Supplemental Guide: Dermatology

ACGME

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Milestones Supplemental Guide

This document provides additional guidance and examples for the Dermatology 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: Medical Dermatology **Overall Intent:** To diagnose and manage dermatologic disease	
Milestones	**Examples**
Level 1 *Obtains basic dermatologic history and physical exam* *Identifies management options for common dermatologic conditions*	● Obtains history from a new 42-year-old patient presenting with rosacea, and examines the face ● Identifies cryotherapy and field therapy as options for a 74-year-old patient presenting with eight thin actinic keratoses on the face and scalp
Level 2 *Evaluates patients with common dermatologic conditions, with assistance* *Manages patients with common dermatologic conditions, with assistance*	● Evaluates a 63-year-old farmer with a new, bleeding lesion on the right cheek; the attending points out key dermoscopic findings ● Assesses the lesion as a basal cell carcinoma, and a full-body skin exam is offered and performed ● Makes a decision to order a skin biopsy on the right cheek, with the attending supervising ● Proposes topical steroid and dry skin care precautions for a patient with new onset hand eczema
Level 3 *Independently evaluates patients with common dermatologic conditions* *Independently manages patients with common dermatologic conditions*	● Evaluates a 45-year-old woman with psoriasis affecting 10 percent body surface area ● Discusses need for topical therapy, options and indications for systemic therapy, and need for connection to primary care ● Selects treatment for a patient with limited alopecia areata including intralesional and topical corticosteroids or immunotherapy; counsels appropriately of the side effects and expected results of a given treatment
Level 4 *Independently evaluates patients with complex dermatologic conditions* *Independently manages patients with complex dermatologic conditions and/or comorbidities*	● A hospitalized bone marrow transplant patient in the intensive care unit (ICU) presents with a new onset blistering eruption ● Performs a complete exam of the skin and mucous membranes, reviews medications, reviews laboratory evaluations, coordinates histopathologic evaluation with the dermpath team and gathers additional information from the interprofessional team ● Determines next appropriate medication on the therapeutic ladder and prescribes second line systemic medication for recalcitrant chronic cutaneous lupus and discusses third line therapies
Level 5 *Independently evaluates and manages patients with rare, atypical, or refractory dermatologic conditions*	● Consults on a patient who has been seen by three other dermatologists; performs extensive chart review and collects prior slides for review, leads discussion at a clinicopathologic conference about how the diagnosis of Galli-Galli disease was determined, and starts patient on systemic retinoid therapy
Assessment Models or Tools	● Direct observation ● Evaluation of case review/discussion ● Examinations

	● Medical record (chart) audit ● Multisource feedback ● Procedure log ● Simulation
Curriculum Mapping	●
Notes or Resources	● Evaluation includes: history, physical exam, and formulation of a prioritized differential diagnosis ● Management includes: selection of appropriate diagnostics, decision to treat, treatment options, prevention strategies, counseling of patient/family, and follow-up planning ● With assistance: while it is recognized that attending supervision is important throughout residency, when using the phrase 'with assistance' with these Milestones and supplement, it presumes that the attending is more guiding and active during the evaluation process and treatment determination. ● Association of Professors of Dermatology (APD). Mini-Clinical Evaluation Exercise (CEX). https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/Mini-CEX%20Evaluation%20Form_Milestones_9-24.pdf. 2019.

