

Supplemental Guide: Micrographic Surgery and Dermatologic Oncology



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Milestones Supplemental Guide

This document provides additional guidance and examples for the Micrographic Surgery and Dermatologic Oncology 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: Mohs Surgery Overall Intent: To demonstrate comprehension of treatment options for skin cancer, to select appropriate patient candidates for Mohs surgery, and to execute the procedure	
Milestones	Examples
Level 1 Identifies appropriate use criteria for selecting cases	Describes relevant zones under appropriate-use criteria
Identifies steps and instrumentation used in Mohs surgery	 Identifies tissue forceps, scalpel, and tissue scissors as instruments included in the Mohs tray Identifies biopsy site and describes the steps needed to perform Mohs surgery
Draws a map for the first layer of Mohs surgery	Accurately draws circle and appropriate hashmarks on the Mohs map
Level 2 Evaluates patients according to appropriate use criteria	Determines appropriateness of Mohs for a focal squamous cell carcinoma in situ arising in an actinic keratosis
Performs first and subsequent layers of Mohs surgery of low complexity	Performs Mohs for a nodular basal cell carcinoma on the cheek
Maintains orientation of tissue on a two- dimensional surface for low-complexity specimens	
Level 3 Considers alternative treatments	 Decides to use a hedgehog inhibitor instead of Mohs for a basal cell nevus patient Elects a non-surgical therapy in an elderly patient
Performs first and subsequent layers of Mohs surgery of moderate complexity	Performs all three stages of Mohs surgery for basal cell carcinoma of the nasal tip
Maintains orientation of tissue on three- dimensional surface for moderate-complexity specimens	Performs Mohs surgery for basal cell carcinoma of the conchal bowl
Level 4 Counsels patients and their families on the breadth of treatment options	Discusses options with a 90-year-old female and family regarding treatment of multiple recurring bleeding basal cell carcinoma on the nasal tip
	Performs Mohs surgery for sebaceous carcinoma of the eyelid margin

Performs first and subsequent layers of Mohs surgery of high complexity	
Consistently maintains orientation of tissue for	Maintains tissue orientation for all three stages including nasal cartilage and nasal mucosa through and through defects
high-complexity specimens	
Level 5 Performs Mohs surgery for extremely complex cases or special sites	 Performs Mohs surgery for a multiply recurrent squamous cell carcinoma involving bone Performs Mohs surgery for a basal cell carcinoma down the external auditory canal
Assessment Models or Tools	Chart review
	Direct observation
	Evaluations
	Multisource feedback
	Procedure logs
Curriculum Mapping	
Curriculum Mapping Notes or Resources	American Academy of Dermatology (AAD). Clinical Guidelines.
	https://www.aad.org/member/clinical-quality/guidelines#. 2020.
	https://www.aad.org/member/clinical-quality/guidelines#. 2020. • Appropriate use criteria
	 https://www.aad.org/member/clinical-quality/guidelines#. 2020. Appropriate use criteria American College of Mohs Surgery. Bibliography.
	 https://www.aad.org/member/clinical-quality/guidelines#. 2020. Appropriate use criteria American College of Mohs Surgery. Bibliography. https://acms.execinc.com/edibo/Login?ReturnUrl=https%3A%2F%2Fwww.mohscollege.or
	 https://www.aad.org/member/clinical-quality/guidelines#. 2020. Appropriate use criteria American College of Mohs Surgery. Bibliography. https://acms.execinc.com/edibo/Login?ReturnUrl=https%3A%2F%2Fwww.mohscollege.org%2Fforms%2Fbibliography.php&LoginMessage=You%20must%20be%20a%20member
	 https://www.aad.org/member/clinical-quality/guidelines#. 2020. Appropriate use criteria American College of Mohs Surgery. Bibliography. https://acms.execinc.com/edibo/Login?ReturnUrl=https%3A%2F%2Fwww.mohscollege.org%2Fforms%2Fbibliography.php&LoginMessage=You%20must%20be%20a%20member%20to%20view%20this%20page 2020.
	 https://www.aad.org/member/clinical-quality/guidelines#. 2020. Appropriate use criteria American College of Mohs Surgery. Bibliography. https://acms.execinc.com/edibo/Login?ReturnUrl=https%3A%2F%2Fwww.mohscollege.org%2Fforms%2Fbibliography.php&LoginMessage=You%20must%20be%20a%20member%20to%20view%20this%20page. 2020. American Society for Dermatologic Surgery Bibliography <a href="https://www.asds.net/2020.</a">
	 https://www.aad.org/member/clinical-quality/guidelines#. 2020. Appropriate use criteria American College of Mohs Surgery. Bibliography. https://acms.execinc.com/edibo/Login?ReturnUrl=https%3A%2F%2Fwww.mohscollege.org/%2Fforms%2Fbibliography.php&LoginMessage=You%20must%20be%20a%20member%20to%20view%20this%20page.. 2020. American Society for Dermatologic Surgery Bibliography <a href="https://www.asds.net/2020.</li"> Mohs College Curriculum. <a href="https://www.mohscollege.org/sisrb/ACMSCoreCurriculum.pdf.</a">
	 https://www.aad.org/member/clinical-quality/guidelines#. 2020. Appropriate use criteria American College of Mohs Surgery. Bibliography. https://acms.execinc.com/edibo/Login?ReturnUrl=https%3A%2F%2Fwww.mohscollege.org/scforms%2Fbibliography.php&LoginMessage=You%20must%20be%20a%20member%20to%20view%20this%20page.. 2020. American Society for Dermatologic Surgery Bibliography <a href="https://www.asds.net/2020.</li"> Mohs College Curriculum. <a href="https://www.mohscollege.org/sisrb/ACMSCoreCurriculum.pdf.2020.</a">
	 https://www.aad.org/member/clinical-quality/guidelines#. 2020. Appropriate use criteria American College of Mohs Surgery. Bibliography. https://acms.execinc.com/edibo/Login?ReturnUrl=https%3A%2F%2Fwww.mohscollege.org/%2Fforms%2Fbibliography.php&LoginMessage=You%20must%20be%20a%20member%20to%20view%20this%20page.. 2020. American Society for Dermatologic Surgery Bibliography <a href="https://www.asds.net/2020.</li"> Mohs College Curriculum. <a href="https://www.mohscollege.org/sisrb/ACMSCoreCurriculum.pdf.</a">

