Supplemental Guide:

Urogynecology and Reconstructive Pelvic Surgery

July 2024

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**Milestones Supplemental Guide**

This document provides additional guidance and examples for the Urogynecology and Reconstructive Pelvic Surgery (URPS) Milestones. This is not designed to indicate any specific requirements for each level, but to provide insight into the thinking of the Milestone Work Group.

Included in this document is the intent of each Milestone and examples of what a Clinical Competency Committee (CCC) might expect to be observed/assessed at each level. Also included are suggested assessment models and tools for each subcompetency, references, and other useful information.

Review this guide with the CCC and faculty members. As the program develops a shared mental model of the Milestones, consider creating an individualized guide (Supplemental Guide Template available) with institution/program-specific examples, assessment tools used by the program, and curricular components.

Additional tools and references, including the Milestones Guidebook, Clinical Competency Committee Guidebook, and Milestones Guidebook for Residents and Fellows, are available on the [Resources](https://www.acgme.org/milestones/resources/) page of the Milestones section of the ACGME website.

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| **Patient Care 1: Patient and Pelvic Floor Evaluation****Overall Intent:** To efficiently obtain and synthesize the history, physical exam, and collateral patient data to develop an appropriate management plan |
| **Milestones** | **Examples** |
| **Level 1** *Obtains history and physical exam to form a patient assessment* | * Obtains a comprehensive urogynecologic-focused history including screening for other pelvic floor disorders, documentation of previous treatments, and impact of symptoms on quality of life
* Performs a comprehensive urogynecologic-focused physical exam including Pelvic Organ Prolapse Quantification system (POP-Q) measurements
* Incorporates data from patient questionnaires in patient history
* Efficiently obtains accurate and complete information from referral sources and electronic medical records to supplement patient history
* Documents and presents patient history and physical exam accurately and completely in an organized fashion
 |
| **Level 2** *Evaluates patients; orders and interprets diagnostic testing* | * Modifies patient interview in complicated clinical situations including use of supplemental historians and translators as indicated (cognitive impairment, poor historian, language barriers, etc.)
* Modifies physical exam to optimize data collection and patient comfort in complicated clinical situations (e.g., dementia, chronic pain conditions, poor Valsalva effort during POP-Q)
* Obtains and interprets office urine testing (e.g., urine dipstick and/or urine microscopy)
* Recognizes contaminated urine specimens; performs/requests catheterized specimen as needed
* Identifies indications for imaging for evaluation of pelvic floor disorders
* Orders and interprets computerized tomography (CT) scans, magnetic resonance imaging (MRIs), and ultrasounds
* Identifies indications for urodynamic testing and cystoscopy
 |
| **Level 3** *Develops a plan to manage patients with straightforward conditions* | * Develops a plan for a patient with a one or more straightforward pelvic floor disorders such as overactive bladder only, pelvic organ prolapse (POP) and stress urinary incontinence, mixed urinary incontinence, or POP-Q and recurrent urinary tract infections (UTI)
* Develops a plan that includes consideration of non-surgical and surgical treatment options
* Develops a plan that includes consideration of patient characteristics
* Develops a plan that includes consideration of patient treatment preferences and goals of treatment
* Modifies plans based on interval changes in history, physical exam, patient characteristics, and response to treatment in straightforward clinical situations
 |
| **Level 4** *Develops a plan to manage patients with complex conditions and adapts the plan for changing clinical situation* | * Identifies appropriate surgical approach for a patient with recurrent vesicovaginal fistula
* Suggests multidisciplinary collaboration for patients with neurogenic bladder dysfunction
* Identifies and manages pelvic floor disorders overlap such as painful bladder syndrome (PBS) and overactive bladder
* Manages recurrent symptomatic advanced prolapse with comorbidities and complicated surgical history
* Develops plan to include consideration of inter-specialty consultation/collaboration to optimize patient outcomes
* Negotiates goals of treatment in complicated clinical situations
* Modifies plans based on interval changes in history, physical exam, patient characteristics, and response to treatment in complex clinical situations
 |
| **Level 5** *Develops a clinical pathway for the management of patients with complex conditions or identifies clinical trials for patients* | * Creates an algorithm for assessment and management of a patient with recurrent urinary tract infections (UTI)s
* Institutes a systematic application of the overactive bladder guidelines
* Refers and counsels patients with pelvic floor disorders for appropriate clinical trials, evaluating new treatments not currently available in clinical setting
 |
| Assessment Models or Tools | * Clinical case discussion assessment
* Direct observation with formative feedback
* End-of-rotation summative feedback
* Medical record (chart) audit
* Multisource feedback
* Observed structured clinical examination
* Quality Assurance reviews
* Self-assessment with chart review (mini-maintenance of certification (MOC)-type activities)
* Simulation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * American Urogynecologic Society (AUGS) best practice statement: evaluation and counseling of patients with pelvic organ prolapse. *Female Pelvic Med Reconstr Surg* 2017;23(5):281-287. <https://journals.lww.com/fpmrs/Fulltext/2017/09000/American_Urogynecologic_Society_Best_Practice.1.aspx>
* Bordeianou L et al. Pelvic Floor Consortium best practice and consensus statements: measuring pelvic floor disorder symptoms using patient-reported instruments. *Female Pelvic Med Reconstr Surg* 2020; 26(1)1-15. <https://journals.lww.com/fpmrs/Fulltext/2020/01000/Measuring_Pelvic_Floor_Disorder_Symptoms_Using.1.aspx>.
* Bump et al. The standardization of terminology of female pelvic organ prolapse and pelvic floor dysfunction. *AJOG* 1996;175(1):10-7.
* Frawley et al. An International Continence Society report on the terminology for pelvic floor muscle assessment. *Neurourol Urodyn* 2021;40:1217-1260.
* Haylen et al. An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction. *Neurourol Urodyn* 2010;29:4-20.
* Shobeiri SA, Alshiek J, Weinstein M, Rostaminia G, Quiroz L, Ramaseshan A. Pelvic floor imaging. Society of Gynecological Surgeons (SGS) Video Archives Vimeo channel. 2020. <https://vimeo.com/418470719>
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| **Patient Care 2: Office-Based Procedures** **Overall Intent:** To proficiently perform all manner of office procedures encountered in independent practice |
| **Milestones** | **Examples** |
| **Level 1** *Performs simple office-based procedures, with supervision* | * Performs diagnostic cystoscopy
* Prepares patient for multi-channel urodynamics including catheter insertions, electromyography patch placement, transducer calibrations, and troubleshooting
* Initiate and complete percutaneous tibial nerve stimulation
* Provides pessary fitting and teaching
 |
| **Level 2** *Independently performs simple office-based procedures* | * Independently performs procedures such as those listed in Level 1
 |
| **Level 3** *Performs complex office-based procedures, with supervision* | * Performs peripheral nerve evaluation
* Performs office-based endoscopic treatments for incontinence such as intravesical Botox and urethral bulking
* Performs urodynamics with interpretation
* Programs and troubleshoots sacral neuromodulation system
* Obtains images using ultrasound of pelvic floor and/or anal sphincter
* Performs nerve injection or trigger point injections
 |
| **Level 4** *Independently performs complex office-based procedures* | * Independently performs procedures such as those listed in Level 3
 |
| **Level 5** *Independently teaches and supervises complex office-based procedures* | * Independently teaches and supervises procedures such as those listed in Level 3
 |
| Assessment Models or Tools | * Direct observation
* End-of-rotation evaluation
* Multisource feedback
* Simulation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Simple procedures: bladder instillation, diagnostic cystoscopy, multi-channel urodynamics (set-up and troubleshooting, straightfoward conditions such as stress urinary incontinence (SUI) and overactive bladder (OAB)), percutaneous tibial nerve stimulation (PTNS), pessary fitting and teaching, simple cystometry, straight catheterization, suprapubic catheter change, urethral dilation
* Complex procedures: anal sphincter ultrasound, bulking agent injection, intravesical botox, pelvic floor ultrasound, multi-channel urodynamics for neurogenic bladder, nerve injection/trigger point injection, peripheral nerve evaluation (PNE), sacral neuromodulation (SNM) interrogation and programming
* American Urological Association (AUA) and the Society for Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction (SUFU). Adult urodynamics: AUA/SUFU Guideline (2012). 2012. <https://www.auanet.org/guidelines/guidelines/urodynamics-guideline>.
* Goldman et al. International Continence Society best practice statement for use of sacral neuromodulation. *Neurourol Urodyn* 2018;37(5)1-26. <https://onlinelibrary.wiley.com/doi/10.1002/nau.23515>.
* International Urologic Association. Pelvic floor ultrasound basic settings and procedures. [Document]. 2018. <https://www.iuga.org/membership/special-interest-groups/pelvic-floor-imaging>.
* Ridgeway, BM, Attaran, M. Urodynamics: indications, techniques, interpretation, and clinical utility. In: Barber MD, Bradley CS, Karram MM, Walters MD, ed. *Walters and Karram Urogynecology and Reconstructive Pelvic Surgery*. 5th ed. Philadelphia: Elsevier; 2022. ISBN 978-0-323-69783-5.
* Rosier et al. International Continence Society Good Urodynamic Practices and Terms 2016: Urodynamics, uroflowmetry, cystometry, and pressure-flow study. *Neurourol Urodyn* 2018;9999:1-18. PMID: 27917521.
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| **Patient Care 3: General Peri-Operative Management (Pre-, Intra-, and Post-Procedural)****Overall Intent:** To develop the skills for pre-operative surgical planning, to identify and manage common and more complex peri-operative/intra-operative complications, and to direct and participate in multidisciplinary surgical planning for complex cases |
| **Milestones** | **Examples** |
| **Level 1** *Accurately and reliably gathers and reports clinical information pertaining to common peri-procedural risks and complications* | * Reports details of gynecologic, urologic, or FPMRS prior surgical procedures
* Practices high-quality shared decision making
* Gives ranges of successful outcomes as well as specific procedural risks when counseling and obtaining consent
* Comprehensively evaluates patients with multiple comorbidities and frailty status, and adjusts surgical planning in accordance with risks
 |
| **Level** 2 *Identifies alterations in normal physiology and anatomy* | * Recognizes that advanced stage prolapse alters landmarks or expected locations of anatomy
* Recognizes signs of atrophy, recommends pre-operative vaginal estrogen cream, and adjusts surgical approach/technique to minimize risk of vaginal/introital narrowing
* Assesses vaginal length after hysterectomy and considers when determining whether sacrospinous ligament fixation is a surgical option
* Safely restores pelvic anatomy in patients with multiple prior surgeries, mobilizes adhesions, can visualize and separate tissue planes
* Appropriately uses pre-procedure imaging
 |
| **Level 3** *Independently identifies and manages common peri-procedural risks and complications* | * Assures appropriate equipment is available in or for the operating room
* Communicates effectively with all team members pre-, intra-, and post-procedure to optimize physiologic stressors and response to surgery
* Routinely avoids potential common procedural risks such as inadvertent cystotomy, excessive blood loss, wound infection
* Manages these common complications (if occurred) with little or no guidance
* Appropriately triages post-operative patients to emergent, immediate, or routine care, as needed
 |
| **Level 4** *Independently identifies and manages complex peri-procedural risks and complications* | * Adeptly handles massive hemorrhage from sacrum or perirectal and paravaginal spaces
* Mobilizes appropriate consultants for organ injury
* Minimizes further complications by recognizing surgical limits
 |
| **Level 5** *Anticipates and implements strategies to prevent or mitigate complications, applying effective interdisciplinary team management skills to manage multiple scenarios simultaneously* | * Coordinates a multispecialty care team (urology, colorectal surgery, plastic surgery, gastroenterology) for complex conditions such as recurrent rectovaginal fistula or recurrent vesicovaginal fistula
 |
| Assessment Models or Tools | * Direct observation/clinical evaluation
* Medical record (chart) audit
* Mock oral examination
* Simulation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Averch TD, Stoffel J, Goldman HB, et al. Catheter associated urinary tract infections: definitions and significance in the urologic patient. AUA White Paper. 2014. <https://www.auanet.org/guidelines/guidelines/catheter-associated-urinary-tract-infections>
* Chrouser K, Foley F, Goldenberg M, et al. Optimizing outcomes in urologic surgery: intraoperative considerations. AUA White Paper. 2018. <https://www.auanet.org/guidelines/guidelines/optimizing-outcomes-in-urologic-surgery-intraoperative-considerations>.
* Handa V, Van Le L. *Te Linde’s Operative Gynecology*, 12th ed. Wolters Kluwer; 2019. ISBN: 978-1496386441.
* Institute for Clinical Systems Improvement. Health care guideline: perioperative. 2020. <https://www.icsi.org/wp-content/uploads/2020/01/Periop_6th-Ed_2020_v2.pdf>.
* Lightner DJ, Wymer K, Sanchez J et al: Best practice statement on urologic procedures and antimicrobial prophylaxis. *J Urol* 2020; 203: 351. [https://www.auanet.org/guidelines/guidelines/urologic-procedures-and-antimicrobial-prophylaxis-(2019)](https://www.auanet.org/guidelines/guidelines/urologic-procedures-and-antimicrobial-prophylaxis-%282019%29).
* Morrill MY, Schimpf MO, Abed H, et al. Antibiotic prophylaxis for selected gynecologic surgeries. *International Journal of Gynaecology & Obstetrics* 2013;120(1):10-5.
* Mueller E, Fitzgerald J. Intraoperative care and management of lower urinary tract injuries. SGS Video Archives Vimeo channel. 2020. <https://vimeo.com/418470734>
* Murphy M, Olivera C, Wheeler T, et al. Postoperative management and restrictions for female pelvic surgery: a systematic review. *Int Urogynecol J* 2013;24:185-193.
* Newman M, Fleisher L, Ko C, Mythen M, eds. *Perioperative Medicine: Managing for Outcome.* 2nd ed. Philadelphia, PA: Elsivier; 2021. ISBN: 978-0323567244.
* Nichols DH. *Clinical Problems, Injuries and Complications of Gynecologic and Obstetric Surgery.* Delancey JOL, ed. Philadelphia, PA: Lippincott Williams and Wilkins; 1995. ISBN-13: 978-0683064971.
* Rahn DD, Mamik MM, Sanses TV, et al. Venous thromboembolism prophylaxis in gynecologic surgery: Systematic review and practice guidelines. *Obstet Gynecol* 2011;118(5):1111-25
* Robles J, Abraham NE, Brummett C, et al. Rationale and strategies for reducing urologic post-operative opioid prescribing (2021). AUA White Paper. 2021. <https://www.auanet.org/guidelines/guidelines/rationale-and-strategies-for-reducing-urologic-post-operative-opioid-prescribing>
* Smith A, Anders M, Auffenberg G, et al. Optimizing Outcomes in Urologic Surgery: Postoperative. AUA White Paper. 2018. <https://www.auanet.org/guidelines/guidelines/optimizing-outcomes-in-urologic-surgery-postoperative>
* Stoffel, JT, Montgomery JS, Suskind AM, et al. Optimizing outcomes in urological surgery: pre-operative care for the patient undergoing urologic surgery or procedure. AUA White Paper. 2018. <https://www.auanet.org/guidelines/guidelines/optimizing-outcomes-in-urological-surgery-pre-operative-care-for-the-patient-undergoing-urologic-surgery-or-procedure>.
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| **Patient Care 4: Endoscopic Procedures****Overall Intent:** To perform endoscopic procedures safely and efficiently |
| **Milestones** | **Examples** |
| **Level 1** *Prepares patients and equipment for endoscopic procedures* | * Correctly assembles endoscopic equipment
* Appropriately positions patient with pressure points padded and limbs situated ergonomically
* Identifies appropriate bridge/scope/lens to use for specific procedures
 |
| **Level 2** *Performs simple endoscopic procedures* | * Anticipates additional equipment needed for procedure
* Safely performs simple endoscopic procedures such as diagnostic cystoscopy
 |
| **Level 3** Performs complex endoscopic procedures, with supervision | * Anticipates equipment needed for different settings (outpatient versus clinic)
* Safely performs procedures such as botulinum toxin, retrograde pyelography, urethral bulking Placement of ureteral stents, or bladder biopsy with fulguration
 |
| **Level 4** *Independently performs complex endoscopic procedures* | * Independently performs procedures such as those listed in Level 3
 |
| **Level 5** *Independently performs complex endoscopic procedures in altered anatomy* | * Identifies the impact of altered anatomy on endoscopic procedures, including hydronephrosis, duplicated collecting system, or lower urinary tract injury
 |
| Assessment Models or Tools | * Clinical case discussion assessment
* Crowdsourcing assessment of surgical skills
* Direct observation
* End-of-rotation evaluation
* Medical record (chart) audit
* Multisource feedback
* Simulation
* Surgical skills assessment tool
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Simple procedures: diagnostic cystoscopy
* Complex procedures: bladder biopsy with fulguration, bulking agent injection, intravesical botulinum toxin injection, retrograde pyelography, ureteral stent placement
* AUA University. AUA urology core curriculum. <https://auau.auanet.org/core>. 2019.
* AUA University. Surgical video library. <https://auau.auanet.org/node/25250>. 2019.
* Smith D, Preminger G, Badlani GH, Kavoussi LR. *Smith’s Textbook of Endourology*. 4th ed. Hoboken, NJ: Wiley Blackwell; 2019. ISBN:978-1-119-24516-2.