Patient Care 2: Pediatric Dermatology **Overall Intent:** To diagnose and manage pediatric patients with dermatologic conditions	
Milestones	**Examples**
Level 1 *Obtains basic dermatologic history and physical exam in a pediatric patient*	● Obtains a dermatologic history from the parent of an 18-month-old and performs a physical examination on the child
Identifies management options for common pediatric dermatologic conditions	● Lists treatment and prevention options for atopic dermatitis
Describes the challenges of procedures on pediatric patients	● Lists barriers to performing a skin biopsy in a 5-year-old child
Level 2 *Evaluates patients with common pediatric dermatologic conditions, with assistance*	● Takes a history, performs a physical exam, and proposes a plan to treat an 8-year-old child with warts on the hand
Manages patients with common pediatric dermatologic conditions, with attention to age, weight, and psychosocial considerations, with assistance	● Proposes a topical steroid treatment based on age and body location for an infant with atopic dermatitis
Assists in procedures on pediatric patients	● Helps to position a 3-year-old child on the parent's lap during a procedure
Level 3 *Independently evaluates patients with common pediatric dermatologic conditions*	● Independently takes a history and performs a dermatologic physical on a 12-year-old child and correctly diagnoses guttate psoriasis
Independently manages patients with common pediatric dermatologic conditions with attention to age, weight, and psychosocial considerations	● Prescribes cephalexin for a 7-year-old child with impetigo based on the child's weight ● For a child of divorced parents, provides two copies of the treatment plan and two tubes of medication to improve compliance
Performs basic procedures on pediatric patients with assistance using patient comfort strategies	● Performs cryotherapy on the hand of an 8-year-old child with painful, symptomatic warts with assistance from the attending; uses coaching and distraction to help the patient tolerate the procedure
Level 4 *Independently evaluates patients with complex pediatric dermatologic conditions*	● Independently evaluates a newborn with a large facial vascular birthmark; constructs a differential diagnosis that includes infantile hemangioma and port wine stain
Independently manages patients with complex pediatric dermatologic conditions and/or	● Adjusts the dose of isotretinoin for a 16-year-old child with acne fulminans and concurrent depression who also lives in a group home

comorbidities, with attention to age, weight, and psychosocial considerations *Independently performs basic procedures on pediatric patients using patient comfort strategies*	● Uses proximal vibration and a position of comfort to perform a punch biopsy on a suspicious nevus on the arm of a 4-year-old child
Level 5 *Independently evaluates and manages pediatric patients with rare, atypical, or refractory dermatologic conditions* *Independently performs a range of procedures in pediatric patients using patient comfort strategies*	● Independently evaluates an infant with generalized scaly skin and poor growth ● Constructs a differential diagnosis that includes ichthyosis, immunodeficiency, seborrheic dermatitis, atopic dermatitis, and nutritional deficiency ● Develops a diagnostic and management plan including possible skin biopsy and laboratory work-up ● Performs an excision and closure of a pilomatricoma on the arm of a 12-year-old child who is distracted with a movie
Assessment Models or Tools	● Direct observation ● Evaluation of case review/discussion ● Examinations ● Medical record (chart) audit ● Multisource feedback ● Procedure log ● Simulation
Curriculum Mapping	●
Notes or Resources	● Pediatric evaluation includes: age-appropriate history, physical exam, and formulation of a prioritized differential diagnosis ● Pediatric management includes: selection of appropriate diagnostics, decision to treat, treatment options, counseling of patient/family, and follow-up planning ● Examples of basic pediatric procedures: cryotherapy, shave biopsy, punch biopsy, and intralesional injections ● While there is substantial overlap with adult medical care, some skills needed to evaluate and treat a pediatric patient are distinct from those needed for adult patient care ● Association of Professors of Dermatology (APD). Pediatric Dermatology Clinical Evaluation Exercise (CEX). https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/Pedi%20derm%20CEX%20Evaluation%20Form_7-31-13%20Rev%209-24-13%20v2.pdf. 2019.

Patient Care 3: Dermatologic Procedures and Surgery **Overall Intent:** To care for patients undergoing dermatologic procedures or surgery	
Milestones	**Examples**
Level 1 *Performs pre-operative assessment for basic procedures, with guidance*	● Identifies patient skin type and lesion thickness and location for cryotherapy of an actinic keratosis on the hand, with guidance from attending physician
Performs basic procedures, with guidance	● Performs shave biopsy of the arm, with guidance from attending
Provides basic wound care instructions	● Describes basic post-operative instructions to patient and family members regarding how to clean and care for a shave biopsy wound
Level 2 *Performs pre-operative assessment for basic procedures*	● Performs pre-operative assessment and identifies that the patient is on a blood thinner
Performs basic procedures	● Performs 4mm punch biopsy of the chest with suture closure
Provides anticipatory guidance for procedural outcomes	● Discusses with the patient and family the warning signs of infection and the expected time for healing after excision of a non-melanoma skin cancer on the back
Level 3 *Performs pre-operative assessment and counseling of risk for excisions and layered closures, with guidance*	● Collects HIV/HCV status, h/o immunosuppression or diabetes, use of anticoagulants, pacemaker, and h/o joint replacement/heart valve from patient scheduled for skin cancer excision, with guidance from attending physician or senior resident
Performs excisions and layered closures, with guidance	● Performs excision of a basal cell carcinoma on the arm and linear closure with guidance
Identifies and manages procedural complications, with guidance	● Diagnoses a post-operative hematoma in surgery follow-up clinic and suggests evacuation of hematoma to attending physician; performs evacuation of hematoma with guidance
Level 4 *Performs pre-operative assessment and counseling of risk for complex procedures*	● Independently collects HIV/HCV status, h/o immunosuppression or diabetes, use of anticoagulants, pacemaker, or h/o joint replacement/heart valve from patient scheduled for skin cancer excision
Performs excisions with layered closures; designs flaps and grafts where indicated	● Performs excision of a basal cell carcinoma on the forehead and linear closure ● Identifies that linear closure is insufficient for a Mohs surgery defect on the left cheek and designs a potential rotation flap closure
Identifies and manages procedural complications	● Opens surgical wound, identifies source of bleeding, and evacuates hematoma