Patient Care 2: Reconstruction	
Overall Intent: To demonstrate ability to design and perform a variety of reconstructive techniques to repair defects while optimizing	
cosmesis and minimizing surgical complication Milestones	Examples
Level 1 Identifies categories of reconstruction options	Discusses reconstructive options including second intent, primary closure, flaps, and skin grafts
Performs linear closures	Performs primary closure of a defect on the cheek
Manages complications from linear closures	Manages acute post-operative bleeding episode and/or wound dehiscence after primary closure
Level 2 Selects reconstruction options	Identifies a linear closure will be inadequate for a large Mohs defect on the cheek and selects a flap for reconstruction
Performs low-complexity reconstruction	Performs an A-to-T reconstruction on the forehead
Manages acute complications from low- complexity reconstruction	Manages a post-operative wound infection after repairing a conchal bowl defect with a full-thickness skin graft
Level 3 Selects and designs low-complexity reconstruction options	Selects and designs a full-thickness skin graft reconstruction on the nose
Performs high-complexity reconstruction	Performs O-to-Z bilateral rotation flaps reconstruction on the scalp
Manages acute complications from high- complexity reconstruction and long-term complications with non-surgical treatments	 Manages a hypertrophic surgical scar with intralesional Kenalog and/or pulsed dye laser Manages an atrophic surgical scar with dermabrasion and/or carbon dioxide (CO₂) laser and/or dermal filler
Level 4 Selects and designs high-complexity reconstruction options	Selects and designs a dorsal nasal rotation, Banner transposition, or bilobed transposition flap on the nose
Performs high-complexity, multi-staged reconstruction	Designs and performs multi-staged reconstruction (e.g., nasolabial, postauricular to auricular, or paramedian forehead interpolation flaps) for a defect
Assists with management of long-term complications with surgical treatments	 Identifies need for referral to oculoplastic surgery for reconstruction of the lacrimal system Assists with scar revision to address webbing by performing Z-plasty
Level 5 Designs a novel reconstruction	Independently designs a novel transposition flap to repair a large scalp defect

Efficiently performs high-complexity, multi- staged reconstruction	Designs a unique combination repair using two distinct flaps to reconstruct a multisubunit defect
Manages long-term complications with surgical treatments	• Identifies webbing in the medial canthal area and performs a Z-plasty surgical revision
Assessment Models or Tools	Chart review
	Direct observation
	Evaluations
	Multisource feedback
	Procedure logs
Curriculum Mapping	•
Notes or Resources	• Baker SR. <i>Local Flaps in Facial Reconstruction</i> . 3rd ed. Philadelphia, PA: Elsevier Sanders; 2014. ISBN:978-1455753161.
	• Goldman G, Dzubow L, Yelverton C. <i>Facial Flaps Surgery</i> . 1st ed. China: McGraw-Hill; 2013. ISBN:978-0071749251.
	• Jiang SB, Ortiz AE. <i>Reconstructive Dermatologic Surgery</i> . 1st ed. New Delhi, India: Jaypee Brothers Medical Publishers (P) Ltd; 2017. ISBN:978-9351529415.
	• Kaufman A. <i>Practical Facial Reconstruction</i> . China: Wolters Kluwer; 2016. ISBN:978-1496300942.
	Mohs College Curriculum. https://www.mohscollege.org/sisrb/ACMSCoreCurriculum.pdf . 2020.
	• Paver R, Stanford D, Storey L. <i>Dermatologic Surgery: A Manual of Defect Repair Options</i> . Australia: McGraw-Hill Book Company Australia; 2010. ISBN:978-0070285392.
	Robinson JK, Hanke CW, Siegel DM, Fratila A. Surgery of the Skin: Procedural Dermatology. 2nd ed. China: Elsevier; 2010. ISBN:978-0323065757.
	Rohrer TE, Cook JL, Kaufman A. <i>Flaps and Grafts in Dermatologic Surgery</i> . 2nd ed. Philadelphia, PA: Elsevier; 2017. ISBN:978-0323476621.

Patient Care 3: Mohs Histopathology Overall Intent: To prepare, accurately interpret, and troubleshoot errors on Mohs frozen section histopathology slides	
Milestones	Examples
Level 1 Discusses en face sectioning and the process for preparing tissue for frozen section	Distinguishes Mohs section from routine histopathology section
Identifies straightforward tumors on frozen section	Identify basal cell carcinoma; squamous cell carcinoma
Level 2 Assesses a Mohs slide competently for	Identifies if a tumor is present on true margin
the presence/absence of tumor	Recognizes when epidermis is missing
	Identifies excessive hematoxylin staining
Identifies artifacts on frozen section Level 3 Identifies when a recut is needed	If fat is missing on the slide, asks technician for a recut
Level 3 Identifies when a recut is needed	Identifies pagetoid spread in sebaceous carcinoma
Identifies normal variants, less common tumors,	Identifies basal cell mimicker basaloid follicular hamartoma
and high-risk features on frozen section	The state of the s
Level 4 Troubleshoots slides and suggests	Recognizes washboarding/chatter artifact and suggests to the technician to tighten the
technical solutions	blade on the cryomicrotome
	Identifies microcystic adenexal carcinoma
Identifies unexpected findings, and rare and	Identifies perineural invasion and measures with micrometer
unusual tumors on frozen section Level 5 Prepares frozen section slides	Accurately captures complete epidermal edges when preparing slides
Level 3 Frepares mozem section sinces	Accurately captures complete epidermal edges when preparing slides
Interprets frozen immunohistochemistry stains	Distinguishes between melanoma in-situ and normal epidermis
Assessment Models or Tools	Direct observation
	Formal review of Mohs frozen section slide collections
Curriculum Mapping	•
Notes or Resources	• Aasi SZ, Leffell DJ, Lazova RZ. <i>Atlas of Practical Mohs Histopathology</i> . 2013th edition.
	New York, NY: Springer; 2012. ISBN:978-1461451600.
	• Association of Professors of Dermatology (APD). Simple Excision & Repair Assessment Tool: Expert rater checklist/scale for assessing technical skills during a simple excision.
	https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/ExcisionToolCh
	ecklist Alam 9-24%20v2.pdf. 2020.
	Gross K. Mohs Surgery and Histopathology (Beyond the Fundamentals). 1st ed. New
	York, NY: Cambridge University Press; 2009. ISBN:978-0521888042.

• Morgan MB, Spencer JM, Hamill Jr JR, Thornhill R. Atlas of Mohs and Frozen Section
Cutaneous Pathology. 2nd ed. Cham, Switzerland: Springer; 2018. ISBN:978-
3319748467.

Patient Care 4: Diagnosis and Management Overall Intent: To accurately diagnose stage of and treat cutaneous malignancies	
Milestones	Examples
Level 1 Diagnoses and manages common malignant lesions and discusses current staging systems	Discusses current American Joint Committee on Cancer (AJCC) staging system when managing squamous cell carcinoma
Discusses risks and benefits of non-surgical management options	 Succinctly explains to a patient that a large squamous cell carcinoma of the head and neck, with poorly differentiated histology, and a history of immunosuppression puts the patient at much higher risk for disease progression compared to otherwise healthy patients Discusses the intention and benefits of Mohs micrographic surgery and identifies scenarios where simpler options (e.g., standard excision, electrodesiccation and curettage, intralesional chemotherapy) are more appropriate or more desirable
Level 2 Orders additional diagnostic testing to narrow the differential diagnosis or for staging	 Identifies a high-risk squamous cell carcinoma and recommends nodal evaluation of the head and neck Discovers a palpable node in the region of a large head and neck squamous cell carcinoma and recommends guided core biopsy
Identifies patients who would benefit from non- surgical management	 Recognizes large caliber perineural invasion on pathology report and recommends radiation oncology consultation Recognizes Breslow depth (greater than 0.8mm) with ulceration on a melanoma referred for standard excision and instead refers to surgical oncology for sentinel lymph node biopsy at time of excision
Level 3 Diagnoses and manages complex malignant lesions and stages tumor	When intra-operative staging, identifies perineural invasion on Mohs sections for squamous cell carcinoma, depth of invasion beyond subcutaneous fat, and clinical bony erosion following resection of galea
Selects and manages alternative treatment and/or adjuvant therapy or work-up in addition to or in place of surgery	 Arranges for colonoscopy in a patient with perianal extramammary Paget's disease Recognizes that, even in the setting of clear surgical margins, Merkel cell carcinoma requires a multidisciplinary approach for disease control
Level 4 Diagnoses and manages rare and unusual malignant lesions	Diagnoses and manages sweat gland carcinoma of nasal tip
Coordinates multidisciplinary care for non- surgical management	Organizes and presents case at tumor board

