Supplemental Guide:

Urology

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Milestones Supplemental Guide

This document provides additional guidance and examples for the Urology 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 page of the Milestones section of the ACGME website.

Patient Care 1: Patient Evaluation **Overall Intent:** To efficiently obtain and synthesize the history, physical exam, and collateral patient data to develop an appropriate management plan	
Milestones	**Examples**
	All examples relate to a patient with hematuria and its potential causes
Level 1 *Obtains history and physical exam to form a patient assessment*	● Obtains a history and physical exam for a patient with hematuria; identifies risk factors and determines if work-up is indicated ● Confirms dipstick hematuria with a microscopic urinalysis ● Differentiates between gross hematuria and microscopic hematuria
Level 2 *Evaluates patients; orders and interprets diagnostic testing*	● Recognizes contaminated urine specimens and orders a catheterized specimen ● Orders appropriate radiographic imaging and endoscopic evaluation ● Interprets computerized tomography (CT) scans and ultrasounds ● Identifies indications for cytology
Level 3 *Develops a plan to manage patients with straightforward conditions*	● Develops a plan for pertinent findings and results of initial work-up of a small bladder tumor ● Develops a plan for a renal pelvic stone ● Identifies indications for continuous bladder irrigation ● As the condition worsens, recognizes the need to escalate care
Level 4 *Develops a plan to manage patients with complex conditions and adapts plan for changing clinical situation*	● Manages refractory hemorrhagic cystitis patients ● Manages unstable hemorrhage after partial nephrectomy
Level 5 *Develops a clinical pathway for the management of patients with complex conditions or identifies clinical trials for patients*	● Develops an institutional clinical algorithm for managing patients with radiation cystitis ● Refers and counsels patients with metastatic bladder cancer for appropriate clinical trial
Assessment Models or Tools	● Clinical case discussion assessment ● Direct observation ● End-of-rotation evaluation ● Medical record (chart) audit ● Multisource feedback ● Observed structured clinical examination ● Simulation
Curriculum Mapping	●
Notes or Resources	● AUA University. Guidelines. https://www.auanet.org/guidelines. 2019. ● AUA University. AUA Urology Core Curriculum. https://auau.auanet.org/core. 2019. ● AUA University. Update series volume. https://auau.auanet.org/courses/published?title=Update%20Series%20Volume&order=title&sort=desc. 2019.

	● Wein AJ, Kavoussi LR, Partin AW, Peters CA. *Campbell-Walsh Urology*. 11th ed. Philadelphia, PA: Elsevier; 2015. ISBN: 978-1455775675.

Patient Care 2: Peri-Procedural Care **Overall Intent:** To safely provide comprehensive pre-operative, intra-operative, and post-operative management of patients, including physiologic alterations and complications	
Milestones	**Examples**
Level 1 *Identifies alterations in normal physiology*	● Identifies post-operative hypotension, fever, or tachycardia ● Selects appropriate pre-operative antibiotics ● Appropriately selects prophylaxis for venous thromboembolism
Level 2 *Accurately and reliably gathers and reports clinical information pertaining to common peri-procedural alterations and complications*	● Orders appropriate testing for chest pain ● Orders appropriate work-up for fever ● Performs appropriate workup of altered mental status
Level 3 *Independently identifies and prioritizes tasks necessary for management of common peri-procedural alterations and complications*	● Manages oliguria after sacrocolpopexy or sling ● Manages post-operative anemia ● Manages hypotension in a postoperative partial nephrectomy ● Manages continuous bladder irrigation
Level 4 *Independently identifies and prioritizes tasks necessary for management of complex and/or less common peri-procedural alterations and complications*	● Manages infected lymphocele following pelvic lymphadenectomy ● Manages chylous ascites after xanthogranulomatous pyelonephritis nephrectomy ● Manages pheochromocytoma using pharmacology ● Recognizes the need for and initiates early parenteral nutrition support
Level 5 *Proactively recognizes potential risk factors for complications, and implements measures to prevent or mitigate them, applying effective team management skills to manage multiple scenarios simultaneously*	● Manages septic shock in immunosuppressed coagulopathic patient ● Manages multidisciplinary care for a patient with pelvic fracture and posterior urethral disruption
Assessment Models or Tools	● Clinical case discussion assessment ● Direct observation ● End-of-rotation evaluation ● Medical record (chart) audit ● Multisource feedback ● Observed structured clinical examination ● Simulation
Curriculum Mapping	●
Notes or Resources…add one for prioritization	● AUA University. AUA Urology Core Curriculum. https://auau.auanet.org/core. 2019. ● AUA University. Update series volume. https://auau.auanet.org/courses/published?title=Update%20Series%20Volume&order=title&sort=desc. 2019. ● Wein AJ, Kavoussi LR, Partin AW, Peters CA. *Campbell-Walsh Urology*. 11th ed. Philadelphia, PA: Elsevier; 2015. ISBN: 978-1455775675.

	● Venous thromboembolism (VTE) and Chest Guidelines ● AUA University. Guidelines. https://www.auanet.org/guidelines. 2019. ● Taneja S, Shah O. *Complications of Urologic Surgery*. 5th ed. Philadelphia, PA: Elsevier; 2017. ISBN:9780323392426.