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| **Patient Care 5: Vaginal Procedures****Overall Intent:** To progress from fundamental patient safety to complex surgical techniques |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates basic skills (e.g., positioning, knot tying, suturing)* | * Proficiently performs knot tying and suturing
* Appropriately positions patient to provide access and avoid neurologic injury
* Demonstrates a basic understanding of the relevant anatomy
 |
| **Level 2** *Performs simple vaginal procedures* | * Performs single compartment repair
* Performs anterior or posterior colporrhaphy or perineal repair
 |
| **Level 3** *Performs complex vaginal procedures, with supervision*  | * Performs multi-compartmental repairs
* Performs vaginal hysterectomy and bilateral salpingo-oophorectomy
* Performs culdoplasty
* Performs vaginal apical prolapse procedures
* Performs colpocleisis
 |
| **Level 4** *Independently performs complex vaginal procedures*  | * Independently performs the procedures listed in Level 3
 |
| **Level 5** *Independently performs uncommon complex vaginal procedures* | * Performs transvaginal vesicovaginal fistula repair
* Performs urethrovaginal fistula repair
* Performs rectovaginal fistula repair
* Performs Martius or other flap surgery
* Performs procedures to create a neovagina
 |
| Assessment Models or Tools | * Clinical evaluations
* Direct observation
* Medical record (chart) audit
* Mock oral examination
* Simulation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Simple procedures: anterior colporrhaphy, perineoplasty, posterior colporrhaphy
* Complex procedures: colpocleisis, culdoplasty, paravaginal defect repair sacrospinous ligament fixation, trachelectomy, uterosacral ligament suspension, vaginal enterocele repair, vaginal hysterectomy
* Uncommon procedures: excision of vaginal mesh, graft augmentation of vaginal repair, Martius or other flap, neovagina, rectovaginal fistula repair, urethrovaginal fistula repair, vesicovaginal fistula repair
* Association of Professors of Gynecology and Obstetrics. (APGO). APGO basic clinical skills curriculum: sterile technique, universal precautions, knots and sutures, cervical assessment, vaginal delivery, patient positioning, surgical instruments. <https://tools.apgo.org/educational-resources/basic-clinical-skills/>.Note: requires login.
* APGO. APGO basic clinical skills curriculum: surgical instruments. 2017. <https://tools.apgo.org/wp-content/uploads/2017/06/BCSSurgicalInstruments.pdf>.
* Barber MD, Bradley CS, Karram MM, Walters MD, ed. *Walters and Karram Urogynecology and Reconstructive Pelvic Surgery*. 5th ed. Philadelphia, PA: Elsevier; 2022. ISBN 978-0-323-69783-5.
* Council on Resident Education in Obstetrics and Gynecology (CREOG). Surgical skills curriculum in obstetrics and gynecology. <https://www.acog.org/education-and-events/creog/curriculum-resources/surgical-curriculum>.
* Handa V, Van Le L. *Te Linde’s Operative Gynecology*, 12th ed. Wolters Kluwer; 2019. ISBN: 978-1496386441.
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| **Patient Care 6: Incontinence and Lower Urinary Tract Procedures****Overall Intent:** To progress from fundamental patient safety to complex surgical techniques |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates basic skills*  | * Appropriately positions a patient for surgery to avoid injury
* Performs cystoscopic assessment for bladder perforation
 |
| **Level 2** *Performs simple (uncomplicated) incontinence and lower urinary tract procedures* | * Places midurethral sling
* Optimizes fluoroscopic lead placement for sacral neuromodulation
* Performs sacral neuromodulation Stage 1 or 2 procedures
* Excision or marsupialization of Skene’s gland cyst
* Harvests autologous graft
 |
| **Level 3** *Performs complex incontinence and lower urinary tract procedures, with supervision* | * Transvaginal incision/excision of midurethral sling
* Places fascial sling
* Performs sacral neuromodulation lead revision or lead removal
* Excises non-circumferential urethral diverticulectomy
 |
| **Level 4** *Independently performs complex incontinence and lower urinary tract procedures* | * Independently performs Level 3 examples
 |
| **Level 5** *Independently performs uncommon complex incontinence and lower urinary tract procedures* | * Removes mesh slings through a retropubic or transobturator approach
* Excises circumferential urethral diverticulectomy
* Performs female urethral stricture repair with or without buccal mucosal graft
* Assists in complex urinary reconstruction, including ileal conduit, augmentation, or ureteral reimplant
* Incision/excision of fascial sling
 |
| Assessment Models or Tools | * Case logs
* Direct observation
* End-of-rotation evaluation
* Medical record (chart) audit
* Mock oral examination
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Simple procedures: excision or marsupialization of Skene’s gland cyst, harvests autologous graft for fascial sling, midurethral sling, SNM Stage 1 or 2, urethrolysis
* Complex procedures: midurethral sling excision, non-circumferential urethral diverticulum excision, places fascial sling, SNM lead revision or removal
* Uncommon procedures: assists in complex urinary reconstruction, including ileal conduit, augmentation, or ureteral reimplant, Burch urethropexy, circumferential urethral diverticulum excision, excision of fascial sling, excision of midurethral sling from retropubic space or transobturator space, female urethral stricture repair with or without buccal mucosal graft, Martius or other flap
* Barber MD, Bradley CS, Karram MM, Walters MD, ed. *Walters and Karram Urogynecology and Reconstructive Pelvic Surgery*. 5th ed. Philadelphia, PA: Elsevier; 2022. ISBN 978-0-323-69783-5.Note: Focus on Chapters 16,17, 24, 37, and 38.
* Smith JA, Howards SS, Preminger GM, Dmochowski RR, ed. *Hinman’s Atlas of Urologic Surgery*. 4th ed. Philadelphia: Elsevier; 2019. ISBN: 978-0-323-65565-1.Note: Focus on Chapters 33, 86, 87, 98, 99, 104.
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| **Patient Care 7: Minimally Invasive Procedures (Laparoscopic and Robotic)****Overall Intent:** To competently navigate minimally invasive techniques to provide safe and effective patient care |
| **Milestones** | **Examples** |
| **Level 1** *Assists during minimally invasive procedures* | * Holds camera steadily during laparoscopic procedure
* Efficiently exchanges surgical tools during laparoscopic and robotic procedures
* Maintains correct depth perception and force of tissue manipulation
* Prepares mesh and knows the steps of the procedure
 |
| **Level 2** *Independently performs straightforward portions of procedures*  | * Sutures mesh to vaginal wall during sacral colpopexy
* Performs dissection of anterior and posterior peritoneum
 |
| **Level 3** *Independently performs critical (complex) portions of procedures*  | * Performs sacral dissection
* Manages dissection during post-hysterectomy cases or severe adhesive disease
 |
| **Level 4** *Independently performs entirety of minimally invasive procedures*  | * Independently performs minimally invasive sacrocolpopexy or other apical suspension
* Independently performs minimally invasive ureteral reimplantation
* Manages bleeding, intra-operative complications
* Directs team to help in complex cases, or during complications
 |
| **Level 5** *Independently teaches and supervises complex minimally invasive procedures*  | * Teaches and supervises a minimally invasive sacrocolopexy
 |
| Assessment Models or Tools | * Clinical case assessment
* Crowdsourcing assessment of surgical skills
* Direct observation
* End-of-rotation evaluation
* Global Evaluative Assessment of Robotic Skills
* Multisource feedback
* Simulation
* Surgical skills assessment tool
* Virtual skills simulator
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Barber MD, Visco AG, Walters MD. Surgical treatment of vaginal apex prolapse. In: Barber MD, Bradley CS, Karram MM, Walters MD, ed. *Walters and Karram Urogynecology and Reconstructive Pelvic Surgery*. 5th ed. Philadelphia: Elsevier; 2022. 330-57. ISBN 978-0-323-69783-5.
* Fundamentals of Laparoscopic Surgery. Website. <https://www.flsprogram.org/>. Copyright 2022.
* Partin AW, Dmochowski RR, Kavoussi LR, Peters CA, ed. *Campbell-Walsh-Wein Urology*. 4th ed. Philadelphia: Elsevier; 2021. ISBN: 978-0-323-54642-3.Note: Focus on Chapters 6, 7, and 132.
* Virtual skills simulator
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| **Medical Knowledge 1: Pelvic Floor Anatomy and Physiology****Overall Intent:** To master the understanding of anatomy for diagnostic precision and surgical competence |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates understanding of normal anatomy and physiology of the pelvic floor and pelvic organs**Demonstrates knowledge of surgically relevant normal anatomy* | * Describes normal anatomy of the pelvis and pelvic floor
* Describes levator anatomy
* Describes DeLancey’s three levels of support
* Understands normal position and appearance of relevant anatomy using various imaging modalities (ultrasound, fluoroscopy, MRI, etc.)
* Describes anatomic relationships of important surgical spaces such as presacral space, retropubic space, pararectal space
* Describes the spatial relationship of the ureter to other pelvic structures
 |
| **Level 2** *Recognizes anatomic alteration of common disorders of the pelvic floor and their impact on physiology**Demonstrates knowledge of surgically relevant anatomic variations* | * Reports on likely alterations that contribute to prolapse by understanding Level I-III support, (connective tissue (uterosacral, cardinal, arcus tendineus, pubourethral) as well as neuromuscular (levator avulsions, sulcal tears or neurogenic loss of muscle function))
* Understands that loss of sphincter tone (urethral or anal) can occur alone or in addition to loss of support, leading to incontinence
* Recognizes how prolapse changes spatial relationship of bladder, ureter, and rectum
* Understands anatomic impact of duplicated collecting systems
* Understands differences between imperforate hymen and transverse septum
 |
| **Level 3** *Demonstrates knowledge of the impact of common anatomic abnormalities on normal physiology of the pelvic floor and pelvic organs**With assistance, identifies surgically relevant anatomic variations and alters patient management accordingly* | * Recognizes how high-tone pelvic floor (levator spasm) can interfere with voiding and defecating
* Recognizes how an advanced anterior vaginal wall prolapse can influence emptying
* Understands the impact posterior vaginal wall prolapse may have on defecation
* Understands the role that vulvovaginal atrophy plays in genitourinary syndrome of menopause
* Recognizes the challenges that an android pelvis can have on surgical access and ease
 |
| **Level 4** *Demonstrates knowledge of anatomic alteration of complex and uncommon disorders of the pelvic floor and their impact on physiology**Independently identifies surgically relevant anatomic variations and alters patient management accordingly* | * Identifies anatomic alterations in:
	+ Hirschsprung
	+ Mullerian agenesis
	+ Patients with congenital spinal bifida
	+ Vesicovaginal fistula and rectovaginal fistula, colovaginal fistula
* Adjusts assessments and surgical technique in conditions such as cervical elongation
* Duplicates collecting system; assesses both systems
* Considers how/where previous ureteral reimplantation and/or renal transplants will affect surgical approaches
 |
| **Level 5** *Develops innovative teaching methods for pelvic floor anatomy and physiology**Leads advanced anatomy discussion at a multidisciplinary conference and/or in the operating room* | * Contributes anatomy papers (dissection or imaging) to the literature
* Disseminates information about simulation using low-resolution or high-resolution models
* Leads advanced anatomy discussion at a multidisciplinary conference or in operating room
 |
| Assessment Models or Tools | * Direct observation
* End-of-rotation evaluation
* In training exams
* Medical record (chart) review
* Mock oral examination
 |
| Curriculum Mapping  |  |
| Notes or Resources | * American Board of Obstetrics and Gynecology (ABOG). FPMRS certifying exam preparation: blueprint. <https://www.abog.org/subspecialty-certification/female-pelvic-medicine-and-reconstructive-surgery/certifying-exam/exam-preparation>.
* Barber MD, Bradley CS, Karram MM, Walters MD, ed. *Walters and Karram Urogynecology and Reconstructive Pelvic Surgery*. 5th ed. Philadelphia, PA: Elsevier; 2022. ISBN 978-0-323-69783-5.
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| **Medical Knowledge 2: Urinary Incontinence (UI) and Lower Urinary Tract Symptoms (LUTS)****Overall Intent:** To provide evidence-based, comprehensive medical and surgical care for patients with urinary incontinence and lower urinary tract symptoms |
| **Milestones** | **Examples** |
| **Level 1** *Lists a differential diagnosis for common clinical presentations for UI and LUTS**Lists therapeutic options for common clinical presentations* | * Categorizes commonly reported symptoms and creates a differential diagnosis including urgency, frequency and nocturia with associated overlapping conditions, leak with urge, leak with cough/sneeze/exercise, insensible losses
* Describes non-surgical and surgical treatment options
* Understands treatment algorithm for overactive bladder and stress urinary incontinence
* Identifies that relationship between bowel dysfunction such as constipation or other motility issues and urinary symptoms
 |
| **Level 2** *Provides a comprehensive differential diagnosis for a wide range of clinical presentations for UI and LUTS**Explains effectiveness, risks, and benefits of standard therapeutic options* | * Differentiates stress urinary incontinence symptoms from vaginal discharge and describes how insensible loss could be a symptom of stress urinary incontinence
* Discusses findings suggestive of intrinsic sphincteric dysfunction and the appropriate diagnostic tools
* Describes the advantages and disadvantages of the transobturator approach in a patient with intrinsic sphincteric dysfunction
 |
| **Level 3** *Provides a focused differential diagnosis based on individual patient presentation for UI and LUTS**Justifies the optimal therapeutic option based on individual patient presentation and goals* | * Describes symptoms associated with less common presentation such as postural incontinence, coital incontinence
* Individualizes plan based on patient factors such as goals, prior treatment and anatomic findings including urethral hypermobility
* Identifies and assesses post-operative voiding dysfunction
 |
| **Level 4** *Interprets complex presentations and rare disorders of UI and LUTS**Adapts the therapeutic choice to anomalous or rare patient presentations* | * Identifies fistula as a possible source of stress urinary incontinence symptoms
* Recommends appropriate treatment for the fistula and identifies concerns regarding mesh placement in a patient with fistula or other urethral pathology
* Reevaluates diagnosis and gathers additional data when standard treatments do not result in expected symptom improvement
* Discusses congenital anomalies of the urinary tract that may present as UI
* Mobilizes inter-specialty consultation/collaboration for evaluation and treatment
 |
| **Level 5** *Studies and reports challenging diagnostic presentations of UI and LUTS**Studies new therapeutic options* | * Publishes/presents case report/series on rare presentation
* Delineates a strategy to manage complex incontinence associated with concomitant issues such as neurogenic disease or prior history of pelvic radiation
* Describes complex bowel and bladder symptoms presentations and outlines progressive management and intervention for the combined presentations
 |
| Assessment Models or Tools | * Direct observation
* End-of-rotation evaluation
* In training exams
* Medical record (chart) review
* Mock oral examination
 |
| Curriculum Mapping  |  |
| Notes or Resources | * ACOG/AUGS committee opinion: evaluation of uncomplicated stress urinary incontinence before surgical treatment. *Female Pelvic Med Reconstr Surg* 20(5):[248-251](https://journals.lww.com/fpmrs/toc/2014/09000). <https://journals.lww.com/fpmrs/Abstract/2014/09000/Committee_Opinion__Evaluation_of_Uncomplicated.3.aspx>.
* ACOG/AUGS practice bulletin: urinary incontinence in women. *Female Pelvic Med Reconstr Surg* 21(6):[304-314](https://journals.lww.com/fpmrs/toc/2015/11000). <https://journals.lww.com/fpmrs/Abstract/2015/11000/Urinary_Incontinence_in_Women.3.aspx>.
* AUGS/IUGA joint report on terminology for surgical procedures to treat stress urinary incontinence in women. *Female Pelvic Med Reconstr Surg* [26(3)162-172](https://journals.lww.com/fpmrs/toc/2020/03000). <https://www.augs.org/assets/1/6/Joint_Report_on_Terminology_for_Surgical.2.pdf>.
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* Haylen et al. An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction. *Neurourol Urodyn* 2010;29:4-20.
* Karram M, Dmochowsk R, Gebhart J, Andiman S. Surgical treatment for SUI. SGS Video Archives Vimeo channel. 2020. <https://vimeo.com/437213839>
* Kobashi KC, Albo ME, Dmochowski RR et al. Surgical treatment of female stress urinary incontinence: AUA/SUFU Buideline. *J Urol* 2017;198:875. [https://www.auanet.org/guidelines/guidelines/stress-urinary-incontinence-(sui)-guideline](https://www.auanet.org/guidelines/guidelines/stress-urinary-incontinence-%28sui%29-guideline).
* Nitti V, Ginsberg D, Tarnay C, Winkelman W. Diagnosis and treatment of bladder emptying problems in women. SGS Video Archives Vimeo channel. 2020. <https://vimeo.com/411456066>
* Olivera CK, Meriwether K, El-Nashar S, et al. Non-antinmuscarinic treatment for overactive bladder: a systematic review. *Am J Obstet Gynecol* 2016;215(1):34-37.
* SGS. FPMRS fellow webinar series. <https://www.sgsonline.org/fpmrs-fellow-webinar-series>.
* Stoffel J, Lightner D, Peterson A, et al. Non-neurogenic chronic urinary retention. AUA White Paper. 2016. <https://www.auanet.org/guidelines/guidelines/chronic-urinary-retention>.
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| **Medical Knowledge 3: Fecal Incontinence (FI) and Defecatory Dysfunction (DD) Treatment****Overall Intent:** To provide evidence-based, comprehensive medical and surgical care for patients with fecal incontinence and defecatory dysfunction |
| **Milestones** | **Examples** |
| **Level 1** *Describes the evaluation for FI and DD* | * Describes the components of patient history relevant to fecal incontinence and defecatory dysfunction (e.g., stool descriptors and frequency, fecal incontinence frequency and stool type, history of obstetric anal sphincter injuries, functional bowel disorders, previous treatments)