Level 5 *Performs flaps and grafts, micrographic surgery, or other advanced procedures*	● Designs and performs bilobed flap for a patient with a Mohs surgery defect on the nose ● Performs rhombic flap near a free margin ● Performs an en bloc excision of a nail fold tumor
Assessment Models or Tools	● Direct observation ● Evaluation of case review/discussion ● Medical record (chart) audit ● Multisource feedback ● Procedure log ● Simulation
Curriculum Mapping	●
Notes or Resources	● Examples of basic procedures in dermatologic surgery: shave/punch biopsy, incision and drainage, liquid nitrogen application, curettage ● Examples of advanced procedures in dermatology: Mohs micrographic surgery, flap or graft reconstruction, laser treatment, botox injections, soft tissue augmentation, liposuction, hair transplant, endovenous laser procedures, nail procedures ● "With guidance" in dermatology procedures and surgery: with assistance from senior resident and/or attending physician based on ACGME and resident institutional supervision policies. ● Selection of tools and proper procedure set-up, including sterile or clean field preparation and maintenance, is included in the performance of each procedure described above ● Association of Professors of Dermatology (APD). Expert rater checklist/scale for assessing technical skills during a simple excision. https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/ExcisionToolChecklist_Alam_9-24%20v2.pdf. 2019.

Patient Care 4: Dermatopathology **Overall Intent:** To recognize key structures of the skin and pathologic findings of diseases of the skin, hair, and nails	
Milestones	**Examples**
Level 1 *Identifies key structural and cellular components of the skin, hair, and nails* *Reviews reported histologic findings*	● Identifies normal adnexal structures, including eccrine ducts and sebaceous lobules ● Reads pathology report after performing a biopsy and reports result to attending as benign or malignant lesion
Level 2 *Identifies microscopic features of common neoplasms and inflammatory reaction patterns* *Performs clinicopathologic correlation, with guidance*	● Recognizes a lichenoid inflammatory pattern and identifies lymphocytes ● Distinguishes between a lichenoid keratosis and lichen planus upon discussion with attending physician
Level 3 *Interprets microscopic features of common disorders of the skin, hair, and nails, with guidance* *Independently performs clinicopathologic correlation for straightforward presentations*	● Identifies key findings to make the diagnosis of pustular psoriasis ● Interprets periodic acid-Schiff stain to exclude the presence of hyphal elements ● Matches clinical annular plaque with histologic palisading granuloma to make a diagnosis of granuloma annulare
Level 4 *Independently interprets microscopic features of common and uncommon disorders of the skin, hair, and nails* *Independently performs clinicopathologic correlation for atypical or complex presentations*	● Identifies microscopic features of atypical fibroxanthoma ● Interprets panel of immunohistochemical markers to exclude other malignant spindle cell tumors, including squamous cell carcinoma and melanoma ● Distinguishes lichen planus, lichenoid drug eruption, and graft versus host disease with consideration of the clinical presentation
Level 5 *Independently interprets atypical or subtle microscopic features of disorders of the skin, hair, and nails*	● Recognizes subtle vacuolar alteration of the basal layer in dermatomyositis ● Distinguishes noninflammatory alopecia based on follicular counts obtained from transverse sections ● Identifies key features that discriminate dysplastic nevi, melanoma in situ, and melanoma
Assessment Models or Tools	● Case presentation ● Dermatopathology unknown slides ● Direct observation ● In-training exam ● Online self-assessments
Curriculum Mapping	●