Patient Care 3: Endoscopic Procedures **Overall Intent:** To perform endoscopic procedures safely and efficiently	
Milestones	**Examples**
Level 1 *Prepares patient and equipment for endoscopic procedures (e.g., lithotomy positioning, assemble endoscope)*	● Correctly assembles endoscopic equipment ● Appropriately positions patient with pressure points padded and limbs situated ergonomically
Level 2 *Independently performs bedside endoscopic procedures (e.g., cystoscopy with catheter placement over a wire)*	● Visualizes entire surface of bladder during cystoscopy ● Anticipates need for additional supplies for catheter placement over wire
Level 3 *Independently performs simple endoscopic procedures (e.g., simple transurethral resection of a bladder tumor (TURBT), simple ureteroscopy (URS), small transurethral resection of the prostate (TURP))*	● Anticipates additional equipment needed for procedure ● Judiciously uses disposable equipment ● Safely performs: ○ transurethral resection of a bladder tumor (TURBT) of a 3 cm posterior wall lesion ○ transurethral resection of the prostate (TURP) for 40 gm prostate ○ ureteropyeloscopy with laser lithotripsy
Level 4 *Independently performs complex endoscopic procedures (e.g., percutaneous nephrolithotomy (PCNL), complex URS, complex TURBT, large TURP)*	● Appropriately manages intraoperative endoscopic complications ● Safely performs: ○ Percutaneous nephrolithotomy (PCNL) ○ TURBT of a 5cm bladder tumor at the lateral bladder wall or dome ○ TURP for >80 gm prostate
Level 5 *Independently performs complex endoscopic procedures in altered anatomy (e.g., horseshoe kidney, urinary diversion, spinal malformation)*	● Manages a severely encrusted ureteral stent ● Obtains percutaneous renal access
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	● American Urological Association (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.

Patient Care 4: Open Procedures **Overall Intent:** To competently and independently perform simple and complex open urologic procedures	
Milestones	**Examples**
Level 1 *Demonstrates basic skills (e.g., positioning, knot tying, suturing)*	● Positions patient for common surgery ● Performs closure of skin incision ● Manages wound vacuum dressing changes ● Ties square knots using one or both hands
Level 2 *Independently performs bedside open procedures (e.g., incision and drainage, priapism aspiration and irrigation, circumcision, removal of genital wart)*	● Performs incision and drainage of a scrotal abscess ● Performs dorsal slit for refractory paraphimosis ● Performs complex dressing changes with debridement on a Fournier's gangrene patient
Level 3 *Independently performs simple open procedures (e.g., scrotal procedures, vasectomy, cystorrhaphy, mid-urethral sling)*	● Performs hydrocelectomy, orchiopexy, orchiectomy, synthetic mid-urethral sling ● Repairs an iatrogenic bladder injury in a non-radiated field ● Performs primary artificial urinary phincter/inflatable penile prosthesis placement in a non-radiated patient
Level 4 *Independently performs complex open procedures (e.g., partial nephrectomy, prosthetic replacement, cystectomy and ileal conduit, ureteral reconstruction)*	● Revises/replaces an infected three-piece inflatable penile prosthesis ● Performs extravesical ureteral reimplant ● Performs simple prostatectomy ● Performs excision and repair of urethral diverticulum
Level 5 *Independently performs uncommon complex open procedures (e.g., retroperitoneal lymph node dissection (RPLND), nephrectomy with caval thrombus, reconstructive genital surgery)*	● Performs salvage cystectomy or prostatectomy ● Performs a nephrectomy for xanthogranulomatous pyelonephritis ● Performs microscopic vasoepididymostomy
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 ● Objective Structured Assessment of Technical Skills ● Simulation ● Surgical skills assessment tool
Curriculum Mapping	●
Notes or Resources	● Smith J, Howards S, Preminger G, Dmochowski R. *Hinman's Atlas of Urologic Surgery*. 4th ed. Philadelphia, PA: Elseview; 2018. ISBN:978-0-12-801648-0.

	● AUA University. Surgical Video Library. https://auau.auanet.org/node/25250. 2019.

Patient Care 5: 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 *Demonstrates basic skills (e.g., positioning, draping, docking and undocking)*	● Properly drapes and preps patient to maintain sterile field ● Properly adjusts robotic console and table height for optimized ergonomics
Level 2 *Assists during minimally invasive procedures (e.g., port placement, bedside assistant)*	● Holds camera steadily during laparoscopic procedure ● Efficiently exchanges surgical tools during laparoscopic and robotic procedures ● Maintains correct depth perception and force of tissue manipulation
Level 3 *Independently performs simple portions of the procedure (e.g., bladder takedown, colon reflection, pelvic lymph node dissection)*	● Independently reflects colon during minimally invasive nephrectomy ● Independently exposes ureteropelvic junction for pyeloplasty ● Exposes correct anatomy for sacral colpopexy
Level 4 *Independently performs critical (complex) portions of the procedure (e.g., hilar dissection, renorrhaphy, anastomosis)*	● Independently completes vesicourethral anastomosis in robotic-assisted laparoscopic prostatectomy ● Independently completes nerve-sparing portion of robotic-assisted laparoscopic prostatectomy ● Independently completes robotic partial nephrectomy for exophytic tumor
Level 5 *Independently performs advanced minimally invasive procedures (e.g., cystectomy, complex partial nephrectomy, complex reconstruction)*	● Manages an intraoperative rectal injury during prostatectomy ● Completes intracorporeal urinary diversion following radical cystectomy ● Completes partial nephrectomy for hilar tumor
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	● Virtual skills simulator ● Fundamentals of Laparoscopic Surgery. https://www.flsprogram.org/. 2019.