* Describes indications and interpretation of imaging studies such as defecography, Sitz marker study, or endoanal ultrasound
* Describes indications and interpretation of physiologic studies, i.e., anal manometry
 |
| **Level 2** *Lists a differential diagnosis for common clinical presentations for FI and DD**Lists therapeutic options for common clinical presentations* | * Verbalizes common symptoms associated with common presentations of fecal incontinence such as loss of stool with or without fecal urgency to synthesize a diagnosis
* For a patient with fecal incontinence, lists behavioral, medical, and procedural options such as fiber, physical therapy, loperamide, and sacral neuromodulation
 |
| **Level 3** *Provides a comprehensive differential diagnosis for a wide range of clinical presentations for FI and DD**Explains effectiveness, risks, and benefits of standard therapeutic options* | * Describes types of constipation and treatment options for each
* Describes causes of obstructed defecation and discusses indications for posterior colporrhaphy/enterocele repair/perineoplasty
* Describes impact of obstetric anal sphincter injuries on fecal incontinence symptoms (mechanisms) and indications for anal sphincter repair
* For non-surgical and surgical treatments of AI and DD described in Level 2 examples, discusses mechanism of action, benefits, risks, typical outcomes, and potential complications
 |
| **Level 4** *Provides a focused differential diagnosis based on individual patient presentation for FI and DD**Justifies the optimal therapeutic option based on individual patient presentation and goals* | * Describes the impact of obstetric anal sphincter injuries history, treatment of fecal incontinence, and continence status on delivery planning in future pregnancy
* Discusses impact of medical history on fecal incontinence and DD treatment such as irritable bowel syndrome, inflammatory bowel disease (ulcerative colitis, Crohn’s disease), or pelvic radiation
 |
| **Level 5** *Studies and reports challenging diagnostic presentations of FI and DD**Creates new or modifies existing therapeutic options* | * Publishes/presents case report/series on rare presentation
* Describes complex bladder and bowel symptom clusters and delineates progressive assessment and management thereof
 |
| Assessment Models or Tools | * Direct observation
* End-of-rotation evaluation
* In training exams
* Medical record (chart) review
* Mock oral examination
 |
| Curriculum Mapping  |  |
| Notes or Resources | * ASCRS. Core subjects. Videos. <https://fascrs.org/healthcare-providers/education/core-subjects>.Note: Focus on “Fecal Incontinence” and “Rectovaginal and Rectourethral Fistulas.”
* Bordeianou JG, Carmichael JC, Paquette IM et al. Consensus statement of definitions for anorectal physiology testing and pelvic floor terminology (revised). American Society of Colon and Rectal Surgeons (ASCRS) Clinical Practice Guidelines. 2018. <https://fascrs.org/ascrs/media/files/downloads/Clinical%20Practice%20Guidelines/consensus_statement_of_definitions_for_anorectal-4.pdf>.
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* Richter H, Zyczynski H, Arya L, Hickman L. A case-based approach to understanding the evidence-based management of fecal incontinence. SGS Video Archives Vimeo channel. 2020. <https://vimeo.com/413835119>.
* SGS. FPMRS fellow webinar series. <https://www.sgsonline.org/fpmrs-fellow-webinar-series>.
* Sultan AH, Monga A, Lee J, et al. An International Urogynecological Association/International Continence Society joint report on the terminology for female anorectal dysfunction. *Neurourol Urodyn* 2016. <https://doi.org/10.1002/nau.23055>.
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| **Medical Knowledge 4: Pelvic Organ Prolapse (POP) Treatment** **Overall Intent:** To provide evidence-based, comprehensive medical and surgical care for patients with pelvic organ prolapse |
| **Milestones** | **Examples** |
| **Level 1** *Discusses the pathophysiology and differential diagnosis of POP* | * Describes symptoms associated with presentation: bulge, pressure, and bladder symptoms
* Understands compartment/organ involved in prolapse
* Identifies risk factors for the development of prolapse
 |
| **Level 2** *Using evidence-based medicine, discusses the advantages and disadvantages of diagnostic tests, procedures, and treatments* | * Provides a range of expected symptom improvement (or anatomic) for varied therapeutic choices
* Describes risks associated with POP surgery with or without mesh and non-surgical options, such as pessary
* Understands risks specific to the geriatric/frail patient population
 |
| **Level 3** *Articulates effectiveness, risks, and benefits of therapeutic modalities for straightforward POP* | * Understands the risk of de novo stress incontinence following prolapse repair
* Understands the benefit and risk of native tissue versus graft augmented repairs
* Understands recurrence rates associated with the variety of prolapse repairs and how to appropriately counsel patients
 |
| **Level 4** *Articulates effectiveness, risks, and benefits of therapeutic modalities for complex or atypical POP* | * Understands the challenges and unique potential risks in the treatment of patients with atypical presentations of prolapse, such as spina bifida, perineocele, and mesh complications/exposures
* Understands management of patients with neovaginal prolapse
 |
| **Level 5** *Studies and reports challenging diagnostic presentations and novel management strategies of POP* | * Publishes/presents case report/series on rare presentation
* Develops expertise in management of prolapse and serves as consultant at regional or national level
* Performs mesh research, or effects of mesh on tissue research
* Develops innovative therapies
* Performs systematic research on the prevention, etiology, and treatment of POP
 |
| Assessment Models or Tools | * Direct observation
* End-of-rotation evaluation
* In training exams
* Medical record (chart) review
* Mock oral examination
 |
| Curriculum Mapping  |  |
| Notes or Resources | * ABOG. FPMRS certifying exam preparation: blueprint. <https://www.abog.org/subspecialty-certification/female-pelvic-medicine-and-reconstructive-surgery/certifying-exam/exam-preparation>.
* ACOG/AUS. Joint practice bulletin: pelvic organ prolapse. *Female Pelvic Med Reconstr Surg* [2019;25(6):397-408](https://journals.lww.com/fpmrs/toc/2019/11000). <https://journals.lww.com/fpmrs/Fulltext/2019/11000/Pelvic_Organ_Prolapse.1.aspx>
* Barber MD, Bradley CS, Karram MM, Walters MD, ed. *Walters and Karram Urogynecology and Reconstructive Pelvic Surgery*. 5th ed. Philadelphia, PA: Elsevier; 2022. ISBN 978-0-323-69783-5.Note: Focus on Chapters 5,6,8, and 19-23.
* DeLancey J, Visco A, Handa V, Cox C. Anatomy of Level III: surgery, prolapse, and operative failure. SGS Video Archives Vimeo channel. 2020. <https://vimeo.com/411455891>.
* Kennelly M, Lucente V, Sand P, Merriman A. The science of graft augmented repairs. SGS Video Archives Vimeo channel. 2020. <https://vimeo.com/437213829>.
* Meriwether KV, Gold KP, de Tayrac R, et al. Joint report on terminology for surgical procedures to treat pelvic organ prolapse. *Female Pelvic Med Reconstr Surg* [2020;26(3):173-201](https://journals.lww.com/fpmrs/toc/2020/03000). <https://journals.lww.com/fpmrs/Abstract/2020/03000/Joint_Report_on_Terminology_for_Surgical.3.aspx> or [https://link.springer.com/article/10.1007%2Fs00192-020-04236-1](https://link.springer.com/article/10.1007/s00192-020-04236-1) or <https://www.augs.org/assets/1/6/Joint_Report_on_Terminology_for_Surgical.3.pdf>.
* Rardin C, Roseblatt P, Goldberg R, Winkelman W. Understanding your patient’s medical history: NUP, IVS, RPU, mesh kits. SGS Video Archives Vimeo channel. 2020. <https://vimeo.com/410043400>.
* SGS. FPMRS fellow webinar series. <https://www.sgsonline.org/fpmrs-fellow-webinar-series>.
* SGS. Systematic review group (SRG). Online publications. <https://www.sgsonline.org/systematic-review-group-srg->.Note: Focus on articles relating to prolapses.
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| **Medical Knowledge 5: Urogenital Fistulas (UF) and Urethral Diverticula (UD) Treatment****Overall Intent:** To provide evidence-based, comprehensive medical and surgical care for patients with urogenital fistulas and urethral diverticula |
| **Milestones** | **Examples** |
| **Level 1** *Discusses the pathophysiology and differential diagnosis of UF/UD* | * Discusses the risk factors for urethral carcinoma in UD
* Discusses risk factors for UD (e.g., multiparity, urethral instrumentation) and UF (e.g., obstructed labor, surgery, malignancy, smoking)
* Creates a differential diagnosis for vaginal wall masses
* Includes UD in differential diagnosis for patient presenting with recurrent UTI, dribbling, and/or dyspareunia
* Includes vesicovaginal fistulas (VVF) or uretervaginal fistula (UVF) in differential diagnosis of patient presenting with continuous incontinence
 |
| **Level 2** *Using evidence-based medicine, discusses the advantages and disadvantages of diagnostic tests, procedures, and treatments* | * Discusses the advantages and disadvantages of MRI and ultrasound in UD diagnosis
* Understands the work-up for UVF and VVF including imaging modalities and role for endoscopy
 |
| **Level 3** *Articulates effectiveness, risks, and benefits of therapeutic modalities for straightforward UF/UD* | * Discusses conservative management of fistulas, including risks, benefits, and likelihood of successful management (e.g., stent, foley)
* Explains the surgical steps of simple fistula repairs (i.e., latzko procedure) for management of VVF
* Discusses the surgical steps for repair of a simple diverticulum
* Understands when vaginal vs transabdominal approach for VVF repair is indicated
 |
| **Level 4** *Articulates effectiveness, risks, and benefits of therapeutic modalities for complex or atypical UF/UD* | * Discusses the nuances of the use of fascial sling at time of UD
* Understands the indications for use of a Martius flap
* Describes the surgical approach for complex multiloculated or circumferential UD (i.e., urethral transection)
 |
| **Level 5** *Studies and reports challenging diagnostic presentations of UF and UD* | * Is involved in scholarly activities focused on case series, novel surgical approaches, or review article on UF or UD
 |
| Assessment Models or Tools | * Direct observation
* End-of-rotation evaluation
* In training exams
* Medical record (chart) review
* Mock oral examination
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Barber MD, Bradley CS, Karram MM, Walters MD, ed. *Walters and Karram Urogynecology and Reconstructive Pelvic Surgery*. 5th ed. Philadelphia: Elsevier; 2022. ISBN 978-0-323-69783-5.Note: Focus on Chapters 37 and 38.
* Partin AW, Dmochowski RR, Kavoussi LR, Petersm CA, Wein A. *Campell-Walsh-Wein Urology* Philadelphia, PA: Elsevier; 2020.Note: Focus on Chapter 129 (2924-2963) and Chapter 130 (2964-2992).
* Vasavada S, Smith A, Carmel M, Chang O. Urinary tract fistulas. SGS Video Archives Vimeo channel. 2020. <https://vimeo.com/437213873>
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| **Medical Knowledge 6: Painful Bladder Syndrome (PBS) and Pelvic Floor Dysfunction (PFDys)****Overall Intent:** To provide evidence-based, comprehensive medical and surgical care for patients with painful bladder syndrome and pelvic floor dysfunction |
| **Milestones** | **Examples** |
| **Level 1** *Discusses the pathophysiology and differential diagnosis of PBS/PFDys* | * Develops a differential diagnosis for pelvic pain that identifies bladder, abdominal, vulvar, and pelvic floor etiologies
* Understands the intersection of bladder, bowel, and pelvic floor musculature dysfunction on pelvic pain
 |
| **Level 2** *Using EBM, discusses the advantages and disadvantages of diagnostic tests, procedures, and treatments* | * Understands the role of cystoscopy in PBS
* Discusses limited use of urodynamics in evaluation of PBS
* Discusses the concept of phenotyping of pelvic pain syndromes
* Understands the importance of multimodal and a multidisciplinary approach to patients with PBS
 |
| **Level 3** *Articulates effectiveness, risks, and benefits of therapeutic modalities for straightforward PBS/PFDys* | * Discusses diet and behavioral interventions for PBS
* Explains risks and benefits of hydrodistension for PBS
* Discusses the role of pelvic floor physical therapy and myofascial release in treatment of PBS and PFD
* Discusses the risks and benefits of medications used for treatment of PBS
 |
| **Level 4** *Articulates effectiveness, risks, and benefits of therapeutic modalities for complex or atypical PBS/PFDys* | * Describes efficacy, risks, and benefits of cystectomy for PBS
* Explains role of sacral neuromodulation, hydrodistension with or without fulguration for bladder predominate symptoms in PBS
* Discusses advantages and disadvantages of pelvic floor trigger point injections or botulinum toxin in PFD
 |
| **Level 5** *Studies and reports challenging diagnostic presentations and novel management strategies of PBS/PFDys* | * Presents studies at national and international conferences
* Publishes data as case series or case reports
* Performs clinical study of novel management pathway for PBS
 |
| Assessment Models or Tools | * Direct observation
* End-of-rotation evaluation
* In training exams
* Medical record (chart) review
* Mock oral examination
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Doggweiler R, Whitmore KE, Meijlink JM, et al. A standard for terminology in chronic pelvic pain syndromes: a report from the chronic pelvic pain working group of the International Continence Society. *Neurourol Urodyn* 2016:36(4)984-1008. <https://doi.org/10.1002/nau.23072>.
* Goldman H, Walter A, Abraham N, McAchran S, Gillingham A. Painful bladder syndrome. SGS Video Archives Vimeo channel. 2020. <https://vimeo.com/418516222>.
* Hanno PM, Erickson D, Moldwin R et al. Diagnosis and treatment of interstitial cystitis/bladder pain syndrome: AUA guideline amendment. *J Urol* 2015:193(5)1545-1553. doi: 10.1016/j.juro.2015.01.086. PMID: 25623737.
* Raz S, Rodriguez L, ed. *Female Urology*. 3rd ed. Philadelphia: Elsevier; 2008.Note: Focus on Chapters 14, 78, and 91-92.
* Takacs EB, Kenne KA, Kowalski JT, Bradley CS. Interstitial cystitis/bladder pain syndrome. In: Barber MD, Bradley CS, Karram MM, Walters MD, editors. Walters and Karram Urogynecology and Reconstructive Pelvic Surgery. 5th ed. Philadelphia: Elsevier; 2022. ISBN 978-0-323-69783-5.
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| **Medical Knowledge 7: Urinary Tract Infection (UTI) and Hematuria****Overall Intent:** To provide evidence-based, comprehensive medical and surgical care for patients with urinary tract infection and hematuria |
| **Milestones** | **Examples** |
| **Level 1** *Lists a differential diagnosis for common clinical presentations for UTI and hematuria**Lists therapeutic options for common clinical presentations* | * Verbalizes typical and atypical symptoms of UTI leading to diagnoses such as acute cystitis, pyelonephritis, complicated UTI, recurrent UTI, persistent UTI
* Lists first-line treatments for acute cystitis and appropriate length of treatment
* Lists second-line treatments for acute cystitis and appropriate treatment length
* Lists antibiotic and non-antibiotic prophylaxis options for recurrent lower UTI (rUTI)
 |
| **Level 2** *Provides a comprehensive differential diagnosis for a wide range of clinical presentations for recurrent UTI and hematuria**Explains advantages and drawbacks of standard diagnostic and therapeutic options* | * Understands that symptoms of rUTI can overlap with overactive bladder/urge urinary incontinence (UUI), PBS/interstitial cystitis, genitourinary syndrome of menopause/vaginal atrophy, etc.
* Discusses use of urine testing (dipstick, urinanalysis microscopy, urine culture) and impact of specimen type (voided, clean catch, catheter) on diagnosis of rUTI
* For treatment options listed in Level 1 examples, discusses mechanism of action, benefits, risks, typical outcomes, potential complications
* Understands when to use diagnostic work-up for rUTI and hematuria, including cystoscopy and upper tract imaging
 |
| **Level 3** *Provides a focused differential diagnosis based on individual patient presentation for recurrent UTI and hematuria**Justifies the optimal therapeutic option based on individual patient presentation* | * Defines complicated UTI and evaluates impact of complicating factor/condition on diagnosis and treatment options
* Discusses impact of pelvic organ prolapse (untreated or with pessary in place) on quality of urine specimen and identifies when catheter specimen is indicated
* Discusses continuous, post-coital, and individualized antibiotic prophylaxis regimens for rUTI
* Discusses vaginal estrogen formulations and alternatives to estrogen cream, including use of hormonal treatments in women with a history of gynecological or breast cancers
 |
| **Level 4** *Interprets challenging presentations and rare disorders of recurrent UTI and hematuria**Adapts the therapeutic choice to anomalous or rare patient presentations* | * Discusses inter-specialty consultation (infectious diseases, nephrology, urology) for complex presentations
* Discusses impact of multi-drug resistance on management of rUTI
* Discusses atypical rUTI presentation versus asymptomatic bacteremia in the geriatric population
* Discusses management of rUTI in pregnancy
* Discusses atypical organisms in rUTI (fungal UTI, mycoplasma, ureaplasma, sexually transmitted infections (STIs)
 |
| **Level 5** *Studies and reports challenging diagnostic presentations of recurrent UTI and hematuria**Creates new or modifies existing therapeutic options* | * Discusses microbiome and its effects on lower urinary tract function and dysfunction
* Delineates drug resistance and advanced antimicrobial use
* Identifies antibiotic related complications and implications thereof
* Develops an algorithm to promote antibiotic stewardship
 |
| Assessment Models or Tools | * Direct observation
* End-of-rotation evaluation
* In training exams
* Medical record (chart) review
* Mock oral examination
 |
| Curriculum Mapping  |  |
| Notes or Resources | * ACOG/AUGS Joint Committee Opinion. Asymptomatic microscopic hematuria in women. *Female Pelvic Med Reconstr Surg* 2017;23(4):228-231. <https://journals.lww.com/fpmrs/toc/2017/07000>.
* Anger J, Lee U, Ackerman AL, et al. Recurrent uncomplicated urinary tract Iinfections in women: AUA/CUA.SUFU guideline (2019). Accessed 2019. <https://www.auanet.org/guidelines/guidelines/recurrent-uti>.
* Barocas DA, Boorjian SA, Alvarez RD et al. Microhematuria: AUA/SUFU Guideline[.](https://www.auanet.org/guidelines/guidelines/microhematuria) *J Urol* 2020;204:778. <https://www.auanet.org/guidelines/guidelines/microhematuria>