Level 5 Prescribes novel non-surgical treatment options	Enrolls patient in university-sponsored immunotherapy trial for advanced cutaneous squamous cell carcinoma
	Prescribes and manages Vismodegib for patient with basal cell naevus syndrome
Assessment Models or Tools	Attendance at and participation in multidisciplinary tumor board
	Direct observation
Curriculum Mapping	
Notes or Resources	 American Joint Committee on Cancer. <i>AJCC Cancer Staging Manual</i>. 8th edition. Springer International Publishing. 2017. https://www.springer.com/us/book/9783319406176 National Comprehensive Cancer Network (NCCN). NCCN Guidelines. https://www.nccn.org/professionals/physician_gls/default.aspx. 2020. Que SKT, Zwald FO, Schmults CD. Cutaneous squamous cell carcinoma: Incidence, risk factors, diagnosis, and staging. <i>J Am Acad Dermatol</i>. 2018;78(2):237-247. https://pubmed.ncbi.nlm.nih.gov/29332704/. 2020. Que SKT, Zwald FO, Schmults CD. Cutaneous squamous cell carcinoma: Management of advanced and high-stage tumors. <i>J Am Acad Dermatol</i>. 2018;78(2):249-261. https://pubmed.ncbi.nlm.nih.gov/29332705/. 2020.

Medical Knowledge 1: Micrographic Surgery Overall Intent: To demonstrate knowledge necessary to perform Mohs Micrographic surgery	
Milestones	Examples
Level 1 Demonstrates knowledge of surgically relevant normal anatomy and physiology, and principles of wound healing	 Identifies the temporal nerve danger zone Describes the phases of second intent wound healing Describes the stages of healing for a full-thickness skin graft Identifies collagen xenograft as a skin substitute
Level 2 Demonstrates knowledge of surgically relevant anatomic variations and peri-operative considerations	 Discusses the importance of avoiding damage to the temporal nerve when operating on the temple and counsels patient of risk when appropriate Identifies the need for pre-operative antibiotic prophylaxis for a patient with a recent total knee replacement and a mucosal squamous cell carcinoma Counsels patient preoperatively with regards to anticoagulation
Level 3 With assistance, identifies surgically relevant anatomic variations and perioperative considerations and alters patient management accordingly	 With prompting, changes to blunt-tipped undermining scissors and careful dissection for reconstruction of a deep defect on the temple With assistance, identifies frontal branch of superficial temporal artery and performs figure-of-eight stitch for hemostasis, if needed
Level 4 Independently identifies surgically relevant anatomic considerations and perioperative considerations, and alters patient management accordingly	 Uses blunt-tipped undermining scissors and careful dissection for reconstruction of a deep defect on the temple Uses bipolar forceps or heat cautery for treating surgical site on the chest of a patient with a defibrillator
Level 5 Significantly contributes to the surgical curriculum for a dermatology residency program or micrographic surgery and dermatologic oncology fellowship	Organizes and leads a cadaver lab to teach anatomy and reconstructive techniques
Assessment Models or Tools	 Direct observation Evaluations E-module multiple choice test Multisource feedback
Curriculum Mapping	
Notes or Resources	 American College of Mohs Surgery Board Review Materials https://www.mohscollege.org/. 2020 American Society of Dermatologic Surgery. Primer in Dermatologic Surgery. https://www.asds.net/medical-professionals/members-resources/product-details/productname/primer. 2020. Mohs College Curriculum. https://www.mohscollege.org/sisrb/ACMSCoreCurriculum.pdf. 2020.

• Robinson JK, Hanke CW, Siegel DM, Fratila A. Surgery of the Skin: Procedural Dermatology. 2nd ed. China: Elsevier; 2010. ISBN:978-0323065757.

Medical Knowledge 2: Cutaneous Oncology Overall Intent: To demonstrate knowledge of cutaneous oncology	
Milestones	Examples
Level 1 Demonstrates basic knowledge of cutaneous oncology	 Recognizes common tumors occurring in skin Discusses association of ultraviolet radiation with tumor incidence and recommends sunscreen and sun barrier and sun avoidance behaviors
Level 2 Demonstrates comprehensive knowledge of cutaneous oncology and clinical implications	 Aware of differential risks associated with squamous cell carcinoma in high-risk locations; poorly differ histologic subtype; large clinical size; recurrent nature, etc. Staging squamous cell carcinoma melanoma staging, basal cell carcinoma tumor subtypes, differences in outcomes between in situ invasive squamous cell carcinoma Stages Merkel cell carcinoma, sebaceous carcinoma Understands locally aggressive nature of dermatofibrosarcoma protuberans and scope of procedure to remove it
Level 3 With assistance, applies knowledge of common cutaneous oncology into medical decision making	 Makes basic recommendations regarding adjuvant therapies for high-risk squamous cell carcinoma Recognizes patients who can benefit from pre-operative imaging Identifies most patients who may benefit from inter-specialty treatment
Level 4 Independently incorporates knowledge of complex cutaneous oncology into medical decision making	 Advises patients without supervision on potential benefits and risks of adjuvant therapy Discusses the need for follow-up with patients with high-risk tumor characteristics Develops treatment plans for patients with both common and rare types of cutaneous neoplasms Recommends nicotinomide to patients with frequent skin cancers Discusses treatment options for patients with metastatic Merkel cell carcinoma; unresectable cutaneous neoplasms
Level 5 Recommends novel investigations based on knowledge of cutaneous oncology and clinical trials	In transplant patients with multiple or single aggressive cutaneous tumors, discusses option of immunosuppression change to siroliumus with transplant team
Assessment Models or Tools	 Direct observation Evaluations E-module multiple choice test Multisource feedback
Curriculum Mapping	•
Notes or Resources	Textbooks

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 safety events	Lists patient misidentification or medication errors as common patient safety events Identifies use of personal protective equipment as a safety precaution
Demonstrates knowledge of how to report patient safety events	 Describes how to report errors or near misses in your environment Describes fishbone tool
Demonstrates knowledge of basic quality improvement methodologies and metrics	
Level 2 Identifies system factors that lead to safety events	Identifies lack of hand sanitizer dispenser at each clinical exam room may lead to increased infection rates
Reports patient safety events through institutional reporting systems	Reports lack of hand sanitizer dispenser at each clinical exam room to the medical director
Describes local quality improvement initiatives	Summarizes protocols to decrease needle sticks
Level 3 Participates in analysis of safety events (simulated or actual)	Prepares for morbidity and mortality (M and M) presentations
Participates in disclosure of patient safety events to patients and their families (simulated or actual)	During a standardized patient encounter, communicates with patients/families about a lost specimen error
Participates in local quality improvement initiatives	Participates in project identifying root cause of rooming inefficiency
Level 4 Conducts analysis of safety events and offers error prevention strategies (simulated or actual)	Collaborates with a team to conduct the analysis of a lost specimen error and can effectively communicate with patients/families about those events
Discloses patient safety events to patients and their families (simulated or actual)	Participates in the completion of a QI project to improve hand hygiene within the practice, including assessing the problem, articulating a broad goal, developing a SMART (Specific, Measurable, Attainable, Realistic, Timely) objective plan, and monitoring progress and challenges