Patient Care 6: Office-Based Procedures **Overall Intent:** To proficiently perform all manner of office procedures encountered in independent practice	
Milestones	**Examples**
Level 1 *Demonstrates basic skills in office procedures (e.g., Foley catheter placement, drain removal)*	● Places Foley catheter ● Removes staples ● Changes suprapubic tube ● Performs bladder irrigation
Level 2 *Performs simple office-based procedures, with direct supervision (e.g., prostate biopsy, urodynamics interpretation, vasectomy, urethral stricture dilation)*	● Performs flexible diagnostic cystoscopy ● Performs trans rectal ultrasound with prostate biopsy ● Performs routine penile or inguinal cord block ● Performs intra-cavernosal injections
Level 3 *Independently performs simple office-based procedures, including percutaneous suprapubic tube placemen*	● Performs flexible diagnostic cystoscopy with urethral dilation ● Performs urodynamics with interpretation ● Places suprapubic tube ● Performs a bladder Botox injection
Level 4 *Independently performs complex office-based procedures (e.g., renal ultrasound, bladder biopsy, Botox injection)*	● Performs cystoscopy and biopsy/fulguration ● Performs penile plaque injection ● Performs targeted prostate biopsy
Level 5 *Independently performs advanced office-based procedures (e.g., stage 1 neuromodulation, minimally invasive benign prostatic hyperplasia (BPH) procedure, penile ultrasound)*	● Performs testicular sperm aspiration ● Performs ultrasound-guided renal biopsy ● Performs minimally invasive benign prostatic hyperplasia procedure
Assessment Models or Tools	● Direct observation ● End-of-rotation evaluation ● Multisource feedback ● Simulation
Curriculum Mapping	●
Notes or Resources	● Urology boot camp or dry lab sessions ● AUA Hands-On Courses. http://www.aua2019.org/register/hands-on-courses. 2019. ● AUA University – Consults and Emergencies, Ultrasound, Foley and Suprapubic Tubes https://auau.auanet.org/ 2019.

Medical Knowledge 1: Clinical Medical Knowledge **Overall Intent:** To demonstrate comprehensive knowledge, including guidelines, of the full spectrum of urologic diseases, treatments, and populations	
Milestones	**Examples**
Level 1 *Demonstrates knowledge of anatomy and physiology as it pertains to surgical conditions*	● Describes the layers of the abdominal wall ● Demonstrates knowledge of male urethral segments ● Demonstrates knowledge of anatomy of the inguinal canal ● Demonstrates knowledge of prostate anatomy
Level 2 *Demonstrates knowledge of pathophysiology and treatments of simple urologic conditions*	● Describes pathophysiology of hyperoxaluria in a patient with inflammatory bowel disease ● Describes the pathophysiology and treatment of stress urinary incontinence ● Describes the treatment of undescended testicle
Level 3 *Demonstrates knowledge of pathophysiology and treatments of complex urologic conditions considering patient factors (e.g., comorbidity, social context)*	● Describes treatment of a pediatric patient with cystinuria ● Describes management of a patient with stage IB testicular germ cell tumor in a non-compliant patient or with limited access to care ● Distinguishes between obstructive and non-obstructive azoospermia
Level 4 *Demonstrates comprehensive knowledge, including guidelines, of the full spectrum of urologic diseases, treatments, and populations*	● Recognizes the need for upper tract surveillance in patients with Lynch syndrome ● Discusses the role of biomarkers in prostate cancer ● Describes peri-operative management of a patient with pheochromocytoma
Level 5 *Creates a curriculum for clinical medical knowledge*	● Develops a regular didactic review for other members of the health care team
Assessment Models or Tools	● AUA Self-assessment study program ● Case-based discussion assessment ● Direct observation ● End-of-rotation evaluations ● In-service exam ● Mock oral examination ● Multisource feedback
Curriculum Mapping	●
Notes or Resources	● AUA. Guidelines. https://www.auanet.org/guidelines. 2019. ● AUA University. AUA Urology Core Curriculum. https://auau.auanet.org/core. 2019. ● Wein AJ, Kavoussi LR, Partin AW, Peters CA. *Campbell-Walsh Urology*. 11th ed. Philadelphia, PA: Elsevier; 2015. ISBN: 978-1455775675. ● Fisher JD, PachaT, Santucci RA. *Urology In-Service and Board Review - The Essential and Concise Study Guide*. Corpus Christi, TX: BMED Press LLC; 2013. ISBN: 978-0982749838. ● AUA. AUA Inside Tract Podcast. https://www.auanet.org/podcast. 2019.

	● Pocket Guide to Urology. http://www.pocketguidetourology.com/. 2019.