Notes or Resources	● Association of Professors of Dermatology (APD). Mini-Dermatopathology Evaluation Exercise (DPEX). https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/Mini-DPEX%20type%201%20multiple%20slide%20Evaluation%20Form_Milestones%20FINAL%20Revised%2010-2-13%20v3.pdf. 2019. ● American Academy of Dermatology (AAD). MyDermPath+ App. https://www.aad.org/apps/dermpath. 2019. ● Dermatopathology Text and Review Books

Patient Care 5: Cosmetic Care **Overall Intent:** To care for patients with cosmetic concerns	
Milestones	**Examples**
Level 1 *Identifies patients with a cosmetic concern*	● Identifies concern of post-inflammatory hyperpigmentation in a 21-year-old patient with a history of acne presents with hyperpigmented macules on the cheeks and chin
Level 2 *Gathers patient data, including cosmetic and relevant medical history* *Describes available cosmetic treatments*	● Identifies relevant history that a 36-year-old female seeking treatment for rhytides with a neuromodulator is neither pregnant nor breastfeeding and has no history of neurologic or autoimmune disease ● Describes the indication and duration of use for hydroquinone in melasma
Level 3 *Evaluates patient and recommends interventions to meet patient goals for cosmetic care, with assistance* *Selects cosmetic treatment, with assistance*	● Evaluates and recommends treatment with polidocanol sclerotherapy injections for a 50-year-old patient presenting with asymptomatic telangiectasias of both legs ● Recommends a long pulse Nd:YAG laser for a Fitzpatrick type IV patient seeking laser hair removal; the laser settings are determined by dermatology faculty
Level 4 *Independently evaluates routine patient and recommends interventions to meet patient goals for cosmetic care* *Delivers cosmetic treatment and manages complications, with assistance*	● Recommends electrodesiccation for a 56-year-old patient with dermatosis papulosa nigra and discusses potential risks and benefits of treatment ● Injects botulinum toxin to the corrugator and procerus muscles with assistance and advises the patient of possible need for touch-up in one to two weeks ● Performs pulsed dye laser treatment for erythrotelangiectatic rosacea, selecting laser settings, and counsels about postoperative care
Level 5 *Independently evaluates and counsels the patient with complex cosmetic concerns* *Delivers cosmetic treatment and manages complications*	● A 70-year-old patient with moderate eyelid ptosis seeks treatment with a neuromodulator for rhytides of the forehead ● Offers treatment with laser or chemical peels as treatment with botulinum toxin is not recommended ● After performing intense pulsed light therapy on the face of a 40-year-old patient, recommends a gentle skin care regimen when the patient is evaluated five days later and is found to have increased erythema and skin sensitivity
Assessment Models or Tools	● Direct observation ● Evaluation of case review/discussion ● Examinations ● Medical record (chart) audit ● Multisource feedback ● Procedure log

	● Simulation
Curriculum Mapping	●
Notes or Resources	● Cosmetic evaluation includes: history, physical exam with special consideration of childbearing potential in females, Fitzpatrick type, and potential contraindications of treatment ● Cosmetic treatment includes: decision to treat, treatment options, selection of appropriate treatment, counseling of risks and benefits, and setting expectations after treatment ● Examples of cosmetic procedures: neuromodulators, chemical peels, laser and light based treatments, soft tissue augmentation, sclerotherapy, and removal of benign neoplasms ● "With assistance" in dermatology procedures and surgery: with assistance from senior resident and/or attending physician based on ACGME and resident institutional supervision policies ● Lolis M, Dunbar SW, Goldberg DJ, Hansen TJ, MacFarlane DF. Patient safety in procedural dermatology: part II. Safety related to cosmetic procedures. *Journal of the American Academy of Dermatology*. 2015;73(1):15-24. doi:10.1016/j.jaad.2014.11.036.