Demonstrates the skills required to identify, develop, implement, and analyze a quality	
improvement project	
Level 5 Actively engages teams and processes to modify systems to prevent safety events	Assumes a leadership role at the departmental or institutional level for patient safety
Mentors others in the disclosure of patient safety events	Conducts a simulation for disclosing patient safety events
Creates, implements, and assesses quality improvement initiatives at the institutional or community level	Initiates and completes a QI project to improve institution hand hygiene rates in collaboration with the medical center and shares results with stakeholders
Assessment Models or Tools	 Direct observation E-module multiple choice tests Medical record (chart) audit Multisource feedback Portfolio Reflection Simulation
Curriculum Mapping	•
Notes or Resources	 Hansen TJ, Lolis M, Goldberg DJ, MacFarlane DF. Patient safety in dermatologic surgery: Part I. Safety related to surgical procedures. <i>J Am Acad Dermatol</i>. 2015;73(1):1-12. https://pubmed.ncbi.nlm.nih.gov/26089045/. 2020. Institute of Healthcare Improvement. http://www.ihi.org/Paqes/default.aspx. 2020. Lolis M, Dunbar SW, Goldberg DJ, Hansen TJ, MacFarlane DF. Patient safety in procedural dermatology: part II. Safety related to cosmetic procedures. <i>Journal of the American Academy of Dermatology</i>. 2015;73(1):15-24. https://pubmed.ncbi.nlm.nih.gov/26089046/. 2020.

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-qua	, , ,	
Milestones	Examples	
Level 1 Demonstrates knowledge of care coordination	For a patient with metastatic melanoma identifies the oncologist, home health nurse, and social workers as members of the team	
Identifies key elements for safe and effective transitions of care and hand-offs	Lists the essential components of a hand-off tool and care transition and hand-offs	
Demonstrates knowledge of population and community health needs and disparities	Identifies that patients in rural areas may have different needs than urban patients	
Level 2 Coordinates care of patients in routine clinical situations, effectively using the roles of the interprofessional team members	Coordinates care with the wound care clinic at the time of discharge from the hospital	
Performs safe and effective transitions of care/hand-offs in routine clinical situations	Provides sign-out on a stable patient with a wound infection, including illness severity, patient summary, action list, and contingency plans	
Identifies specific population and community health needs and inequities for the local population	Identifies that limited transportation options may be a factor in rural patients getting to multiple Mohs surgery appointments	
Level 3 Coordinates care of patients in complex clinical situations, effectively using the roles of the interprofessional team members	Works with the social worker to coordinate care for a homeless patient with wound dehiscence that will require financial assistance to complete treatment	
Performs safe and effective transitions of care/hand-offs in complex clinical situations	Provides sign-out on a stable patient with flap necrosis, including illness severity, patient summary, action list, and contingency plans	
Uses local resources effectively to meet the needs of a patient population and community	 Refers patients to a local clinic and prints pharmacy coupons for patients in need Identifies that limited transportation and out-of-pocket costs may be a factor for a patient getting multiple dermatology appointments 	
Level 4 Leads effective coordination of patient- centered care among different disciplines and specialties	Leads team members in approaching consultants to review cases/recommendations and arranges tumor board for the team	

Advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems including outpatient settings	Prior to going on vacation, proactively informs the covering physician about a plan of care for a transplant patient with an enlarging tumor with a pending skin biopsy result
Participates in changing and adapting practice to provide for the needs of specific populations	Assists to design protocols for clinic check-in of transgender patients
Level 5 Analyzes the process of care coordination and leads in the design and implementation of improvements	Leads a program to ensure appropriate follow-up for melanoma patients who need surveillance skin checks
Improves quality of transitions of care within and across health care delivery systems to optimize patient outcomes	Develops a protocol to improve transition to home health care dermatology for a patient with a large lower extremity wound healing by second intent
Leads innovations and advocates for populations and communities with health care inequities	Leads development of teledermatology services for a rural site
Assessment Models or Tools	Direct observation
	Medical record (chart) audit Multisource feedback
	Objective structured clinical examination (OSCE)
	Quality metrics and goals mined from electronic health record (EHR)
	Review of sign-out tools, use and review of checklists
Curriculum Mapping	•
Notes or Resources	 CDC. Population Health Training in Place Program (PH-TIPP). https://www.cdc.gov/pophealthtraining/whatis.html 2020. Kaplan KJ. In pursuit of patient-centered care. http://tissuepathology.com/2016/03/29/in-pursuit-of-patient-centered-care/#axzz5e7nSsAns. 2020. Skochelak SE, Hawkins RE, Lawson LE, Starr S, Borkan J, Gonzalo J. Health Systems
	Science. 1st ed. Philadelphia, PA: Elsevier; 2016. • Starmer, AJ, et al. I-pass, a mnemonic to standardize verbal handoffs. Pediatrics. 2012;129(2):201-204. https://pubmed.ncbi.nlm.nih.gov/22232313/ . 2020.

Systems-Based Practice 3: Physician Role in Health Care Systems	
Overall Intent: To understand the role in the complex health care system and how to work within and optimize the system to improve patient care and the health system's performance	
Milestones	Examples
Level 1 Identifies key components of the complex health care system	Articulates the roles of primary care providers and dermatology specialists in the management of skin disease
Describes basic health payment systems and practice models	Understands the impact of health plan coverage on prescription drugs for individual patients
Identifies basic practice management knowledge domains for effective transition to practice	Identifies that notes must meet coding requirements
Level 2 Describes how components of a complex health care system are interrelated, and how this impacts patient care	Aware that a patient needs prior authorization for flaps and grafts
Delivers care with consideration of each patient's payment models	Takes into consideration patient's prescription drug coverage when choosing a treatment for actinic keratoses
Describes core administrative knowledge needed for transition to practice	Describes the elements required for proper evaluation and management coding in the EHR
Level 3 Discusses how individual practice affects the broader system	Provides post-operative counseling and sets follow-up appointments to avoid patients seeking non-urgent care in the emergency department
Engages with patients in shared decision making, informed by each patient's payment models	Discusses risks and benefits of surgical treatment of an asymptomatic lipoma when a patient has a high out-of-pocket deductible
Demonstrates use of information technology required for medical practice	Communicates patient laboratory results through online patient portal
Level 4 Manages various components of the complex health care system to provide efficient and effective patient care	Ensures proper EHR documentation for a prior authorization for a patient with basal cell nevus syndrome patient on vismodegib including pertinent comorbidities and contraindications

Advocates for patient care needs with consideration of the limitations of each patient's payment models	Applies for patient assistance programs for prescription drugs on behalf of a patient with basal cell nevus syndrome and limited resources
Analyzes individual practice patterns and professional requirements in preparation for practice	 Proactively compiles and reviews procedure log in anticipation of applying for hospital privileges Tracks average stage count
Level 5 Advocates for or leads systems change that enhances high-value, efficient, and effective patient care	Works with community or professional organizations to advocate for restrictions on indoor tanning
Participates in health policy advocacy activities	Improves informed consent process for non-English-speaking patients requiring interpreter services
Educates others to prepare them for transition to practice	
Assessment Models or Tools	 Direct observation Medical record (chart) audit Patient satisfaction data Portfolio
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. 2020. American Board of Dermatology. Focused Practice Improvement Modules. https://secure.dataharborsolutions.com/ABDermOrg/Default.aspx. 2020. American Board of Internal Medicine. QI/PI activities. https://www.abim.org/maintenance-of-certification/earning-points/practice-assessment.aspx. 2020. AHRQ. Major Physician Measurement Sets. https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/physician/measurementsets.html. 2020. The Commonwealth Fund. Health System Data Center. https://datacenter.commonwealthfund.org/? ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1. 2020. Dzau VJ, McClellan M, Burke S, et al. Vital directions for health and health care: priorities from a National Academy of Medicine Initiative. https://www.ahrq.gov/professionals/quality/create/physician/measurementsets.html. 2020. Dzau VJ, McClellan M, Burke S, et al. Vital directions for health and health care: priorities from a National Academy of Medicine, Washington, DC. https://www.ahrq.gov/professionals/quality/create/physician/measurementsets.html. 202

• The Kaiser Family Foundation: Topic: Health Reform. https://www.kff.org/topic/health-reform/. 2020.