Medical Knowledge 2: Clinical Reasoning **Overall Intent:** To use sound reasoning and data synthesis skills for safe clinical decision making	
Milestones	**Examples**
	All examples relate to prostate cancer screening
Level 1 *Integrates patient-specific information to generate an appropriate working diagnosis*	● Identifies patients for prostate cancer screening while considering patient's risk factors and preference
Level 2 *Provides a prioritized differential diagnosis using supporting rationale*	● Develops a list of potential causes for elevated prostate-specific antigen levels ● Explains indications for ordering a repeat prostate-specific antigen level
Level 3 *Independently synthesizes clinical information to inform diagnosis and therapy in simple cases and adapts based on a patient's clinical course and additional data*	● Uses risk stratification tools to determine need for additional diagnostic testing for elevated prostate-specific antigen levels ● Uses predictive prostate cancer nomograms to counsel patients ● Explains the indications for systematic versus targeted biopsy for elevated prostate-specific antigen levels
Level 4 *Independently synthesizes clinical information to inform diagnosis and therapy in complex cases, recognizing sources of error*	● Appropriately manages patients with persistently elevated prostate-specific antigen levels after previous negative prostate biopsy ● Incorporates emerging evidence to revise the clinical plan
Level 5 *Teaches others to recognize sources of diagnostic error*	● Reviews institutional prostate cancer screening patterns to assess for bias and delivers feedback to providers
Assessment Models or Tools	● AUA In-service examination ● Clinical case discussion assessment ● Direct observation ● End-of-rotation evaluation ● Medical record (chart) audit ● Mock oral examination ● Multisource feedback ● Observed structured clinical examination
Curriculum Mapping	●
Notes or Resources	● Society to Improve Diagnosis in Medicine. Inter-Professional Consensus Curriculum on Diagnosis and Diagnostic Error. https://www.improvediagnosis.org/?s=competency+summary+list. 2019. ● Society to Improve Diagnosis in Medicine. Driver Diagram. https://www.improvediagnosis.org/wp-content/uploads/2018/10/Driver_Diagram_-_July_31_-_M.pdf. 2019. ● Society to Improve Diagnosis in Medicine. Assessment of Reasoning Tool. https://www.improvediagnosis.org/art/. 2019. ● CancerNomograms. http://labs.fccc.edu/nomograms/. 2019.

Systems-Based Practice 1: Patient Safety and Quality Improvement (QI) **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 *Demonstrates knowledge of common patient safety events and institutional reporting system* *Demonstrates knowledge of basic quality improvement methodologies and metrics*	● 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 *Identifies and reports patient safety events* *Describes local quality improvement initiatives (e.g., multimodal analgesics, antibiotic stewardship, smoking cessation, hospital acquired infection)*	● 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 decreased spread of hospital acquired *C. difficile*
Level 3 *Participates in analysis of patient safety events (simulated or actual)* *Participates in local quality improvement initiatives*	● Presents patient safety event at morbidity and mortality conference ● Participates in project identifying root cause of retained ureteral stent
Level 4 *Offers strategies (simulated or actual) to prevent patient safety events* *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 QI 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 QI project to appropriately utilize imaging in the management of prostate cancer
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	● Institute of Healthcare Improvement. http://www.ihi.org/Pages/default.aspx. 2019 ● AUA. Quality Improvement Summit. https://www.auanet.org/education/educational-calendar/quality-improvement-summit. 2019. ● AUA University. AUA Urology Core Curriculum. https://auau.auanet.org/core. 2019.

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*	● For a patient with advanced prostate cancer, identifies that care is delivered through multi-disciplinary team members ● Identifies that patients with different backgrounds may have different needs
Performs safe and effective transitions of care/hand-offs in routine clinical situations	● Lists the essential components of sign-out, care transition and hand-offs
Level 2 *Coordinates multidisciplinary care of patients in routine clinical situations for their local population*	● Appropriately coordinates translation services for patients and provides patient materials that are sensitive to patient background
Performs safe and effective transitions of care/hand-offs in complex clinical situations	● 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 (e.g., home parenteral nutrition, postoperative intravenous feeding, intensive care unit)*	● 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 and effective transitions of care/hand-offs of junior residents	● Supervises safe hand-offs when transferring a patient to the intensive care unit (ICU)
Level 4 *Leads care coordination of patients with barriers to care (e.g., trauma patient with no access to care)*	● Leads coordination of care for patients without insurance or means to access care
Resolves conflicts in transitions of care between teams	● Effectively manages times when volume of work outpaces available resources
Level 5 *Designs innovative care coordination strategies for populations with health care needs*	● Develops a telemedicine pilot to improve access to care
Leads in the design and implementation of improvements to transitions of 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. http://tissuepathology.com/2016/03/29/in-pursuit-of-patient-centered-care/#axzz5e7nSsAns. 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. 2019. ● Starmer, AJ, et al. I-pass, a mnemonic to standardize verbal handoffs. *Pediatrics*. 2012;129(2):201-204. https://pediatrics.aappublications.org/content/129/2/201?sso=1&sso_redirect_count=1&nfstatus=401&nftoken=00000000-0000-0000-0000-000000000000&nfstatusdescription=ERROR%3a+No+local+token. 2019.

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 *Identifies basic needs for effective transition to practice (e.g., information technology, legal, billing and coding, financial, personnel)*	● Identifies that notes must meet coding requirements
Describes basic health payment systems (e.g., government, private, public, uninsured care) and practice models	● Identifies that the type of health plan coverage may impact care
Level 2 *Demonstrates use of information technology required for medical practice (e.g., electronic health record, documentation required for billing and coding)*	● Uses appropriate documentation to capture patient complexity
Describes how components of a complex health care system are interrelated and how this impacts patient care	● Explains that ordering extraneous tests or use of unnecessary supplies in the operating room (OR) impact overall health care costs
Level 3 *Describes core administrative knowledge needed for transition to independent practice (e.g., contract negotiations, malpractice insurance, government regulation, compliance)*	● Discusses the advantages and disadvantages of various employment models ● Understands the core elements of employment contracts
Discusses how individual practice affects the broader system performance (e.g., length of stay, readmission rates, clinical efficiency)	● Recognizes the importance of timely discharge processes on hospital length of stay and access to care for other patients
Level 4 *Analyzes individual practice patterns and professional requirements in preparation for practice*	● Compares individual post-prostate biopsy infection rate to benchmarks and changes practice if indicated ● Proactively compiles procedure log in anticipation of applying for hospital privileges
Manages various components of the complex health care system to provide efficient and effective patient care (e.g., patient payment models, insurance)	● Works collaboratively to improve patient assistance resources for a patient with a recent extensive surgery and limited resources ● Incorporates value-based principles in managing patients