Patient Care 6: Diagnostics **Overall Intent:** To perform and interpret laboratory tests	
Milestones	**Examples**
Level 1 *Describes indications and steps involved in in-office testing* *Describes laboratory, imaging, and other diagnostic testing used in dermatology*	● Lists the indications and steps necessary to collect material and prepare a slide for potassium hydroxide (KOH) microscopic exam ● Describes the different types of skin biopsy techniques and general indications for each
Level 2 *Selects and performs in-office tests, with assistance* *Selects laboratory, imaging, and other diagnostic tests for common presentations, with assistance*	● Scrapes and prepares a slide for oil microscopy after being directed by the attending where to scrape a patient suspected of having scabies ● Orders the appropriate monitoring laboratory tests for the female patient taking isotretinoin after discussing with attending
Level 3 *Independently selects and performs in-office test; interprets in-office diagnostic tests, with assistance* *Independently interprets laboratory, imaging, and other diagnostic tests for common presentations*	● After scraping the inner thigh of a patient, prepares a slide with KOH independently, and reviews this with the attending at a multiheaded microscope ● Reviews a low-titer antinuclear antibodies (ANA) result from an elderly patient and concludes that it is not relevant to their chronic urticaria
Level 4 *Independently selects, performs, and interprets a full spectrum of in-office tests* *Independently interprets laboratory, imaging, and other diagnostic tests for complex or rare presentations*	● While evaluating an elderly patient with groin rash, performs a KOH, which is negative; then performs a Wood's lamp examination that reveals coral red fluorescence in the area of rash, confirming a diagnosis of erythrasma ● In a patient presenting with retiform purpura and livedo reticularis, orders laboratory tests that, upon interpretation of results, confirm the patient has antiphospholipid antibody syndrome
Level 5 *Evaluates the application of novel and emerging diagnostic tests*	● Presents a grand rounds lecture highlighting emerging application of melanoma genetic testing and answers audience questions with clear knowledge of the controversies, pros, and cons
Assessment Models or Tools	● Case presentation ● Direct observation ● In-training exam ● Proficiency testing ● Online self-assessments
Curriculum Mapping	●

Notes or Resources	● Examples of in-office tests include: hair shaft oil microscopy, KOH, scabies prep, Tzanck smear, and Wood's lamp ● Examples of laboratory, imaging, and other diagnostic tests include: biopsy results including special stains, dermatopathology disease-associated blood testing (ANA, ENA), medication laboratory monitoring, and MRI for vascular lesion assessment ● How to perform a KOH scraping. https://www.youtube.com/watch?v=REAdCUkmBqM. 2019. ● Association of Professors of Dermatology. In-Office Diagnostics Evaluation Exercise (IODxEE). https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/In-Office%20Diagnostics%20evaluation%20form_Milestones_9-24.pdf. 2019.

Patient Care 7: Clinical Reasoning and Differential Diagnosis **Overall Intent:** To develop a prioritized differential diagnosis and explain the clinical reasoning	
Milestones	**Examples**
Level 1 *Develops a differential diagnosis for common presentations, with guidance*	● When a 20-year-old female presents with pink papules around the mouth sparing the vermilion border, classifies the eruption as acneiform and lists acne vulgaris, rosacea, and perioral dermatitis in the differential diagnosis, with assistance
Level 2 *Independently develops a differential diagnosis for common presentations*	● When a 12-year-old male presents with ovoid, pink, scaly patches with a herald patch, lists pityriasis rosea and other papulosquamous diseases in the differential diagnosis
Level 3 *Develops a prioritized differential diagnosis for complex presentations and identifies clinical reasoning errors*	● When a 45-year-old male presents with fever, leukocytosis and painful plaques, develops a ranked differential diagnosis that prioritizes infectious etiologies, performs a biopsy that is consistent with Sweet's syndrome, and upon reflection, realizes an anchoring bias toward infection due to leukocytosis
Level 4 *Pursues and synthesizes additional information to reach high-probability diagnoses with continuous re-appraisal*	● Orders laboratory tests to help distinguish lupus from dermatomyositis when a 38-year-old female acutely develops an erythematous eruption of the face and trunk; the ANA is equivocal, so the resident plans for skin biopsy and schedules a follow-up visit to monitor for clinical progression
Level 5 *Integrates additional data and coaches others to minimize clinical reasoning errors*	● When an 80-year-old male who presents with a spindle cell tumor of the scalp is scheduled for treatment of a presumptive atypical fibroxanthoma, coaches junior resident that this is a diagnosis of exclusion and suggests immunostains to help clarify the diagnosis
Assessment Models or Tools	● Case discussions ● Chart audit ● Direct observation ● Multisource evaluation ● Written examination
Curriculum Mapping	●
Notes or Resources	● Ko CJ, Braverman I, Sidlow R, Lowenstein EJ. Visual perception, cognition and error in dermatologic diagnosis: Key cognitive principles. *J Am Acad Dermatol*. 2019;81(6):1227-1234. doi:10.1016/j.jaad.2018.10.082. ● Lowenstein EJ, Sidlow R, Ko CJ. Visual perception, cognition and error in dermatologic diagnosis: Diagnosis and error. *J Am Acad Dermatol*. 2019;81(6):1237-1245. doi:10.1016/j.jaad.2018.12.072. ● Schneiderman PI, Grossman ME. *A Clinician's Guide to Dermatologic Differential Diagnosis*. 1st ed. London, UK: Informa Healthcare; 2006.