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* Brubaker L, Carberry C, Nardos R, Carter-Brooks C, Lowder JL. American Urogynecologic Society best practice statement: recurrent urinary tract infection in adult women. *Female Pelvic Med Reconstr Surg* 2018:24(5)321-335. <https://www.augs.org/assets/1/6/American_Urogynecologic_Society_Best_Practice_2.pdf>
* Jeppson PC, Jakus-Waldman S, Yzdany T, et al. AUGS systematic review: microscopic hematuria as a screening tool for urologic malignancies in women. *Female Pelvic Med Reconstr Surg* 2021:27(1)9-15. <https://www.augs.org/assets/1/6/Microscopic_Hematuria_as_a_Screening_Tool_for.4-2.pdf>
* Nihira M, Anger J, Ackerman L, Jackson J. Urinary tract infections. SGS Video Archives Vimeo channel. 2020. <https://vimeo.com/418516232>
* Wolf JS, Bennett CJ, Dmochowski RR, et al. Urologic surgery antimicrobial prophylaxis. American Urological Association. Amended 2012. <https://www.auanet.org/guidelines/archived-documents/antimicrobial-prophylaxis-best-practice-statement>
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| **Medical Knowledge 8: Neurourology and Neurogenic Lower Urinary Tract Dysfunction (NULTD)****Overall Intent:** To provide evidence-based, comprehensive medical and surgical care for patients with neurourology conditions and neurogenic lower urinary tracts dysfunction |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates knowledge of neurophysiology of normal storage and emptying**Lists a differential diagnosis for common clinical presentations and diseases associated with neurogenic lower urinary tract dysfunction* | * Has a good understanding of ranges of: bladder capacity, void frequency, nocturnal urine production
* Distinguishes autonomic contributions to detrusor, sphincters such as sympathetic, parasympathetic
* Understands the somatic contribution
* Understanding of afferent sensory system (c-fibers)
* Describes normal void and storage mechanisms and reflexes/coordination
* Describes a differential diagnosis for symptoms of NULTD, such as sudden onset of urgency incontinence; includes multiple sclerosis, stroke, Parkinson’s disease
* Understands common presenting symptoms of NLUTD, such as abnormal urinary storage or micturition, urgency, frequency, nocturia, and urinary retention/sense of incomplete emptying
 |
| **Level 2** *Demonstrates basic understanding of how congenital or acquired neurologic conditions affect storage and voiding**Provides a comprehensive differential diagnosis for a wide range of clinical presentations for neurogenic lower urinary tract dysfunction* | * Understands how “level” and timing of the neurological insult impact diagnosis
* Assures a comprehensive review of medications to determine potential effects on sympathetic or parasympathetic function
* Identifies the following differential diagnosis that may lead to NULTD: Traumatic brain injury, brain tumors, cerebellar ataxia, normal pressure hydrocephalus, pelvic plexus injury, multiple systems atrophy, spina bifida, cerebral palsy
* Describes more complex clinical presentations including initial urinary retention or detrusor areflexia, acontractile bladder, detrusor sphincter dyssynergia, pseudosphincter dyssynergia, autonomic dysreflexia, poorly compliant bladder
 |
| **Level 3** *Integrates understanding of the pathophysiology of neurologic conditions and pharmacologic management strategies for straightforward clinical conditions**Provides therapeutic options for common clinical presentations, as well as efficacy, risks, and benefits of standard therapeutic options* | * Describes pharmacologic management of NLUTD (Botox, anticholinergic, B-3 agonists)
* Explains the mechanism of action of different medications on lower urinary tract dysfunction
* Understand extent of the patient’s loss in function and the likelihood for progression (e.g., manual dexterity and ability to self-catheterize)
* Describes options for bladder emptying (physical therapy, timed voiding, clean intermittent catheterization)
* Understands when to order urodynamic studies to assess bladder storage and voiding function, and the importance of achieving and maintaining low bladder pressure to avoid urinary tract injury
 |
| **Level 4** *Integrates understanding of the pathophysiology of neurologic conditions and management strategies for complex clinical conditions, with anticipation of the natural history of disease**Adapts the therapeutic choice to complex or rare patient presentations* | * Understands how natural history of a specific disease condition, such as multiple sclerosis, impacts urinary tract management
* Understands how the natural progression of alterations in pathophysiology of the lower urinary tract can impact the upper tracts
* Understands the management of autonomic dysreflexia
* Understands when it is appropriate to surgically treat neurogenic bladder (augmentation cystoplasty, suprapubic tube catheter, sacral neuromodulation)
 |
| **Level 5** *Disseminates new information regarding the etiology of abnormal storage and voiding**Studies and reports challenging diagnostic presentations and management strategies of neurogenic lower urinary tract dysfunction* | * Conducts systematic research in the field of neurourology
* Expands the understanding of neuromodulation
 |
| Assessment Models or Tools | * Direct observation
* End-of-rotation evaluation
* In training exams
* Medical record (chart) review
* Mock oral examination
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Barber MD, Bradley CS, Karram MM, Walters MD, ed. *Walters and Karram Urogynecology and Reconstructive Pelvic Surgery*. 5th ed. Philadelphia, PA: Elsevier; 2022. ISBN 978-0-323-69783-5.
* Gajewski JB, Schurch B, Hamid R, et al. An International Continence Society (ICS) report on the terminology for adult neurogenic lower urinary tract dysfunction (ANLUTD). *Neurourol Urodyn* published online 2017; *Neurourol Urodyn* 2018;37(3):1152-1161. <https://doi.org/10.1002/nau.23397>.
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* Frainey, B, Goldman, HB. Lower Urinary Tract Dysfunction Due To Neurologic Disease. In: Azadi A, Cornella JL, Dwyer PL, Felicia LL. *Ostegard’s Textbook of Urogynecology*. 7th edition. Philadelphia, PA: LWW: 2022 (in press). ISBN: 978-1975162337.
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| **Systems-Based Practice 1: Patient Safety and Quality Improvement****Overall Intent:** To engage in the analysis and management of patient safety events, including relevant communication with patients, families, and health care professionals; to conduct a QI project |
| **Milestones** | **Examples** |
| **Level 1** *Identifies and reports patient safety events**Describes local quality improvement initiatives* | * Lists patient misidentification or medication errors as common patient safety events
* Describes how to report errors in your local environment
* Describes importance of surgical checklist, including time-out
 |
| **Level 2** *Participates in disclosure of patient safety events to patients and their families (simulated or actual)**Participates in local quality improvement initiatives* | * Identifies lack of hand sanitizer dispenser at each clinical exam room may lead to increased infection rates
* Reports breakdowns of sterile processing that could harm patients
* Summarizes protocols resulting in improved antibiotic stewardship
 |
| **Level 3** *Participates in analysis of patient safety events, including formulation and implementation of action (simulated or actual)**Assesses local impact of health care inequities on quality of care* | * Presents patient safety event at morbidity and mortality conference
* Participates in project identifying root cause of retained vaginal packing
 |
| **Level 4** *Demonstrates the skills required to lead disclosure of patient safety events to patients and their families**Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project* | * Collaborates with a multidisciplinary team to analyze and decrease risk of catheter-associated urinary tract infection or surgical site infections
* Designs a local quality improvement project to increase patient compliance or provide additional educational materials for patients
 |
| **Level 5** *Actively engages and leads teams and processes to prevent patient safety events**Creates, implements, and assesses quality improvement initiatives at the institutional or community level* | * Assumes a leadership role at the departmental or institutional level to improve patient safety
* Conducts a simulation for disclosing patient safety events
* Designs a regional or national quality improvement project for management of complications related to pelvic floor disorders
 |
| Assessment Models or Tools | * Direct observation
* E-module multiple choice tests
* Local patient safety event reporting
* Medical record (chart) audit
* Multisource feedback
* Resident portfolio
* Simulation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * AUA. Quality Improvement Summit. <https://www.auanet.org/education/educational-calendar/quality-improvement-summit>. Accessed 2019.
* AUA University. AUA Urology Core Curriculum. [https://auau.auanet.org/core. Accessed 2019](https://auau.auanet.org/core.%20Accessed%202019).
* Institute of Healthcare Improvement. <http://www.ihi.org/Pages/default.aspx>. Accessed 2019.
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| **Systems-Based Practice 2: System Navigation for Patient-Centered Care****Overall Intent:** To effectively navigate the health care system, including the interdisciplinary team and other care providers; to adapt care to a specific patient population to ensure high-quality patient outcomes |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates knowledge of care coordination and community health needs**Performs safe and effective transitions of care/hand-offs in routine clinical situations* | * For a patient with recurrent multi-drug resistant UTI, identifies that care is delivered through multidisciplinary team members
* Identifies that patient with different backgrounds may have different needs
* Lists the essential components of sign-out, care transition and hand-offs
 |
| **Level 2** *Coordinates multidisciplinary care of patients in routine clinical situations, considering inequities for their local population**Performs safe and effective transitions of care/hand-offs in complex clinical situations* | * Appropriately coordinates translation services for patients and provides patient materials that are sensitive to patient background
* Routinely uses sign-out effectively for a stable patient
 |
| **Level 3** *Coordinates multidisciplinary care of patients in complex clinical situation and incorporates local resources into the plan**Supervises safe and effective transitions of care/hand-offs of more junior learners* | * Coordinates a plan with the social worker to initiate home health care for patients with complicated wound care
* Works with patients to provide affordable medications and treatments
* Supervises safe hand-offs when transferring a patient to the intensive care unit (ICU)
 |
| **Level 4** *Leads care coordination of patients with barriers or other inequities in care**Resolves conflicts in transitions of care between teams* | * Leads coordination of care for patients without insurance or means to access care
* Effectively manages times when volume of work outpaces available resources
 |
| **Level 5** *Designs innovative care coordination strategies for populations with health care inequities**Leads in the design and implementation of improvements to transitions of care* | * Develops a telemedicine pilot to improve access to care
* Develops a protocol to improve transitions to long-term care facilities
 |
| Assessment Models or Tools | * Direct observation
* Medical record (chart) audit
* Multisource feedback
* Observed structured clinical examination
* Review of sign-out tools, use and review of checklists
* Rotation evaluation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * CDC. Population Health Training in Place Program (PH-TIPP). <https://www.cdc.gov/pophealthtraining/whatis.html>. 2019.
* Kaplan KJ. In pursuit of patient-centered care. TissuePathology.com website. Published March 29, 2016. <http://tissuepathology.com/2016/03/29/in-pursuit-of-patient-centered-care/#axzz5e7nSsAns>. Accessed 2019.
* Skochelak SE, Hawkins RE, Lawson LE, Starr SR, Borkan JM, Gonzalo JD. *AMA Education Consortium: Health Systems Science*. 1st ed. Philadelphia, PA: Elsevier; 2016. <https://commerce.ama-assn.org/store/ui/catalog/productDetail?product_id=prod2780003>. Accessed 2019. 2019.
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| **Systems-Based Practice 3: Physician Role in Health Care Systems****Overall Intent:** To understand the physician’s role in the complex health care system and how to optimize the system to improve patient care and health system performance |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates basic administrative skills for effective transition to practice* | * Identifies that notes must meet coding requirements, e.g., information technology skills, billing and coding knowledge, understanding of risk management, supervision of more junior learners in administrative tasks
 |
| **Level 2** *Demonstrates advanced use of information technology required for medical practice* | * Uses appropriate documentation to capture patient complexity, e.g., documentation for billing and coding, electronic health record (EHR) facility including use of smart phrases/templates
 |
| **Level 3** *Discusses how individual practice affects the broader system performance* | * Recognizes the importance of timely discharge processes on hospital length of stay and access to care for other patients
* Explains that ordering extraneous tests or use of unnecessary supplies in the operating room impact overall health care costs
 |
| **Level 4** *Describes core administrative knowledge needed for transition to independent practice* | * Incorporates value-based principles in managing patients
* Identifies ancillary services necessary for a new practice
* Understands requirements for privileging for at different institutions (e.g., robotic surgery, hysterectomy, stents)
 |
| **Level 5** *Analyzes individual independent practice patterns and professional requirements in preparation for practice* | * Leads a practice management conference for residents
* Provides a lecture on payment models
 |
| Assessment Models or Tools | * Direct observation
* Medical record (chart) audit
* Multisource feedback
* Rotation evaluation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Agency for Healthcare Research and Quality (AHRQ).Measuring the Quality of Physician Care. <https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/physician/challenges.html>. Accessed 2019.
* AHRQ. Major physician performance sets. <https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/physician/measurementsets.html>. Accessed 2019.
* American Board of Internal Medicine (ABIM). QI/PI activities. <http://www.abim.org/maintenance-of-certification/earning-points/practice-assessment.aspx>. Accessed 2019.
* The Commonwealth Fund.Health System Data Center. <http://datacenter.commonwealthfund.org/?_ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1>. Accessed 2019.
* The Commonwealth Fund. Health Reform Resource Center. <http://www.commonwealthfund.org/interactives-and-data/health-reform-resource-center#/f:@facasubcategoriesfacet63677=[Individual%20and%20Employer%20Responsibility>. Accessed 2019.
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* The Kaiser Family Foundation. Health reform. <https://www.kff.org/topic/health-reform/>. Accessed 2019.
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| **Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice****Overall Intent:** To incorporate evidence and patient values into clinical practice |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates how to access available evidence* | * Identifies evidence-based guidelines and or algorithms for conditions, e.g., hematuria assessment
 |
| **Level 2** *Articulates clinical questions to guide evidence-based care* | * Understands and formulates clinical questions in the assessment of patients with pelvic floor disorders
 |
| **Level 3** *Integrates best available evidence with patient preferences to guide care* | * Obtains, discusses, and applies evidence for the treatment of prolapse
 |
| **Level 4** *Tailors patient care in the setting of conflicting or absent evidence* | * Accesses and applies available literature, and evaluates and considers value of other resources when formulating a treatment plan for compound colo-uterine-vesical fistula
 |
| **Level 5** *Coaches others to critically appraise and apply evidence for patients with complex conditions* | * Leads clinical teaching on application of best practices in critical appraisal of robotic surgical approach for colo-uterine-vesical fistula with vertical rectus abdominis musculocutaneous (VRAM) flap
* As part of a team, develops pain management pathways to decrease opioid use
 |
| Assessment Models or Tools | * Direct observation
* EHR review
* In-service examinations
* Mock oral examinations
* Presentation evaluation
* Rotation evaluations
 |
| Curriculum Mapping  |  |
| Notes or Resources | * National Institutes of Health. US National Library of Medicine. PubMed Tutorial. <https://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html>. Accessed 2019.
* AUA. Guidelines. <https://www.auanet.org/guidelines>. Accessed 2019.
* AUA University. Update series volume. <https://auau.auanet.org/courses/published?title=Update%20Series%20Volume&order=title&sort=desc>. Accessed 2019.
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| **Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth****Overall Intent:** To seek clinical performance information with the intent to improve care; to reflect on all domains of practice, personal interactions, and behaviors, including impact on colleagues and patients; to develop clear goals and objectives for improvement |
| **Milestones** | **Examples** |
| **Level 1** *Identifies gap(s) between expectations and actual performance**Establishes goals for personal and professional development* | Seeks feedback from patients, families, and patient care team members* Incorporates evaluations from nursing, patients, peers, and faculty to identify opportunities for improvement
* Regularly logs procedure and cases and identifies areas of lower-case volumes and participates in developing a plan to improve low volume procedures
* Sets a SMART (Specific, Measurable, Attainable, Realistic, and Time-bound) personal practice goal of improving knowledge of a given item in any of the Medical Knowledge subcompetencies