Level 5 *Educates others to prepare them for transition to practice* *Advocates for or leads systems change that enhances high-value, efficient, and effective patient care*	● Leads a practice management conference for residents ● Provides a lecture on payment models ● Improves informed consent process for non-English-speaking patients ● Works with community or professional organizations to advocate for health care access
Assessment Models or Tools	● Direct observation ● Medical record (chart) audit ● Multisource feedback ● Patient satisfaction data ● Portfolio ● 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. 2019. ● AHRQ. Major physician performance sets. https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/physician/measurementsets.html. 2019. ● The Kaiser Family Foundation. www.kff.org. 2019. ● The Kaiser Family Foundation. Health Reform. https://www.kff.org/topic/health-reform/. 2019. ● Dzau VJ, McClellan M, Burke S, et al. Vital directions for health and health care: priorities from a National Academy of Medicine Initiative. *NAM Perspectives*. Discussion Paper, National Academy of Medicine, Washington, DC. https://nam.edu/vital-directions-for-health-health-care-priorities-from-a-national-academy-of-medicine-initiative/. 2019. ● The Commonwealth Fund. Health System Data Center. http://datacenter.commonwealthfund.org/?_ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1. 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. 2019. ● American Board of Internal Medicine. QI/PI activities. http://www.abim.org/maintenance-of-certification/earning-points/practice-assessment.aspx. 2019.

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 for hematuria assessment
Level 2 *Articulates clinical questions to guide evidence-based care*	● In a patient with stress urinary incontinence, identifies and discusses potential evidence-based treatment options
Level 3 *Integrates best available evidence with patient preferences to guide care*	● Obtains, discusses, and applies evidence for the treatment of a child with vesicoureteral reflux
Level 4 *Tailors patient care in the setting of conflicting or absent evidence*	● Accesses and applies the primary literature to identify treatment options for hormone resistant prostate cancer
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 cytoreductive nephrectomy in a patient with metastatic kidney cancer ● As part of a team, develops pain management pathways to decrease opioid use
Assessment Models or Tools	● Direct observation ● Electronic health record (EHR) review ● In-service examinations ● Mock oral examinations ● Presentation evaluation ● Rotation evaluations
Curriculum Mapping	●
Notes or Resources	● National Institutes of Health. U.S. National Library of Medicine. PubMed Tutorial. https://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html. 2019 ● AUA. Guidelines. https://www.auanet.org/guidelines. 2019. ● AUA University. Update series volume. https://auau.auanet.org/courses/published?title=Update%20Series%20Volume&order=title&sort=desc. 2019.

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*	● Identifies gaps in surgical skills ● Seeks feedback from patients, families, and patient care team members ● Sets a SMART (specific, measurable, attainable, realistic and time-bound) personal practice goal of improving knowledge of vesicoureteral reflux
Level 2 *Analyzes and reflects on the factors which contribute to gap(s) between expectations and actual performance* *Identifies opportunities for performance improvement; designs a learning plan*	● Identifies the impact of personal anxiety on fine motor skills ● 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 vesicoureteral reflux
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, completes a personal curriculum to refine their evaluation of vesicoureteral reflux
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 ● Performs a self-directed chart audit of their evaluation of vesicoureteral reflux
Level 5 *Coaches others on reflective practice* *Coaches others in the design and implementation of learning plans*	● Leads others through a reflective practice cycle ● Assists other residents and students in developing their individualized learning plans
Assessment Models or Tools	● Direct observation ● End-of-rotation evaluations ● In-service examinations

	● Mock oral examination ● Reflective Ability Rubric ● Simulation ● Video review
Curriculum Mapping	●
Notes or Resources	● C-SATS. Global Evaluative Assessment of Robotic Skills (GEARS). https://www.csats.com/gears. 2019. ● OSAT assessment ● CSAT assessment ● AUA University. Update series volume. https://auau.auanet.org/courses/published?title=Update%20Series%20Volume&order=title&sort=desc. 2019. ● Learning by Doing: A Guide to Teaching and Learning Methods. https://thoughtsmostlyaboutlearning.files.wordpress.com/2015/12/learning-by-doing-graham-gibbs.pdf. 2019. ● O'Sullivan P, Aronson L, Chittenden E, Niehaus B, Learman L. Reflective ability rubric and user guide. *MedEdPORTAL*. 2010;6:8133. https://doi.org/10.15766/mep_2374-8265.8133. 2019.

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 verbalize 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 family member following an unsuccessful resuscitation attempt ● 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 self and others* *Recognizes and uses appropriate resources for managing and resolving ethical dilemmas (e.g., ethics consultations, literature review)*	● Proactively assumes tasks of a junior resident who is fatigued to ensure they are able to get adequate rest ● Advocates for members of the care team when bias is witnessed ● Seeks ethics consult for posthumous sperm extraction
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. 2019. ● ABIM Foundation; American Board of Internal Medicine, ACP-ASIM Foundation, American College of Physicians-American Society of Internal Medicine, European Federation of Internal Medicine. Medical professionalism in the new millennium: a physician charter. *Ann Intern Med*. 2002;136:243-246. http://abimfoundation.org/wp-content/uploads/2015/12/Medical-Professionalism-in-the-New-Millenium-A-Physician-Charter.pdf. 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. 2019. ● Levinson W, Ginsburg S, Hafferty FW, Lucey CR. *Understanding Medical Professionalism*. 1st ed. New York, NY: McGraw-Hill Education; 2014. ● Bynny RL, Paauw DS, Papadakis MA, Pfeil S. *Medical Professionalism. Best Practices: Professionalism in the Modern Era*. Menlo Park, CA: Alpha Omega Alpha Medical Society; 2017. http://alphaomegaalpha.org/pdfs/Monograph2018.pdf. 2019. ● AUA. Code of Ethics. https://www.auanet.org/myaua/aua-ethics/code-of-ethics. 2019.

