the non-surgical skill portion of the procedural competency may include oral examination, written examination, and chart review. Guidelines for competency for urogynecologic procedures can be obtained from the fellowship director. If a resident is interested in being signed-off on urogynecologic surgical procedures, she or he should discuss this with an attending as soon as possible so a plan of action can be developed. Sign-off is ultimately at the discretion of the Urogynecology attending and will require significant extra time and effort on the part of the resident.