* Sets a personal practice goal of documenting POP-Q in patients presenting with concerns regarding pelvic organ prolapse
 |
| **Level 2** *Analyzes and reflects on the factors that contribute to gap(s) between expectations and actual performance**Identifies opportunities for performance improvement; designs a learning plan* | * Identifies the impact of personal fitness for duty on surgical skills
* Integrates feedback to adjust the documentation of POP-Q in the evaluation of patients with pelvic organ prolapse
* Assesses time-management skills and how it impacts timely completion of clinic notes and literature reviews
* When prompted, develops a longitudinal education plan to improve their evaluation of a given item in any of the Medical Knowledge subcompetencies
* Identifies time management skills as a contributing factor to performance, and makes a detailed plan for more timely completion of indicated screening and completion of clinic notes
* When prompted, develops individual education plan to improve their evaluation of given item in any of the Medical Knowledge subcompetencies
* Identifies specific knowledge base deficits and develops a detailed, structured reading plan over a six-month period
 |
| **Level 3** *Institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance**Integrates practice data and feedback with humility to implement a learning plan* | * Uses standardized assessment tools to inform refinement of surgical technique
* Completes a focused literature review prior to patient encounters
* Incorporating feedback, creates a personal curriculum to improve own evaluation of a given item in any of the Medical Knowledge subcompetencies
* Completes a literature review prior to patient encounters
* Develops calendar reminder to review patients’ pathology results one week following surgical procedures
* Does a chart audit to determine the percent of patients presenting with pelvic organ prolapse and documentation of POP-Q
 |
| **Level 4** *Continuously reflects on remaining gaps and institutes behavioral adjustments to narrow them**Uses performance data to measure the effectiveness of the learning plan and adapts when necessary* | * Routinely records own robotic procedures to analyze and improve technical skills
* Routinely debriefs with the attending and other team members to optimize patient care
* Solicits patient feedback on newly implemented screening tools
* After patient encounter, debriefs with the attending and other patient care team members to optimize future collaboration in the care of the patient and family
* Performs a self-directed chart audit of their evaluation of a given item in any of the Medical Knowledge subcompetencies
* Completes a quarterly chart audit to ensure documentation of POP-Q
 |
| **Level 5** *Coaches others on reflective practice**Coaches others in the design and implementation of learning plans* | * Leads others through a reflective practice cycle
* Models practice improvement and adaptability
* Develops educational module for collaboration with other patient care team members
* Assists other residents and students in developing their individualized learning plans
 |
| Assessment Models or Tools | * 360-degree evaluations
* Direct observation
* Clinical evaluations
* Chart reviews
* End-of-rotation evaluations
* In-service examinations
* Mock oral examination
* Patient care ratings
* Review of learning plan
* Reflective Ability Rubric
* Semi-annual evaluations
* Simulation
* Video review
 |
| Curriculum Mapping  |  |
| Notes or Resources | * AUA University. Update series volume. <https://auau.auanet.org/courses/published?title=Update%20Series%20Volume&order=title&sort=desc>. Accessed 2019.
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| **Practice-Based Learning and Improvement 3: Scholarly Activity****Overall Intent:** To identify areas worthy of investigation, design and implement a plan for investigation, and disseminate the findings of scholarly work |
| **Milestones** | **Examples** |
| **Level 1** *Identifies potential topics for a scholarly project for which gaps in evidence exist* | * In small group settings, identifies unanswered questions clearly in the subspecialty field, derived from prior literature or prior unpublished projects; expresses interest in pursuing greater understanding or closing the gap in knowledge; chooses a primary mentor
 |
| **Level 2** *Develops specific questions/aims that can be measured in the scholarly project* | * Generates well-crafted and measurable research questions; presents an “elevator speech” related to their proposed project to people inside and outside of subspecialty, including the lay public; possibly submits proposal for potential funding; submits a proposal and receives approval by the Institutional Review Board (IRB) or IACUC
 |
| **Level 3** *Using appropriate design and methods, collects and analyzes data for the scholarly project* | * Chooses appropriate research design; collects and organizes data; applies correct analytic and statistical techniques to provide initial answers and new questions to be considered. Individually or with research team
 |
| **Level 4** *Completes and defends the scholarly project* | * Summarizes findings in a formal presentation; fields relevant questions; completes a thesis/manuscript of findings describing why and how the project was done; compares findings to others; describes strengths and limitations of project and findings
 |
| **Level 5** *Widely disseminates the scholarly project* | * Received funding for the completed project
* Publishes in peer-reviewed literature
* Establishes a scholarly niche that will go beyond training
 |
| Assessment Models or Tools | * Assessment of quality of presentations and/or research
* Assessment of quality of publications, protocols, and/or grants
* Direct observation
* Portfolio
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Blome C, Sondermann H, Augustin M. Accepted standards on how to give a medical research presentation: A systematic review of expert opinion papers. GMS Journal for Medical Education. 2017;34(1):Doc11. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5327661/. 2021.
* National Cancer Institute (NIH). Clinical Trials Information for Patients and Caregivers. https://www.cancer.gov/about-cancer/treatment/clinical-trials. 2021.
* Schünemann HJ, Wiercioch W, Brozek J, et al. GRADE Evidence to Decision (EtD) frameworks for adoption, adaption, and de novo development of trustworthy recommendations: GRADE-ADOLOPMENT. Journal of Clinical Epidemiology. 2017;81:101-110. https://www.jclinepi.com/article/S0895-4356(16)30482-6/fulltext. 2021.
 |
| **Professionalism 1: Professional Behavior and Ethical Principles****Overall Intent:** To recognize and address lapses in ethical and professional behavior, demonstrate ethical and professional behaviors, and use appropriate resources for managing ethical and professional dilemmas |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates professional behavior in routine situations and knows how to report professionalism lapses**Demonstrates knowledge of ethical principles underlying shared decision-making and patient confidentiality* | * Understands that substance abuse impairs judgment
* Can explain the institutional process for reporting impaired physicians
* Knows how to access appropriate graduate medical education (GME) resources and other hospital employee assistance programs
* Recognizes and respects the importance of confidentiality in the sign-out process
* Respects patient autonomy by not performing unnecessary procedures for learning purposes
 |
| **Level 2** *Demonstrates insight into personal triggers for professionalism lapses; develops mitigation strategies**Analyzes straightforward situations using ethical principles* | * Is punctual to assigned clinical and educational duties
* Ensures adequate sleep before a complex surgery
* Conveys discomfort when performing unfamiliar tasks and declines to continue without supervision
 |
| **Level 3** *Demonstrates professional behavior in complex or stressful situations**Seeks help in managing and resolving complex ethical situations* | * Appropriately responds to a distraught patient or family member following an adverse outcome
* After noticing a colleague’s inappropriate social media post, reviews policies related to posting of content, and seeks guidance
 |
| **Level 4** *Recognizes and intervenes in situations to prevent professionalism lapses in oneself and others**Recognizes and uses appropriate resources for managing and resolving ethical dilemmas (e.g., ethics consultations, literature review)* | * Proactively assumes tasks of a fellow or resident who is fatigued to ensure they can get adequate rest
* Advocates for members of the care team when implicit or explicit bias is witnessed
* Manages a near miss or sentinel event (e.g., getting risk management, legal consultations)
* Recognizes and manages situations of medical futility
 |
| **Level 5** *Coaches others when their behavior fails to meet professional expectations**Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution* | * Develops a peer coaching program to guide others when behavior fails to meet professional expectations, and creates a performance improvement plan to prevent recurrence
* Partners with program director to design and implement vendor interaction policy
 |
| Assessment Models or Tools | * Direct observation
* Mock oral examination or written self-reflection
* Multisource feedback
* Rotation evaluation
* Simulation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * American Medical Association. Ethics. <https://www.ama-assn.org/delivering-care/ama-code-medical-ethics>. Accessed 2019.
* ACOG. Code of professional ethics. *Obstetrics & Gynecology* September 2003;102(3): 663-667. <https://journals.lww.com/greenjournal/abstract/2003/09000/code_of_professional_ethics_of_the_american.59.aspx>
* ACOG. Committee opinion 683:behavior that undermines a culture of safety. January 2017. <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2017/01/behavior-that-undermines-a-culture-of-safety>
* ACOG. Committee opinion 791: professional use of digital and social media. October 2019. <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2019/10/professional-use-of-digital-and-social-media>.
* AUA. Code of Ethics. <https://www.auanet.org/myaua/aua-ethics/code-of-ethics>. Accessed 2019.
* Byyny RL, Papadakis MA, Paauw DS. *Medical Professionalism Best Practices*. Menlo Park, CA: Alpha Omega Alpha Medical Society; 2015. <https://alphaomegaalpha.org/pdfs/2015MedicalProfessionalism.pdf>. Accessed 2019.
* Levinson W, Ginsburg S, Hafferty FW, Lucey CR. *Understanding Medical Professionalism*. 1st ed. New York, NY: McGraw-Hill Education; 2014.
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| **Professionalism 2: Accountability/Conscientiousness****Overall Intent:** To take responsibility for one’s own actions and the impact on patients and other members of the health care team |
| **Milestones** | **Examples** |
| **Level 1** *Takes responsibility for failure to complete tasks and responsibilities, identifies potential contributing factors, and describes strategies for ensuring timely task completion in the future* | * Acknowledges that end-of-rotation evaluations were not completed
* Responds promptly to reminders from program administrator to complete work hour logs and case logs
 |
| **Level 2** *Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations and recognizes situations that may impact one’s ability to accomplish this* | * Completes administrative tasks such as annual Health Insurance Portability and Accountability (HIPAA) modules or licensing requirements by specified due date
* Before going out of town, completes tasks in anticipation of lack of computer access while traveling
 |
| **Level 3** *Performs tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations and proactively implements strategies to accomplish this* | * Notifies attending of multiple competing demands on call, appropriately triages tasks, and asks for assistance from other residents or faculty members as needed
* In preparation for being out of the office, arranges coverage for assigned clinical tasks on patients and ensures appropriate continuity of care
 |
| **Level 4** *Recognizes situations that may impact others’ ability to complete tasks and responsibilities in a timely manner and proposes solutions* | * Takes responsibility for inadvertently omitting key patient data requiring follow-up during sign-out and professionally discusses with the patient, family and interprofessional team
 |
| **Level 5** *Develops systems to ensure the best possible care of patients, including prioritizing tasks and mitigating burnout* | * Sets up a meeting with the nurse manager to streamline patient discharges and leads team to find solutions to the problem
* Supervises and mentors more junior fellows or residents, assisting with prioritization of clinical tasks to achieve completion in safest, most efficient manner
* Working with nursing mangers to rectify systems-based issues
 |
| Assessment Models or Tools | * Compliance with deadlines and timelines
* Direct observation
* Global evaluations
* Multisource feedback
* Self-evaluations and reflective tools
* Simulation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * ACOG Code of Professional Ethics <https://journals.lww.com/greenjournal/abstract/2003/09000/code_of_professional_ethics_of_the_american.59.aspx>
* Code of conduct from fellow/resident institutional manual
* Expectations of residency program regarding accountability and professionalism
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| **Professionalism 3: Well-Being and Awareness** **Overall Intent:** To identify and mitigate personal and professional stressors that affect well-being of self and others |
| **Milestones** | **Examples** |
| **Level 1** *Recognizes status of personal and professional well-being, with assistance* | * Acknowledges own response to patient’s adverse outcome
* Completes a well-being questionnaire
 |
| **Level 2** *Independently recognizes status of personal and professional well-being* | * Independently identifies and communicates impact of a personal family tragedy
 |
| **Level 3** *With assistance, proposes a plan to optimize personal and professional well-being* | * After meeting with mentor, reflects and develops a strategy to address the personal impact of difficult patient encounters
 |
| **Level 4** *Independently develops a plan to optimize personal and professional well-being* | * Independently identifies and engages in ways to manage personal stress and mitigate burnout
 |
| **Level 5** *Recognizes risk to well-being and offers support when others’ l responses or performance do not meet professional expectations* | * Reaches out to a team member who appears to be struggling and offers resources and guidance
 |
| Assessment Models or Tools | * Direct observation
* Group discussions
* Individual interview or meeting with mentor
* Rotation evaluation
* Self-assessment and personal learning plan
* Semi-annual review
 |
| Curriculum Mapping  |  |
| Notes or Resources | * This subcompetency is not intended to evaluate a fellow’s well-being. Rather, the intent is to ensure that each fellow has the fundamental knowledge of factors that affect well-being, the mechanisms by which those factors affect well-being, and available resources and tools to improve well-being.
* Local resources, including Employee Assistance programs and online training modules
* ACGME. “Well-Being Tools and Resources.” https://dl.acgme.org/pages/well-being-tools-resources. Accessed 2022.
* National Academy of Medicine Action Collaborative on Clinician Well-being and Resilience <https://nam.edu/initiatives/clinician-resilience-and-well-being/>
* AMA. Physician Well-being. <https://www.ama-assn.org/topics/physician-well-being>. Accessed 2019.
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| **Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication****Overall Intent:** To deliberately use language and behaviors to form constructive relationships with patients, to identify communication barriers including self-reflection on personal biases, and minimize them in the doctor-patient relationships; organize and lead communication around shared decision making |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates respect and establishes rapport with patients and their families**Communicates with patients and their families in an understandable and respectful manner* | * Introduces self as a fellow and discusses the fellow’s role in the health care team
* Identifies potential challenges for communication due to language, disability, health care literacy, etc.
 |
| **Level 2** *Establishes a therapeutic relationship in straightforward encounters**Identifies barriers to effective communication* | * Avoids medical jargon and restates patient perspective when discussing plan of care
* Prioritizes and sets agenda at the beginning of the appointment for a new patient with chronic pelvic floor pain
* Recognizes the differences to how patient absorb knowledge, such as the need for handouts with diagrams and pictures and electronic resources and videos to communicate information
* Uses situational awareness to address potential challenges for communication due to language, disability, health care literacy etc.
 |
| **Level 3** *Establishes a therapeutic relationship in challenging encounters**When prompted, reflects on personal biases while attempting to minimize communication barriers* | * Acknowledges patient’s request for diagnostic testing in the absence of clear clinical indication
* Participates in a family meeting to set goal of treatment for multi-drug resistant UTI, and overactive bladder, etc.
* In a discussion with the faculty member, acknowledges discomfort in caring for a patient who is non-compliant
 |
| **Level 4** *Facilitates difficult discussions with patients and their families**Independently recognizes personal biases while attempting to proactively minimize communication barriers* | * Continues to engage family members to determine goals of care, aligned with the patient’s values, using patient and family input, such as a patient with dementia or underlying psychiatric conditions
* Reflects on personal bias of a patient’s personal decisions that directly impact their clinical condition (e.g., smoking) and solicits input from faculty about overcoming these biases
 |
| **Level 5** *Mentors others in situational awareness and critical self-reflection**Coaches others in the facilitation of crucial conversations* | * Leads a discussion group on negative personal experience or burnout
* Develops a curriculum on social justice that addresses unconscious bias
* Serves on a hospital bioethics committee
 |
| Assessment Models or Tools | * Direct observation
* Kalamazoo Essential Elements Communication Checklist (Adapted)