Systems-Based Practice 4: Accreditation, Compliance, and Quality Overall Intent: To gain in-depth knowledge of the components of laboratory accreditation, regulatory compliance, and quality management **Milestones Examples Level 1** Demonstrates knowledge that • Attends departmental quality assurance /quality control meetings, M and M conferences and accreditation/regulatory summation meetings laboratories must be accredited • Is aware of College of American Pathologists (CAP) and Clinical Laboratory Improvement Amendments (CLIA) regulations Discusses the need for quality control and • Discusses the need for alternative proficiency testing when commercial material is proficiency testing unavailable Level 2 Demonstrates knowledge of the • Can explain the difference between quality control and quality assay verification and components of laboratory accreditation and validation in context of CLIA regulations regulatory compliance, either through training or experience Interprets quality data, charts, and trends, • Interprets daily quality control and proficiency test reports including proficiency testing results, with supervision **Level 3** Identifies the differences between Identifies the need and assists with an application to add a new test to an existing CLIA accreditation and regulatory compliance; certificate discusses the process for achieving accreditation and maintaining regulatory compliance Discusses implications of proficiency testing • Reviews evaluation forms of CAP Surveys, identifying additional actions to take based on failures the results • Performs a self-inspection using the Common CAP/CLIA checklists **Level 4** Participates in an internal or external laboratory inspection (actual or simulated) Performs analysis and review of proficiency Assists in developing a strategy for handling quality control or proficiency testing failures testing failures and recommends a course of action, with oversight Level 5 Independently formulates a response • Develops strategies for quality control or proficiency testing failures for proficiency testing failures Assessment Models or Tools Assignment of duties for departmental or hospital quality assurance/quality control

committees

	 Direct observation Documentation of inspector training and participation in resident portfolio Multisource evaluation Planning and completion of QI projects Presentation at M and M conferences Rotation evaluations
	Simulation
Curriculum Mapping	
Notes or Resources	College of American Pathologists. Laboratory Accreditation Program.
	https://www.cap.org/laboratory-improvement/accreditation/laboratory-accreditation-
	<u>program</u> . 2020.
	• Electronic Code of Federal Regulations. https://www.ecfr.gov/cgi-bin/text-
	<u>idx?SID=1248e3189da5e5f936e55315402bc38b&node=pt42.5.493&rgn=div5#se42.5.493</u>
	11. 2020.

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 and use available evidence, and incorporate patient preferences and values in order to take care of a routine patient	Identifies evidence-based guidelines for the management of Merkel cell carcinoma
Level 2 Articulates clinical questions and elicits patient preferences and values to guide evidence-based care	In a patient with Merkel cell carcinoma, solicits patient perspective
Level 3 Locates and applies the best available evidence, integrated with patient preference, to the care of complex patients	Obtains, discusses, and applies clinical practice guidelines for the treatment of a patient with Merkel cell carcinoma and metabolic syndrome while eliciting patient preferences
Level 4 Critically appraises and applies evidence even in the face of uncertainty and conflicting evidence to guide care, tailored to the individual patient	Accesses the primary literature to identify alternative treatments for patients with Merkel cell carcinoma with organ transplant
Level 5 Coaches others to critically appraise and apply evidence for complex patients; and/or participates in the development of guidelines	As part of a team, develops standardizing management protocol for melanoma surveillance program at the institution
Assessment Models or Tools	 Direct observation Oral or written examinations Presentation evaluation Quality improvement project Research portfolio
Curriculum Mapping	•
Notes or Resources	 Institutional IRB guidelines National Institutes of Health. U.S. National Library of Medicine. PubMed Tutorial. https://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html. 2020. National Institutes of Health. U.S. National Library of Medicine. Write Your Application. https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/write-your-application.htm. 2020. Patient Centered Outcomes Research Institute (PCORI). Funding Opportunities. https://www.pcori.org/funding-opportunities. 2020. Silverberg JI. Study designs in dermatology: A review for the clinical dermatologist. <i>J Am Acad Dermatol</i>. 2015;73(5):721-31. https://pubmed.ncbi.nlm.nih.gov/26475532/. 2020.

Silverberg JI. Study designs in dermatology: Practical applications of study designs and
their statistics in dermatology. <i>J Am Acad Dermatol</i> . 2015;73(5):733-40.
https://www.researchgate.net/publication/283781024 Study designs in dermatology Pr
actical applications of study designs and their statistics in dermatology 2020.
Various journal submission guidelines

Practice-Based Learning and Ir	mprovement 2: Reflective Practice and Commitment to Personal Growth
	formation to improve patient care; reflect on all domains of practice, personal interactions, and
behaviors, and their impact on colleagues and p	patients (reflective mindfulness); develop clear objectives and goals for improvement
Milestones	Examples
Level 1 Accepts responsibility for personal and professional development by establishing goals	Sets a personal practice goal of learning and applying the necessary components of medical documentation required for coding and billing
Identifies the factors that contribute to gap(s) between expectations and actual performance	Identifies gaps in knowledge of differentiating basal cell carcinoma from follicular structures
Actively seeks opportunities to improve	Asks for feedback from patients, families, and patient care team members
Level 2 Demonstrates openness to performance data (feedback and other input) to inform goals	Reviews patient satisfaction survey data and provider evaluations prior to semiannual performance review to develop plans for improvement
Analyzes and reflects on the factors that contribute to gap(s) between expectations and actual performance	Assesses time management skills and how it impacts timely completion of clinic notes and literature reviews
Designs and implements a learning plan, with prompting	When prompted, develops individual education plan to address identified gaps discussed at mid-year evaluation
Level 3 Seeks performance data episodically, with adaptability and humility	 Performs a chart audit to determine the rate of postoperative infections and formulates a practice improvement plan in collaboration with faculty and staff members Completes a comprehensive literature review prior to a complex patient encounter in an unfamiliar diagnosis
Analyzes, reflects on, and institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance	Independently assesses performance to identify areas of focus for individualized learning plan and reports progress to program director
Independently creates and implements a learning plan	Independently develops learning plans for improving performance on difficult techniques or new conditions
Level 4 Intentionally and consistently seeks performance data with adaptability and humility	Completes a quarterly chart audit to ensure documentation of lymph node examination in patients with invasive melanoma
Challenges own assumptions and considers alternatives in narrowing the gap(s) between expectations and actual performance	After identifying challenge in developing rapport with anxious patients, creates a plan for improving personal communication strategies