	● Duvivier A. *Atlas of Clinical Dermatology*. Philadelphia, PA: W.B. Saunders Company; 1987.

Patient Care 8: Therapeutics Management **Overall Intent:** To identify potential candidates for topical, systemic, and other dermatologic therapeutics; understand and articulate risks/benefits/alternatives/complications/indications of therapy; develop drug side effects and laboratory monitoring plans; and adjust therapeutic approach for refractory disease	
Milestones	**Examples**
Level 1 *Identifies patients who are candidates for topical and systemic therapy* *Identifies available treatment options for common skin disorders* *Identifies therapeutic agents which require laboratory monitoring*	● In a patient with atopic dermatitis without improvement on low-potency topical steroids, suggests a topical calcineurin inhibitor but is unsure if systemic therapy is warranted ● Identifies potential systemic options for acne but is unsure of dosage or selection ● States that baseline laboratory tests should be evaluated prior to initiating treatment with isotretinoin but is unsure of frequency of monitoring or follow-up
Level 2 *Provides appropriate counseling regarding adverse effects and reasonable risks* *Selects treatment options for common skin disorders, with guidance* *Selects appropriate laboratory monitoring for systemic treatments, with guidance*	● Prior to initiation of treatment with isotretinoin, advises a teenage girl with nodulocystic acne about xerosis and cheilitis, phototoxicity, and hypertriglyceridemia, and stresses the importance of compliance with oral contraceptives ● For a diabetic patient with tinea cruris and onychomycosis, selects therapy with a topical allylamine; after prompting, elects oral terbinafine ● Prior to initiation of anti-tumor necrosis factor-α therapy in a patient with psoriasis, orders tuberculosis screening, but requires prompting by supervising faculty to order hepatitis B serologies
Level 3 *Consistently evaluates treatment response and counsels patients on expectations of therapy* *With guidance, selects therapeutic modalities for common and uncommon skin disorders while balancing risks and benefits* *Selects appropriate laboratory monitoring and manages adverse effects, with guidance*	● When evaluating a patient taking hydroxychloroquine for discoid lupus erythematosus, advises the patient that clinical response will be apparent after 2 months of treatment, but that scarring and dyspigmentation can be permanent ● In a patient with pustular psoriasis and hyperlipidemia, weighs the risks and benefits of acitretin and cyclosporine ● In a patient taking cyclosporine, promptly notes a 30 percent increase over baseline creatinine, but seeks guidance to determine whether dosage reduction or discontinuation should be recommended
Level 4 *Consistently identifies refractory disease and independently escalates therapy as necessary*	● Selects therapy with ustekinumab for a patient with inflammatory bowel disease and plaque-type psoriasis previously refractory to phototherapy, high-potency topical steroids, and methotrexate