 Self-assessment including self-reflection exercises* Skills needed to Set the state, Elicit information, Give information, Understand the patient, and End the encounter (SEGUE)
* Multisource feedback
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Laidlaw A, Hart J. Communication skills: An essential component of medical curricula. Part I: Assessment of clinical communication: AMEE Guide No. 51. *Med Teach* 2011;33(1):6-8. <https://www.tandfonline.com/doi/abs/10.3109/0142159X.2011.531170?journalCode=imte20>. Accessed 2021.
* Makoul G. Essential elements of communication in medical encounters: the Kalamazoo consensus statement. *Acad Med* 2001;76(4):390-393. <https://journals.lww.com/academicmedicine/Fulltext/2001/04000/Essential_Elements_of_Communication_in_Medical.21.aspx>. Accessed 2021.
* Makoul G. The SEGUE Framework for teaching and assessing communication skills. *Patient Educ Couns* 2001;45(1):23-34. <https://www.sciencedirect.com/science/article/abs/pii/S0738399101001367?via%3Dihub>. Accessed 2021.
* Symons AB, Swanson A, McGuigan D, Orrange S, Akl EA. A tool for self-assessment of communication skills and professionalism in residents. *BMC Med Educ* 2009;9:1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2631014/>. Accessed 2021.
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| **Interpersonal and Communication Skills 2: Patient Counseling and Shared Decision Making****Overall Intent:** To demonstrate the ability/role to explain treatments and alternatives to patients and help them choose treatment options that best aligns with their preferences as well as their unique cultural and personal beliefs |
| **Milestones** | **Examples** |
| **Level 1** *Answers questions about the treatment plan and seeks guidance when appropriate* | * Discusses post-operative pain management and expected healing process
* Informs patients of side effect profile of medications
 |
| **Level 2** *Counsels patients through the decision-making process, including answering questions, for simple clinical problems* | * Counsels patients regarding risks and benefits of treatment of index patients (stress urinary incontinence only, single-compartment POP)
* Discusses with patients third-line therapies for medication refractory overactive bladder including risks and benefits
 |
| **Level 3** *Counsels patients through the decision-making process, including answering questions, for complex clinical problems* | * Counsels patients regarding risks and benefits of treatment with complex pelvic floor disorders (e.g., multi-compartment POP, mixed urinary incontinence (MUI))
* Counsels patient on recommendation for anti-incontinence procedure at the time of POP repair
 |
| **Level 4** *Counsels patients through the decision-making process, including answering questions, for uncommon clinical problems* | * Counsels patient through decision-making process for unexpected post-operative complications
* Counsels patient through decision-making process for treatment of fistulas or diverticulum
 |
| **Level 5** *Coaches others in patient counseling and the shared decision-making process* | * Leads case-based teaching conferences for resident education
 |
| Assessment Models or Tools | * Chart – stimulated recall
* Direct observation
* Global assessment
* Medical record (chart) audit
* Multisource feedback
* Simulation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Alston C, Berger Z, Brownlee S, et al. Shared decision-making strategies for best care: Patient decision aids. *NAM Perspectives* Discussion Paper, National Academy of Medicine, Washington DC; 2014. <https://nam.edu/perspectives-2014-shared-decision-making-strategies-for-best-care-patient-decision-aids/>. Accessed 2021.
* Elwyn G, Frosch D, Thomson R, et al. Shared decision making: A model for clinical practice. *J Gen Intern Med* 2012;27(10):1361-7. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3445676/>. Accessed 2021.
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| **Interpersonal and Communication Skills 3: Interprofessional and Team Communication****Overall Intent:** To effectively communicate with the health care team, including consultants, in both straightforward and complex situations |
| **Milestones** | **Examples** |
| **Level 1** *Communicates in an approachable and productive manner to facilitate teamwork* | * Communicates clearly with office or operating room staff members about equipment needed for planned procedures
 |
| **Level 2** *Integrates contributions from interprofessional team members and health care team members into the care plan* | * Acknowledges the need for multidisciplinary consults in a patient with complex presentations
* Incorporates other services recommendations (e.g., pelvic floor physical therapy, colorectal surgery) findings following initial consultation to adjust or inform treatment plan
 |
| **Level 3** *Actively recognizes and mitigates communication barriers and biases with members of the health care team* | * Uses closed-loop communication with team members
* Anticipates potential concerns in pre-operative time out and post-operative debrief
 |
| **Level 4** *Leads and coordinates recommendations from multidisciplinary members of the health care team* | * Leads conversations between colorectal and plastics for complex pelvic floor reconstructive patient’s pre-operative planning
* Leads multidisciplinary case conferences integrating recommendations from services into a treatment plan
 |
| **Level 5** *Leads a communication process* | * Mediates a conflict resolution between different members of the health care team, solicits other team member’s opinions when making clinical decisions
* Teaches advanced communication skills (e.g., TEAM STEPPS, daily huddles)
* Leads a debrief after adverse event in a procedural area
 |
| Assessment Models or Tools | * Direct observation
* Global assessment
* Medical record (chart) audit
* Multisource feedback
* Simulation
 |
| Curriculum Mapping  |  |
| Notes or Resources | * Braddock CH, Edwards KA, Hasenberg NM, Laidley TL, Levinson W. Informed decision making in outpatient practice: Time to get back to basics. *JAMA* 1999;282:2313-2320. <https://jamanetwork.com/journals/jama/fullarticle/192233>. Accessed 2021.
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* François, J. Tool to assess the quality of consultation and referral request letters in family medicine. *Can Fam Physician* 2011;57(5):574–575. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093595/>. Accessed 2021.
* Green M, Parrott T, Cook G. Improving your communication skills. *BMJ* 2012;344:e357 <https://www.bmj.com/content/344/bmj.e357>. Accessed 2021.
* Henry SG, Holmboe ES, Frankel RM. Evidence-based competencies for improving communication skills in graduate medical education: A review with suggestions for implementation. *Med Teach* 2013;35(5):395-403. <https://www.tandfonline.com/doi/abs/10.3109/0142159X.2013.769677?journalCode=imte20>. Accessed 2021.
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* Roth CG, Eldin KW, Padmanabhan V, Freidman EM. Twelve tips for the introduction of emotional intelligence in medical education. *Med Teach* 2018;21:1-4. <https://www.tandfonline.com/doi/abs/10.1080/0142159X.2018.1481499?journalCode=imte20>. Accessed 2021.
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| **Interpersonal and Communication Skills 4: Communication within Health Care Systems****Overall Intent:** To effectively communicate using a variety of methods |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates organized diagnostic and therapeutic reasoning through notes in the patient record* | * Documents discussion and clinical decision making
* Effectively uses EHR to optimize patient care
 |
| **Level 2** *Concisely reports diagnostic and therapeutic reasoning in the patient record* | * Reviews past notes and outside information and summarizes the information succinctly
* Organized and accurate documentation outlines clinical reasoning that supports the treatment plan
* Creates accurate, original notes that do not contain extraneous information and concisely summarizes the assessment and plan
 |
| **Level 3** *Appropriately and efficiently uses the electronic health record for varied types of communication* | * Efficiently uses multiple modes of communication for delegation of tasks to administrative support staff and nursing
* Responsibly completes tasks within the EHR (I.e., closes encounters, efficient inbox management)
 |
| **Level 4** *Efficiently communicates in an organized fashion that includes contingency plans* | * Creates consistently accurate, organized, and concise documentation, and frequently incorporates anticipatory guidance
* Creates exemplary notes that are used as an example when teaching learners
 |
| **Level 5** *Guides departmental or institutional communication around medical informatics* | * Leads a task force established by the hospital QI committee to develop a plan to improve house staff hand-off checklists
* Mentors/coaches colleagues how to improve clinical notes, including terminology, billing compliance, conciseness, and inclusion of all required elements
* Develops and implements MyChart/EHR-based questionnaire for relevant history and review of systems items for patients to complete prior to first outpatient office visit
* Creates a policy around HIPAA-compliant electronic communication (e.g., texting)
 |
| Assessment Models or Tools | * Direct observation
* Medical record audit
* Multisource feedback
 |
| Curriculum Mapping  |  |
| Notes or Resources | * ACOG. Committee opinion 587: effective patient-physician communication. February 2014. <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2014/02/effective-patient-physician-communication>. Accessed 2021.
* Haig KM, Sutton S, Whittington J. SBAR: A shared mental model for improving communication between clinicians. *Jt Comm J Qual Patient Saf* 2006;32(3):167-175. [https://www.jointcommissionjournal.com/article/S1553-7250(06)32022-3/fulltext](https://www.jointcommissionjournal.com/article/S1553-7250%2806%2932022-3/fulltext). Accessed 2021.
 |