Uses performance data to measure the effectiveness of the learning plan and when necessary, improves it	Reviews personal performance metrics from the EHR to track timeliness of completion of documentation and rectify deficiencies
Level 5 Role models consistently seeking performance data with adaptability and humility	Reflects on suboptimal patient communication scores and enrolls in a relationship centered communication course
Coaches others on reflective practice	Develops educational module for collaboration with other patient care team members
Facilitates the design and implementing learning plans for others	Assists upper level residents with a strong interest in Mohs surgery in developing their individualized learning plans
Assessment Models or Tools	 Chart audit Direct observation EHR reports Multisource feedback Patient feedback Review of learning plan /individualized learning plan development
Curriculum Mapping	•
Notes or Resources	 Burke AE, Benson B, Englander R, Carraccio C, Hicks PJ. Domain of competence: Practice-based learning and improvement. <i>Acad Pediatr</i>. 2014;14(2 Suppl):S38-S54. https://pubmed.ncbi.nlm.nih.gov/24602636/. 2020. Hojat M, Veloski JJ, Gonnella JS. Measurement and correlates of physicians' lifelong learning. <i>Acad Med</i>. 2009;84(8):1066-74. https://pubmed.ncbi.nlm.nih.gov/19638773/. 2020. Lockspeiser TM, Schmitter PA, Lane JL, et al. Assessing residents' written learning goals and goal writing skill: validity evidence for the learning goal scoring rubric. <i>Acad Med</i>. 2013;88(10):1558-1563. https://pubmed.ncbi.nlm.nih.gov/23969364/. 2020.

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 Identifies and describes potential triggers for professionalism lapses	Identifies that being tired can cause a lapse in professionalism Identifies that not answering pages has adverse effects on patient care and on professional relationships
Describes when and how to appropriately report professionalism lapses, including strategies for addressing common barriers	Articulates how the principle of "do no harm" applies to a patient who may not need a surgical flap closure even though the training opportunity exists
Demonstrates knowledge of medical ethical principles	Identifies that being late to clinic demonstrates a lapse in professionalism
Level 2 Demonstrates insight into professional behavior in routine situations	Informs faculty members when they will be arriving late to clinic due to delay from inpatient consultation
Takes responsibility for one's own professionalism lapses	Accepts responsibility for being late to teaching conference, without making excuses or blaming others
Analyzes straightforward situations using ethical principles	Postpones non-emergent skin cancer surgery in an elderly patient with altered mental status/not competent to make medical decisions
Level 3 Demonstrates professional behavior in complex or stressful situations	Appropriately responds to a distraught family member, following an adverse surgical complication
Recognizes the need to seek help in managing and resolving complex ethical situations	Requests ethics committee involvement regarding decisions to withhold care in terminal hospitalized patient with metastatic Merkel cell carcinoma
Analyzes complex situations using ethical principles	Offers treatment options for a 3.0cm asymptomatic basal cell of the forehead in a terminally ill patient, free of personal bias, while honoring the patient's choice
Level 4 Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in oneself and others	Recognizes own frustration but models composure and humility when a patient challenges the resident's opinion and shares the experience with peers
Recognizes and uses appropriate resources for managing and resolving ethical dilemmas	Recognizes and uses ethics consults, literature, risk-management/legal counsel to resolve ethical dilemmas

Level 5 Coaches others when their behavior fails to meet professional expectations Identifies and seeks to address system-level	 Identifies a resident who fails to complete documentation in a timely manner, and helps to create a performance improvement plan Engages stakeholders to address excessive wait times in the dermatology clinic to
factors that induce or exacerbate ethical problems or impede their resolution	decrease patient and provider frustrations that lead to unprofessional behavior
Serves as resource for colleagues who face ethical dilemmas	
Assessment Models or Tools	Direct observation
	Global evaluation
	Multisource feedback
	Oral or written self-reflection
	Simulation
Curriculum Mapping Notes or Resources	
Notes of Resources	 American Medical Association. Ethics. https://www.ama-assn.org/delivering-care/ama-code-medical-ethics. 2020. 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. <i>Ann Intern Med</i> . 2002;136:243-246. http://abimfoundation.org/wp-content/uploads/2015/12/Medical-Professionalism-in-the-New-Millenium-A-Physician-Charter.pdf . 2020.
	APD. Journal Entry Competency Assessment. https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/ProCom%20JE CA modified%20092413%20v3.pdf. 2020.
	Bynny RL, Paauw DS, Papadakis MA, Pfeil S. <i>Medical Professionalism. Best Practices: Professionalism in the Modern Era</i> . Menlo Park, CA: Alpha Omega Alpha Medical Society; 2017. ISBN:978-1-5323-6516-4.
	Levinson W, Ginsburg S, Hafferty FW, Lucey CR. <i>Understanding Medical Professionalism</i> . 1st ed. New York, NY: McGraw-Hill Education; 2014.

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 Responds promptly to requests or reminders to complete tasks	Responds promptly to reminders from program administrator to complete ACGME Case Logs and work hour logs Demonstrates timely attendance at conferences
Proactively ensures that the needs of patients are met	In preparation for being out of the office, notifies a patient with a pending melanoma biopsy that the report is not yet available and arrange for a colleague to discuss the results with the patient during absence
Level 2 Performs routine tasks and responsibilities in a timely manner with appropriate attention to detail	Completes administrative tasks, safety modules, procedure log, work hours, and licensing requirements by specified due date
Takes responsibility for failure to complete tasks and responsibilities	Completes end-of-rotation evaluations
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 while on call, appropriately triages tasks, and asks for assistance from other residents or faculty members as needed
Recognizes situations that may impact one's own ability to complete tasks and responsibilities in a timely manner	Before going on leave, completes tasks in anticipation of lack of computer access while traveling
Level 4 Mitigates situations that may impact others' ability to complete tasks and responsibilities in a timely manner	Takes responsibility for inadvertently omitting key patient information during sign-out and proposes a plan for standardized hand-offs with the interprofessional team
Implements strategies to enhance accountability of team members involved in patient care	Completes notes and care plan promptly, recognizing that others in the team need to carry on their tasks
Level 5 Takes ownership of system outcomes and suggests revisions to the systems to enhance accountability	Sets up a meeting with the nurse manager to streamline referrals and scheduling for high- risk tumors and leads team to find solutions to the problem
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	AAD. Code of Medical Ethics.
	https://server.aad.org/Forms/Policies/Uploads/AR/AR%20Code%20of%20Medical%20Eth
	ics%20for%20Dermatologists.pdf. 2020.
	APD. Journal Entry Competency Assessment.
	https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/ProCom%20JE
	<u>CA_modified%20092413%20v3.pdf</u> . 2020.
	Code of conduct from fellow institutional manual
	Expectations of fellowship program regarding accountability and professionalism