Independently selects therapeutic modalities for common and uncommon skin disorders based on stepwise therapeutic ladders *Independently orders appropriate laboratory monitoring and manages adverse effects*	● Elects doxycycline and high-potency topical corticosteroids following an initial encounter with an elderly, frail patient with localized bullous pemphigoid and no history of prior therapy ● Following laboratory evaluation one month after initiating acitretin for a patient with pustular psoriasis, identifies hypertriglyceridemia and counsels the patient regarding lifestyle modification and plans to repeat evaluation, and when the hypertriglyceridemia is persistent, selects therapy with fenofibrate
Level 5 *Independently manages rare and complex diseases based on emerging evidence* *Evaluates the application of novel and emerging therapeutic modalities or unique applications of existing drugs* *Develops systems for safety monitoring*	● Discusses options including cyclosporine, mycophenolate mofetil, and IVIg for anti-MDA5 dermatomyositis ● For a young woman with Hailey-Hailey disease refractory to isotretinoin, discusses recently described options, including naltrexone, magnesium, botulinum toxin, and laser therapy ● Creates a reminder system within the electronic health record (EHR) to ensure appropriate laboratory screening prior to biologic therapy for psoriasis
Assessment Models or Tools	● Case discussions/multidisciplinary conference ● Chart review ● Direct observation ● Multisource evaluation ● Written examinations
Curriculum Mapping	●
Notes or Resources	● Wolverton ST. *Comprehensive Dermatologic Drug Therapy*. 3rd ed. China: Elsevier; 2013. ● Lebwohl M, Heymann W, Berth-Jones J, Coulson I. *Treatment of Skin Disease*. 5th ed. China: Elsevier; 2018. ● American Board of Dermatology. Focused Practice Improvement Modules. https://secure.dataharborsolutions.com/ABDermOrg/Default.aspx. 2019. ● Litt's Drug Eruption and Reaction Database. https://www.drugeruptiondata.com/. 2019. ● American Academy of Dermatology. Clinical Guidelines. https://www.aad.org/guidelines. 2019.

Medical Knowledge 1: Knowledge of Dermatologic Disease **Overall Intent:** To show knowledge of the science of dermatology	
Milestones	**Examples**
Level 1 *Describes fundamental cutaneous anatomy and physiology* *Demonstrates knowledge of the clinical features of common dermatologic disorders*	● Describes the structure and function of the epidermis ● Identifies the areas of the body most commonly involved in patients with atopic dermatitis
Level 2 *Describes pathophysiology of common skin disorders* *Demonstrates knowledge of the clinical features, associations, treatments, and expected course of common dermatologic disorders*	● Explains the role of TH2 cytokines in the pathophysiology of atopic dermatitis ● Identifies the common comorbidities of psoriasis
Level 3 *Demonstrates knowledge of the pathophysiology of complex skin disorders* *Demonstrates knowledge of the clinical features, associations, treatments, and expected course of uncommon and complex dermatologic disorders*	● Draws the key elements of the basement membrane zone and highlights different molecular areas of immune attack in the autoimmune blistering diseases ● Provides an overview of cutaneous vasculitis, including other organ involvement, systemic treatments, and expected course
Level 4 *Synthesizes knowledge of pathophysiology of skin disorders from multiple sources* *Demonstrates comprehensive knowledge of the clinical features, associations, treatments, and expected course of common, uncommon, and complex dermatologic disorders*	● Integrates current scientific evidence on the pathophysiology of toxic epidermal necrolysis into selecting treatment options ● Describes the immunologic pathways that lead to checkpoint inhibitor-induced cutaneous reactions ● Compares and contrasts the clinical features and immunologic profile of mixed connective tissue disease with those of systemic sclerosis and dermatomyositis
Level 5 *Teaches emerging concepts in cutaneous pathophysiology* *Teaches emerging concepts in clinical features, associations, treatments, or expected course of common, uncommon, and complex dermatologic disorders*	● After reading and synthesizing a variety of new reports, teaches about the mechanism of action of a promising new biologic therapy entering Phase 4 trials that treats advanced cutaneous lymphoma ● Teaches about cutaneous adverse reactions to new biologic anti-cancer agents used in oncology ● Publishes a study suggesting dermatologists should stop performing a specific monitoring laboratory test when prescribing a particular medication

Assessment Models or Tools	● ABD exam performance ● Case conference ● Didactic lecture participation ● Direct observation ● Practice exams
Curriculum Mapping	●
Notes or Resources	● The intent of this subcompetency is to capture a resident's broad knowledge of dermatology learned within and outside of clinical practice and aid the program director in identifying residents who may need additional self-study ● American Academy of Dermatology. Board Prep Plus. https://www.aad.org/education/residents/board-prep. 2019. ● American Board of Dermatology. Exam of the Future Information Center. Content Outlines. https://www.abderm.org/residents-and-fellows/exam-of-the-future-information-center.aspx#content. 2019. ● Dermatology Text and Review Books