To help programs transition to the new version of the Milestones, the ACGME has mapped the original Milestones 1.0 to the new Milestones 2.0. Indicated below are where the subcompetencies are similar between versions. These are not exact matches but are areas that include similar elements. Not all subcompetencies map between versions. Inclusion or exclusion of any subcompetency does not change the educational value or impact on curriculum or assessment.

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| **Milestones 1.0** | **Milestones 2.0** |
| PC1: General Pelvic Floor Evaluation | PC1: Patient and Pelvic Floor Evaluation |
| PC2: Urinary Incontinence and Overactive Bladder Treatment  | PC6: Incontinence and Lower Urinary Tract Procedures |
| PC3: Anal Incontinence and Defecatory Dysfunction Treatment |  |
| PC4: Pelvic Organ Prolapse Treatment |  |
| PC5: Urogenital Fistulas and Urethral Diverticula Treatment |  |
| PC6: Painful Bladder Syndrome Treatment |  |
| PC7: Urinary Tract Infection (UTI) |  |
|  | PC2: Office-Based ProceduresPC3: General Peri-Operative ManagementPC4: Endoscopic Procedures PC5: Vaginal ProceduresPC7: Minimally Invasive Procedures (Laparoscopic and Robotic) |
| MK1: Pelvic Floor Anatomy and Physiology | MK1: Pelvic Floor Anatomy and Physiology |
| MK2: Urinary Incontinence and Overactive Bladder Treatment | MK2: Urinary Incontinence (UI) and Lower Urinary Tract Symptoms (LUTS) |
| MK3: Anal Incontinence and Defecatory Dysfunction Treatment | MK3: Fecal Incontinence (FI) and Defecatory Dysfunction (DD) Treatment  |
| MK4: Pelvic Organ Prolapse Treatment | MK4: Pelvic Organ Prolapse (POP) Treatment  |
| MK5: Urogenital Fistulas and Urethral Diverticula Treatment | MK5: Urogenital Fistulas (UF) and Urethral Diverticula (UD) Treatment |
| MK6: Painful Bladder Syndrome Treatment | MK6: Painful Bladder Syndrome (PBS) and Pelvic Floor Dysfunction (PFDys) |
| MK7: Urinary Tract Infection | MK7: Urinary Tract Infection (UTI) and Hematuria |
| MK8: Neuro-Urology | MK8: Neurourology and Neurogenic Lower Urinary Tract Dysfunction (NULTD) |
| SBP1: Computer Systems | ICS4: Communication within Health Care System |
| SBP2: Health Care Economics | SBP3: Physician Role in the Health Care Systems  |
| SBP3: Works and coordinates patient care effectively in various health care delivery settings and systems | SBP2: System Navigation for Patient-Centered Care |
| PBLI1: Scholarly Activity | PBLI3: Scholarly Activity |
| PBLI2: Implements Quality Improvement Project | SBP1: Patient Safety and Quality Improvement |
|  | PBLI1: Evidence-Based and Informed PracticePBLI2: Reflective Practice and Commitment to Personal Growth |
| PROF1: Professional Ethics and Accountability  | PROF1: Professional Behavior and Ethical PrinciplesPROF2: Accountability/Conscientiousness |
|  | PROF3: Self-Awareness and Help-Seeking  |
| ICS1: Health Care Teamwork | ICS3: Interprofessional and Team Communication |
| ICS2: Effective Communication | ICS1: Patient- and Family-Centered CommunicationICS2: Patient Counseling and Shared Decision Making |