Professionalism 3: Self-Awareness and Help-Seeking Overall Intent: To identify, use, manage, improve, and seek help for personal and professional well-being for self and others	
Milestones	Examples
Level 1 Recognizes status of personal and professional well-being, with assistance	Acknowledges own response to patient's diagnosis of metastatic melanoma
Recognizes limits in one's own knowledge/ skills, with assistance	 Recognizes that they missed emotional cues during a Mohs stage with a patient experiencing anxiety
Level 2 Independently recognizes status of personal and professional well-being	• Independently identifies and communicates impact of a personal family tragedy on ability to provide patient care
Independently recognizes limits in own knowledge/skills and seeks help when appropriate	After receiving notice of knowledge deficits during routine discussion of cases after clinic, identifies barriers to effective study habits
Level 3 Proposes a plan to optimize personal and professional well-being	Works with program director to develop a strategy to support breast feeding after returning from maternity leave
Proposes a plan to remediate or improve limits in one's own knowledge/skills	Develops a plan with program director to improve study habits
Level 4 Independently develops and implements a plan to optimize personal and professional well-being	Independently identifies ways to manage personal stress
Independently develops and implements a plan to remediate or improve limits in one's own knowledge/skills	Attends a hands-on surgical course after identifying weakness in complex suturing technique and flap design
Level 5 Coaches others to optimize personal and professional well-being	Assists in organizational efforts to address resident and fellow well-being
Assessment Models or Tools	 Direct observation Group interview or discussions for team activities Individual interview Institutional online training modules Self-assessment and personal learning plan
Curriculum Mapping	
Notes or Resources	• This subcompetency is not intended to evaluate a fellow's well-being, but to ensure each fellow 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.
- ACGME. "Well-Being Tools and Resources." https://dl.acgme.org/pages/well-being-tools-resources. Accessed 2022.
- AAIM. Annotated Bibliography of Evidence Based Well-Being Interventions. https://www.im.org/resources/wellness-resiliency/charm/best-practice-group. 2020.
- APD. Journal Entry Competency Assessment.
 https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/ProCom%20JE
 CA modified%20092413%20v3.pdf. 2020.
- Hicks, Patricia J., Daniel Schumacher, Susan Guralnick, Carol Carraccio, and Ann E. Burke. 2014. "Domain of Competence: Personal and Professional Development."
 Academic Pediatrics 14(2 Suppl): S80-97.
 https://www.sciencedirect.com/science/article/abs/pii/S187628591300332X.
- Local resources, including Employee Assistance programs

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		
Level 1 Uses language and non-verbal behavior to demonstrate respect and establish rapport with patients of different socioeconomic and cultural backgrounds	Introduces self and faculty member, identifies patient and others in the room, and engages all parties in health care discussion	
Identifies common barriers (e.g., language, disability/hearing) to effective communication	 Requests trained interpreter with non-English-speaking patients prior to obtaining informed consent for shave biopsy Uses trained interpreter beyond the consent for interacting with patient for longer procedures 	
Identifies elements of shared decision making	Acknowledges the importance of including a family member or health care proxy when discussing treatment for skin cancer in a patient with dementia	
Level 2 Establishes a therapeutic relationship in straightforward encounters using active listening and clear language	Avoids medical jargon and restates patient perspective when discussing treatment for basal cell carcinoma	
Identifies complex barriers (e.g., health literacy, cultural differences) to effective communication	 Explains importance of skin cancer prevention and detections in people of color Understands therapeutic outcome advantages when using trained interpreter instead of family members 	
Identifies the importance of engaging in shared decision making	Works with elderly patient and their care team to identify barriers to topical treatment for actinic keratoses	
Level 3 Establishes a therapeutic relationship in challenging patient encounters, with guidance	Acknowledges patient's request for Mohs surgery for low-risk basal cell carcinoma and explains the rationale for stepwise therapy while maintaining patient rapport	
When prompted, reflects on conscious and unconscious biases while attempting to minimize communication barriers	In a discussion with the faculty member, acknowledges discomfort in caring for a patient with skin cancer who continues to tan	
Uses shared decision making to make a personalized care plan, with guidance	Conducts a family meeting to determine goals of care for a 96-year-old patient with dementia and a basal cell carcinoma on the nose	

Level 4 Independently establishes a therapeutic relationship in challenging patient encounters	Schedules ongoing follow-ups to support a contentious patient with multiple skin cancers and procedural fatigue
Independently recognizes conscious and unconscious biases while attempting to proactively minimize communication barriers	 Recognizes personal frustration when using an interpreter during a patient encounter and accounts for a longer visit time to accommodate communication Reflects on implicit bias after a challenging patient encounter
Independently uses shared decision making to make a personalized care plan	Uses input from an elderly patient's power of attorney who insists on Mohs surgery for a low-risk basal cell carcinoma
Level 5 Mentors others in situational awareness and critical self-reflection to consistently develop positive therapeutic relationships	Develops a residency curriculum on implicit bias
Independently uses shared decision making to make a personalized care plan when there is a high degree of uncertainty	Leads a discussion with patient and family members regarding treatment strategies for a young man with a rare adnexal tumor without clear guidelines for standard of care
Assessment Models or Tools	 Direct observation OSCE Self-assessment including self-reflection exercises Standardized patients
Curriculum Mapping	•
Notes or Resources	 AAD. Simulated Patient Encounters. https://store.aad.org/products/12923. 2020. Hong J, Nguyen TV, Prose NS. Compassionate care: enhancing physician-patient communication and education in dermatology: Part II: Patient education. J Am Acad Dermatol. 2013;68(3):364.e1-10. https://pubmed.ncbi.nlm.nih.gov/23394924/. 2020. 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://pubmed.ncbi.nlm.nih.gov/21182378/. 2020. Makoul G. Essential elements of communication in medical encounters: the Kalamazoo consensus statement. <a "="" 11602365="" href="https://journals.lww.com/academicmedicine/Fulltext/2001/04000/Essential Elements of Communication in Medical.21.aspx#pdf-link. 2020. Makoul G. The SEGUE Framework for teaching and assessing communication skills. Patient Educ Couns. 2001;45(1):23-34. https://pubmed.ncbi.nlm.nih.gov/11602365/. 2020. Nguyen TV, Hong J, Prose NS. Compassionate care: enhancing physician-patient communication and education in dermatology: Part I: Patient-centered communication.

 Am Acad Dermatol. 2013;68(3):353.e1-8. https://pubmed.ncbi.nlm.nih.gov/23394923/. 2020. 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/. 2020.

Interpersonal and Communication Skills 2: 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 Recognizes when a consultation is • Requests consultation with radiation oncology for squamous cell carcinoma with perineural spread needed • Accepts consult request from the transplant surgery team for ongoing screening of solid Respectfully receives a consultation request organ transplant patient Uses language that demonstrates that one • Acknowledges the contribution of each member of support staff in clinic values all members of the health care team Level 2 Clearly communicates key reasons for a • Explains to radiation oncology the reason for adjuvant post-operative radiation therapy based on Mohs section findings requested consultation Clearly and concisely responds to a consultation Listens carefully to requesting provider, confirms clinical question, and affirms that request request will be addressed promptly Solicits feedback on performance as a member Contacts the Mohs nurse and histotechnician to elicit feedback of the health care team Level 3 Confirms comprehension of consultant When receiving treatment recommendations from an attending physician, repeats back recommendations the plan to ensure understanding • After a consultation has been completed, communicates with the primary care team to Checks understanding of recommendations when providing consultation verify they have received and understand the recommendations Communicates concerns and provides feedback • Discusses opportunities for improvement on quality of in clinic presentation to rotating to peers and learners medical student • Participates in a multidisciplinary tumor board to develop a shared care plan for a patient **Level 4** Coordinates recommendations from with advanced squamous cell carcinoma with lymph node metastasis different members of the health care team to optimize patient care • After an attending recommends vismodegib for a newly diagnosed patient with advanced Communicates feedback and constructive basal cell carcinoma, the fellow discusses the rationale for first line use of this medication criticism to superiors