Professionalism 2: Administrative Tasks **Overall Intent:** To take responsibility for one's 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*	● Responds promptly to reminders from program administrator to complete work-hour logs ● Timely attendance at conferences ● Timely completion of end-of-rotation evaluations
Level 2 *Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations*	● Completes administrative tasks, safety modules, case logs, and 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*	● Notifies attending of multiple competing demands on-call, appropriately triages tasks, and asks for assistance from other residents or faculty members as needed
Level 4 *Recognizes situations that may impact others' ability to complete tasks and responsibilities in a timely manner and proposes solutions*	● Implements an administrative process for resident responsibilities for upcoming visiting professor event
Level 5 *Develops systems to enhance other's ability to efficiently complete administrative tasks and responsibilities*	● Develops automated reminder system to notify others of upcoming deadlines
Assessment Models or Tools	● Case log review ● Compliance with deadlines and timelines ● Direct observation ● Multisource feedback ● Rotation evaluations ● Self-evaluations and reflective tools
Curriculum Mapping	●
Notes or Resources	● AUA. Code of Ethics. https://www.auanet.org/myaua/aua-ethics/code-of-ethics. 2019 ● Code of conduct from fellow/resident institutional manual ● Expectations of residency program regarding accountability and professionalism

Professionalism 3: Well-Being **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 *Coaches others when emotional responses 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 resident's well-being, but to ensure each resident has the fundamental knowledge of factors that impact well-being, the mechanisms by which those factors impact well-being, and available resources and tools to improve well-being. ● Local resources, including Employee Assistance and online training modules ● ACGME. "Well-Being Tools and Resources." https://dl.acgme.org/pages/well-being-toolsresources. Accessed 2022. ● AMA. Physician Well-being. https://www.ama-assn.org/topics/physician-well-being. 2019.

Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication **Overall Intent:** To form therapeutic relationships using shared decision making, to identify and mitigate communication barriers and bias	
Milestones	**Examples**
Level 1 *Demonstrates respect and establishes rapport with patient and family (e.g., situational awareness of language, disability, health literacy level)* *Communicates with patients and their families in an understandable and respectful manner*	● Introduces self and faculty member, explains the roles of team members, and identifies patient and others in the room ● Actively listens and engages all parties in healthcare discussion ● Identifies need for trained interpreter with non-English-speaking patients ● Uses age-appropriate language when counseling pediatric patients
Level 2 *Establishes a therapeutic relationship in straightforward encounters* *Identifies barriers to effective communication (e.g., health literacy)*	● Avoids medical jargon and restates patient perspective when discussing erectile dysfunction ● Recognizes the need for handouts with diagrams and pictures to communicate information to a patient who is unable to read
Level 3 *Establishes a therapeutic relationship in challenging encounters (e.g., shared decision making)* *When prompted, reflects on biases while attempting to minimize communication barriers*	● Appropriately counsels patient on treatment options for prostate cancer using shared decision making to align treatment plan with patient priorities ● In a discussion with a mentor, acknowledges personal discomfort in caring for patient of other sex
Level 4 *Facilitates difficult discussions specific to patient and family conferences, (e.g., end-of-life, explaining complications, therapeutic uncertainty)* *Independently recognizes biases while attempting to proactively minimize communication barriers*	● Continues to engage representative family members with disparate goals in the care of a critically ill patient ● Uses patient and family input to engage palliative care and develop a plan for home hospice in the terminally ill patient, aligned with the patient's values ● Recognizes their potential bias involved in caring for a patient and solicits input from faculty to mitigate communication barriers
Level 5 *Mentors others in situational awareness and critical self-reflection* *Coaches others in the facilitation of crucial conversations*	● Leads a discussion group on personal experience of moral distress ● Develops a residency curriculum on social justice which addresses bias
Assessment Models or Tools	● Direct observation ● Kalamazoo Essential Elements Communication Checklist (Adapted)

	● Multisource feedback ● Observed structured clinical examination ● Self-assessment including self-reflection exercises ● Skills needed to set the State, Elicit information, Give information, Understand the patient, and End the encounter (SEGUE)
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/full/10.3109/0142159X.2011.531170. 2019. ● 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#pdf-link. 2019. ● Makoul G. The SEGUE Framework for teaching and assessing communication skills. *Patient Educ Couns*. 2001;45(1):23-34. https://www.ncbi.nlm.nih.gov/pubmed/11602365. 2019. ● 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://bmcmededuc.biomedcentral.com/articles/10.1186/1472-6920-9-1. 2019. ● Harvard. Implicit Association Test (IAT). https://implicit.harvard.edu/implicit/takeatest.html. 2019. ● AUA University. https://auau.auanet.org/. 2019.