**Available Milestones Resources**

*Milestones 2.0: Assessment, Implementation, and Clinical Competency Committees Supplement,* 2021 - [*https://meridian.allenpress.com/jgme/issue/13/2s*](https://meridian.allenpress.com/jgme/issue/13/2s)

*Milestones Guidebooks:* [*https://www.acgme.org/milestones/resources/*](https://www.acgme.org/milestones/resources/)

* *Assessment Guidebook*
* *Clinical Competency Committee Guidebook*
* *Clinical Competency Committee Guidebook Executive Summaries*
* *Implementation Guidebook*
* *Milestones Guidebook*

*Milestones Guidebook for Residents and Fellows:* [*https://www.acgme.org/residents-and-fellows/the-acgme-for-residents-and-fellows/*](https://www.acgme.org/residents-and-fellows/the-acgme-for-residents-and-fellows/)

* Milestones Guidebook for Residents and Fellows
* Milestones Guidebook for Residents and Fellows Presentation
* Milestones 2.0 Guide Sheet for Residents and Fellows

Milestones Research and Reports: <https://www.acgme.org/milestones/research/>

* *Milestones National Report*, updated each fall
* *Milestones Predictive Probability Report,* updated each fall
* *Milestones Bibliography*, updated twice each year

*Developing Faculty Competencies in Assessment* courses - <https://www.acgme.org/meetings-and-educational-activities/courses-and-workshops/developing-faculty-competencies-in-assessment/>

Assessment Tool: Direct Observation of Clinical Care (DOCC) - <https://dl.acgme.org/pages/assessment>

Assessment Tool: Teamwork Effectiveness Assessment Module (TEAM) - [https://team.acgme.org/](https://team.acgme.org/%E2%80%AF%E2%80%AF%E2%80%AF%E2%80%AF%E2%80%AF)

Improving Assessment Using Direct Observation Toolkit - <https://dl.acgme.org/pages/acgme-faculty-development-toolkit-improving-assessment-using-direct-observation>

Remediation Toolkit - <https://dl.acgme.org/courses/acgme-remediation-toolkit>

Learn at ACGME has several courses on Assessment and Milestones - <https://dl.acgme.org/>