class

Level 5 Role models flexible communication strategies that demonstrate one values input from all health care team members, resolving conflict when needed Facilitates regular health care team-based feedback in complex situations	 When faced with discordant treatment recommendations for Merkel cell carcinoma from multiple consultation services, coordinates and helps lead a multidisciplinary meeting to clarify and align clinical decision making Creates a monthly meeting for providers and staff members in the resident-run county clinic to improve workflow and safety
Assessment Models or Tools	 Direct observation Global assessment Medical record (chart) audit Multisource feedback Simulation Self-reflection
Curriculum Mapping	
Notes or Resources	 Afifi L, Shinkai K. Communication strategies for a successful inpatient dermatology consultative service: A narrative review. Semin Cutan Med Surg. 2017;36(1):23-27. https://pubmed.ncbi.nlm.nih.gov/28247872/. 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(24):2313-2320. https://pubmed.ncbi.nlm.nih.gov/10612318/. Dehon E, Simpson K, Fowler D, Jones A. Development of the faculty 360. MedEdPORTAL. 2015;11:10174. https://www.researchgate.net/publication/282533153 Development of the Faculty 360. 2020. Fay D, Mazzone M, Douglas L, Ambuel B. A validated, behavior-based evaluation instrument for family medicine residents. MedEdPORTAL. 2007;3:622. https://www.mededportal.org/doi/10.15766/mep 2374-8265.622. 2020. 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/. 2020. Green M, Parrott T, Cook G. Improving your communication skills. BMJ. 2012;344:e357. https://www.bmj.com/content/344/bmj.e357.full.print. 2020. 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://pubmed.ncbi.nlm.nih.gov/23444891/. 2020.



Interpersonal and Communication Skills 3: Communication within Health Care Systems Overall Intent: To effectively communicate using a variety of methods	
Milestones	Examples
Level 1 Accurately records information in the electronic health record (EHR) in a timely manner	Documents in the medical record accurately, but documentation may include extraneous information
Safeguards protected health information by	Shreds written documentation with patient identifiers after clinic
using appropriate communication channels	● In the cafeteria, defers conversation with peer about a recent mutual patient in clinic
Level 2 Demonstrates organized diagnostic and therapeutic reasoning through notes in the EHR	Outlines clinical reasoning that supports the treatment plan in an organized and accurate document
Uses documentation tools and short cuts (e.g., copy/paste) accurately and appropriately, per	 Uses documentation templates appropriately for Mohs surgery procedure note Writes a note for a patient on acetretin, copying forward last month's visit and updating
institutional policy	dose, current side effects, exam, and plan
Level 3 Concisely reports diagnostic and therapeutic reasoning in the EHR	Concisely documents complex clinical thinking, but may not contain anticipatory guidance
Appropriately selects and uses direct (e.g., telephone, in-person) and indirect (e.g., progress notes, texts, and inbox messages) forms of communication based on context	Calls patient in a timely manner about recent biopsy result of squamous cell carcinoma and documents telephone encounter
Level 4 Communicates clearly, concisely, and in an organized written form, including anticipatory guidance	Appropriately documents patient counseling for a woman of child-bearing age being treated with vismodegib, accurately documenting time frame for avoidance of pregnancy
Provides written or verbal communication (e.g., patient notes, email) that serves as an example for others to follow	Composes exemplary notes that are used to teach others
Level 5 Coaches others to improve written communication	Leads a work group established by the department to improve the quality of documentation in resident clinic notes
Guides departmental or institutional communication around policies and procedures	Leads a quality and patient safety committee to communicate biopsy results in a timely manner
Assessment Models or Tools	Direct observationMedical record (chart) audit

	Multisource feedback
Curriculum Mapping	
Notes or Resources	 American Academy of Dermatology (AAD). Simulated Patient Encounters. https://store.aad.org/products/12923. 2020. 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. <i>Teach Learn Med.</i> 2017;29(4):420-432. https://www.scholars.northwestern.edu/en/publications/promoting-responsible-electronic-documentation-validity-evidence 2020. Haig KM, Sutton S, Whittington J. SBAR: a shares mental model for improving communications between clinicians. <i>Jt Comm J Qual Patient Saf.</i> 2006;32(3):167-75. https://www.jointcommissionjournal.com/article/S1553-7250(06)32022-3/fulltext. 2020. Hong J, Nguyen TV, Prose NS. Compassionate care: enhancing physician-patient communication and education in dermatology: Part II: Patient education. J Am Acad Dermatol. 2013;68(3):364.e1-10. https://pubmed.ncbi.nlm.nih.gov/23394924/. 2020. 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. doi: 10.3109/0142159X.2011.531170.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. 2020. Makoul G. The SEGUE Framework for teaching and assessing communication skills. Patient Educ Couns. 2001;45(1):23-34. https://pubmed.ncbi.nlm.nih.gov/11602365/. 2020. Nguyen TV, Hong J, Prose NS. Compassionate care: enhancing physician-patient communication and education in dermatology: Part I: Patient-centered communication. J Am Acad Dermatol. 2013;68(3):353.e1-8. https://pubmed.ncbi.nlm.nih.gov/23394923/. 2020. Starmer AJ, et al. I-pass, a mnemonic to standardize verbal handoffs. <i>Pediatrics</i>. 2012;129(2):201-204. https://pubme

To help programs transition to the new version of the Milestones, the original Milestones 1.0 have been mapped to the new Milestones 2.0; it is indicated if subcompetencies are similar between versions. These are not exact matches but include some of the same 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.

Milestones 1.0	Milestones 2.0
PC1; Mohs Surgery	PC1: Mohs Surgery
PC2: Reconstruction	PC2: Reconstruction
PC3: Mohs Histopathology	PC3: Mohs Histopathology
PC4: Diagnosis and Management	PC4: Diagnosis and Management
MK1: Mastery of Dermatologic Surgical Curriculum	MK1: Micrographic Surgery
MK2: Mastery of Cutaneous Oncologic Curriculum	MK2: Cutaneous Oncology
SBP1: Practices Cost-Conscious Care (for Patients and Populations)	SBP3: Physician Role in Health Care Systems
SBP2: Works Effectively within an Inter-professional Team	SBP2: System Navigation for Patient Centered Care
	SBP4: Accreditation, Compliance, and Quality
PBLI1: Appraises and Assimilates Scientific Evidence	PBLI1: Evidence-Based and Informed Practice
PBLI2: Integrates Quality Improvement Concepts and Activities in Practice	SBP1: Patient Safety and Quality Improvement
PROF1: Giving and Receiving Feedback	PBLI2: Reflective Practice and Commitment to Personal Growth
PROF2: Accountability, Honesty, and Integrity	PROF1: Professional Behavior and Ethical Principles PROF2: Accountability/Conscientiousness
	PROF3: Self-Awareness and Help-Seeking
ICS1: Personnel and Conflict Management	ICS2: Interprofessional and Team Communication
ICS2: Communicates with Patients, Families, and Health Care Providers	ICS1: Patient- and Family-Centered Communication ICS2: Interprofessional and Team Communication ICS3: Communication within the Health Care System

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/