Interpersonal and Communication Skills 2: Patient Counseling and Shared Decision Making **Overall Intent:** To counsel patients about indications, risks, benefits, and alternatives during informed consent	
Milestones	**Examples**
Level 1 *Demonstrates basic understanding of informed consent process*	● Confirms consent and patient counseling has been completed for a procedure
Level 2 *Answers questions about treatment plan and seeks guidance when appropriate*	● Uses patient-centered communication when answering questions during the informed consent process ● Ensures use of receptive body language, eye contact, and posture
Level 3 *Counsels patient through decision-making process, including questions, for simple clinical problems*	● Fully discusses indications, risks, benefits, and alternatives during informed consent for ureteroscopy ● Obtains a consent in situations in which the patient is unable to provide it themselves and documents appropriately
Level 4 *Counsels patient through decision-making process, including questions, for complex clinical problems*	● Fully discusses indications, risks, benefits, and alternatives during informed consent for prostatectomy ● Obtains a consent in emergent situations and documents appropriately
Level 5 *Counsels patient through decision-making process, including questions, for uncommon clinical problems*	● Develops supplemental materials to better inform patients prior to procedure ● Obtains consent for a micro-testicular sperm extraction procedure with anticipated low success rate
Assessment Models or Tools	● Direct observation ● Multisource feedback ● Patient evaluation of residents ● Rotation evaluation
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/full/10.3109/0142159X.2011.531170. 2019. ● 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#pdf-link. 2019. ● Makoul G. The SEGUE Framework for teaching and assessing communication skills. *Patient Educ Couns*. 2001;45(1):23-34. https://www.ncbi.nlm.nih.gov/pubmed/11602365. 2019.

	● 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://bmcmededuc.biomedcentral.com/articles/10.1186/1472-6920-9-1. 2019. ● Harvard. Implicit Association Test (IAT). https://implicit.harvard.edu/implicit/takeatest.html. 2019. ● AUA University. https://auau.auanet.org/. 2019.

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 *Respectfully interacts and actively communicates with all members of health care team (e.g., politely accepts and requests consults)*	● Respectfully requests cardiology consultation for anticoagulation management ● Receives consult request for a patient with urinary retention, asks clarifying questions politely, and expresses gratitude for the consult ● Acknowledges the contribution of nursing and social work in the discharge of a patient
Level 2 *Communicates in an approachable and productive manner to facilitate team work (e.g., active listening updates in timely fashion duality)*	● Succinctly presents complete information to senior residents or faculty ● Communicates diagnostic evaluation recommendations clearly and concisely in an organized and timely manner ● Communicates consultation to the dietician in the EHR for a metabolic stone patient to decrease risk factor for stone formation ● Actively listens to other members of the team and responds appropriately
Level 3 *Actively recognizes and mitigates communication barriers and biases with members of the health care team*	● After a consultation has been completed, communicates directly with the primary team to verify they have received and understand the recommendations ● When receiving treatment recommendations from an attending physician, actively listens and repeats back the plan to ensure understanding ● Seeks opportunity to constructively educate consulting service
Level 4 *Leads and coordinates recommendations from multidisciplinary members of the health care team (e.g., facilitates conflict resolution)*	● Leads a multidisciplinary goals of care conference for a patient with terminal disease ● Presents a case to tumor board and coordinates the recommendations from each specialty
Level 5 *Exemplar of flexible communication strategies*	● Mediates a conflict resolution between different members of the health care team
Assessment Models or Tools	● Direct observation ● Medical record (chart) audit ● Multi-source feedback ● Rotation evaluation ● Simulation
Curriculum Mapping	●
Notes or Resources	● Roth CG, Eldin KW, Padmanabhan V, Freidman EM. Twelve tips for the introduction of emotional intelligence in medical education. *Med Teach*. 2019;41(7):1-4. https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1481499. 2019. ● Green M, Parrott T, Cook G., Improving your communication skills. *BMJ*. 2012;344:e357. https://www.bmj.com/content/344/bmj.e357. 2019.

	● 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/full/10.3109/0142159X.2013.769677. 2019. ● 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/. 2019. ● Dehon E, Simpson K, Fowler D, Jones A. Development of the faculty 360. *MedEdPORTAL*. 2015;11:10174. http://doi.org/10.15766/mep_2374-8265.10174. 2019. ● Lane JL, Gottlieb RP. Structured clinical observations: a method to teach clinical skills with limited time and financial resources. *Pediatrics*. 2000;105(4):973-7. https://pdfs.semanticscholar.org/8a78/600986dc5cffcab89146df67fe81aebeaecc.pdf. 2019. ● Fondahn E, De Fer TM, Lane M, Vannucci A. *Washington Manual of Patient Safety and Quality Improvement Lippincott Manual Series)*. 1st ed. Philadelphia, PA: Wolters Kluwer; 2016. ISBN: 978-1451193558.

Interpersonal and Communication Skills 4: Communication within Health Care Systems **Overall Intent:** To effectively communicate across the health care system using the medical record	
Milestones	**Examples**
Level 1 *Accurately records information in the patient record in a timely manner while safeguarding patient personal health information*	● Documentation is accurate but may include extraneous information ● Shreds patient list after rounds; avoids talking about patients in the elevator
Level 2 *Documents diagnostic and therapeutic reasoning in the patient record with appropriate use of documentation shortcuts*	● Organized and accurate documentation outlines clinical reasoning that supports the treatment plan ● Develops documentation templates to avoid copy-and-paste errors
Level 3 *Concisely reports diagnostic and therapeutic reasoning*	● Complex clinical thinking is documented concisely but may not contain anticipatory guidance
Level 4 *Efficiently communicates in an organized fashion that includes contingency plans*	● Writes accurate, organized, and concise note for a patient with overactive bladder and provides plan for follow-up management if current treatment is unsuccessful ● Notes are exemplary and used to teach others.
Level 5 *Facilitates improved written and verbal communication of others*	● Organizes one-on-one teaching sessions with residents and medical students to improve documentation
Assessment Models or Tools	● Direct observation ● Medical record (chart) audit ● Multisource feedback ● Rotation evaluation
Curriculum Mapping	●
Notes or Resources	● Bierman JA, Hufmeyer KK, Liss DT, Weaver AC, Heiman HL. Promoting responsible electronic documentation: validity evidence for a checklist to assess progress notes in the electronic health record. *Teach Learn Med.* 2017;29(4):420-432. https://www.tandfonline.com/doi/full/10.1080/10401334.2017.1303385. 2019. ● AUA University. https://auau.auanet.org/. 2019.

In an effort to aid programs in the transition to using the new version of the Milestones, we have mapped the original Milestones 1.0 to the new Milestones 2.0. Below we have indicated where the subcompetencies are similar between versions. These are not necessarily exact matches, but are areas that include some of the same elements. Note that not all subcompetencies map between versions. Inclusion or exclusion of any subcompetency does not change the educational value or impact on curriculum or assessment.

Milestones 1.0	Milestones 2.0
PC1: Gathers information by interviewing the patient or surrogate and performing a physical exam.	PC6: Patient Evaluation
PC2: Uses diagnostic tests and procedures, including performance and interpretation of imaging studies.	PC6: Patient Evaluation
PC3: Develops a patient care plan, including medical, surgical, and/or radiological interventions.	PC5: Peri-procedural Care MK2: Clinical Reasoning
PC4: Performs intra-operative and post-operative management of patients, including recognition and treatment of physiologic alterations and complications.	PC5: Peri-procedural Care
PC5: Performs open surgical procedures.	PC2: Open Procedures
PC6: Performs endoscopic procedures of the upper and lower urinary tract	PC1: Endoscopic Procedures
PC7: Performs laparoscopic/robot-assisted surgical procedures.	PC3: Minimally Invasive Procedures (Laparoscopic and Robotic)
PC8: Performs office-based procedures.	PC4: Office-Based Procedures
MK1: Surgical Care	MK1: Clinical Medical Knowledge
MK2: Differential Diagnosis	MK2: Clinical Reasoning
MK3: Evidence-Based Medicine	PBLI1: Evidence-Based and Informed Practice
MK4: Core Domains	MK1: Clinical Medical Knowledge
SBP1: Works effectively within and across health delivery systems.	SBP2: System Navigation for Patient-Centered Care
SBP2: Incorporates cost awareness and risk-benefit analysis into patient care.	SBP3: Physician Role in Health Care Systems
SBP3: Works in inter-professional teams to enhance patient safety	SBP1: Patient Safety and Quality Improvement ICS3: Interprofessional and Team Communication
SBP4: Uses technology to accomplish safe health care delivery.	ICS4: Communication within Health Care Systems
PBLI1: Improves via feedback and self-assessment.	PBLI2: Reflective Practice and Commitment to Personal Growth
PBLI2: Learns and improves by asking and answering clinical questions from a patient scenario.	PBLI1: Evidence-Based and Informed Practice

PBLI3: Acquires the best evidence.	PBLI1: Evidence-Based and Informed Practice
PBLI4: Appraises the evidence for validity, impact, and applicability.	PBLI1: Evidence-Based and Informed Practice
PBLI5: Applies the evidence to decision-making for individual patients.	PBLI1: Evidence-Based and Informed Practice
PBLI6: Improves the quality of care for a panel of patients.	SBP1: Patient Safety and Quality Improvement
PBLI7: Participates in the education of other team members.	ICS3: Interprofessional and Team Communication
PROF1: Demonstrates adherence to ethical principles.	PROF1: Professional Behavior and Ethical Principles
PROF2: Demonstrates compassion, integrity, and respect for others.	PROF1: Professional Behavior and Ethical Principles
PROF3: Demonstrates responsiveness to patient needs that supersede self-interest.	PROF1: Professional Behavior and Ethical Principles
PROF4: Demonstrates respect for patient privacy and autonomy.	PROF1: Professional Behavior and Ethical Principles
PROF5: Demonstrates accountability to patients, society, and the profession.	PROF2: Administrative Tasks ICS4: Communication within Health Care Systems
PROF6: Demonstrates sensitivity and responsiveness to heterogeneous populations, including variety in age, culture, religion, disabilities, and sex.	PROF1: Professional Behavior and Ethical Principles PBLI2: Reflective Practice and Commitment to Personal Growth ICS1: Patient and Family-Centered Communication
No match	PROF3: Well-Being and Awareness
ICS1: Communicates effectively with patients and families with various socioeconomic and cultural backgrounds.	ICS1: Patient and Family-Centered Communication
ICS2: Effectively counsels, educates, and obtains informed consent.	ICS1: Patient and Family-Centered Communication ICS2: Patient Counseling and Shared Decision Making
ICS3: Communicates effectively with physicians, other health professionals, and health-related agencies.	ICS3: Interprofessional and Team Communication
ICS4: Communicates effectively during care transitions and consultations with fellow residents.	SBP2: System Navigation for Patient-Centered Care ICS3: Interprofessional and Team Communication
ICS5: Works effectively as a member or leader of a health care team or other professional group.	ICS3: Interprofessional and Team Communication

Available Milestones Resources

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

Milestones Guidebooks: 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/

- 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/

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/