Medical Knowledge 2: Visual Recognition **Overall Intent:** To identify classic and subtle morphologic findings and visual patterns within dermatology	
Milestones	**Examples**
Level 1 *Identifies common diseases with characteristic findings* *Defines primary lesions and secondary features*	● Recognizes a verrucous stuck-on papule as a seborrheic keratosis ● Defines vesicles and bullae based on size, and recognizes crusting as a secondary feature
Level 2 *Identifies uncommon diseases with characteristic findings* *Describes morphology, with assistance*	● Recognizes Gottron's papules as a finding in a patient with known dermatomyositis ● Describes morphea as a depressed plaque with guidance
Level 3 *Identifies variable presentations of common disease* *Describes morphology with fluency* *Integrates visual diagnostic tools (e.g., dermoscopy), with assistance*	● Recognizes variable patterns of psoriasis, including plaque, pustular, guttate, palmoplantar and partially treated variants, and describes the features clearly and concisely ● Upon request by the attending physician, performs dermoscopy on an ulcerated pink nodule and recognizes arborizing vessels to support a diagnosis of basal cell carcinoma
Level 4 *Identifies variable presentations of uncommon and rare disease* *Identifies subtle morphologic variability* *Independently integrates visual diagnostic tools*	● In an 80-year-old male with an intensely pruritic papular eruption, the resident recommends biopsy with direct immunofluorescence (DIF) to rule out bullous pemphigoid ● Identifies subtle erythema and correctly diagnoses erysipelas in patient with Fitzpatrick Skin Type 5 ● Recognizes subtle scalloped border in a patient with a perianal ulcer as a manifestation of herpes simplex infection ● Independently performs dermoscopy on a pigmented plaque and recognizes a blue-gray veil to support a diagnosis of melanoma
Level 5 *Integrates visual diagnostic tools for a wide range of diagnoses of the skin, hair, and nails*	● Uses dermoscopy to identify a scabies mite
Assessment Models or Tools	● Case conference ● Clinical pathologic correlation ● Clinical unknowns ● Direct observation ● AAD Question of the Week ● ABD Exams

Curriculum Mapping	●
Notes or Resources	● The intent of this subcompetency is to capture a resident's ability to recognize, understand, and describe morphologic findings and visual patterns which are integral to dermatologic diagnosis. This subcompetency may help to identify residents who would benefit from additional coaching in visual diagnosis ● Schneiderman PI, Grossman ME. *A Clinician's Guide to Dermatologic Differential Diagnosis*. 1st ed. London, UK: Informa Healthcare; 2006. ● Duvivier A. *Atlas of Clinical Dermatology*. Philadelphia, PA: W.B. Saunders Company; 1987. ● Dermoscopedia. Online Dermoscopy Modules. https://dermoscopedia.org/Main_Page. 2019. ● Dermoscopy and Kodachrome lectures

Systems-Based Practice 1: Patient Safety and Quality Improvement **Overall Intent:** To engage in the analysis and management of patient safety events, including relevant communication with patients, families, and health care professionals; to conduct a QI project	
Milestones	**Examples**
Level 1 *Demonstrates knowledge of common safety events* *Demonstrates knowledge of how to report patient safety events* *Demonstrates knowledge of basic quality improvement methodologies and metrics*	● Lists patient misidentification or medication errors as common patient safety events ● Identifies use of personal protective equipment as a safety precaution ● Describes how to report errors or near misses in your environment ● Describes fishbone tool
Level 2 *Identifies system factors that lead to safety events* *Reports patient safety events through institutional reporting systems* *Describes local quality improvement initiatives (e.g., handwashing, needle stick prevention, wrong site surgery prevention)*	● Identifies lack of hand sanitizer dispenser at each clinical exam room may lead to increased infection rates ● Reports lack of hand sanitizer dispenser at each clinical exam room to the medical director ● Summarizes protocols to decrease needle sticks
Level 3 *Participates in analysis of safety events (simulated or actual)* *Participates in disclosure of patient safety events to patients and families (simulated or actual)* *Participates in local quality improvement initiatives*	● Prepares for morbidity and mortality presentations ● During a standardized patient encounter, communicates with patients/families about a lost specimen error ● Participates in project identifying root cause of rooming inefficiency
Level 4 *Conducts analysis of safety events and offers error prevention strategies (simulated or actual)* *Discloses patient safety events to patients and families (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 ● 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 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* *Mentors others in the disclosure of 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 for patient safety ● Conducts a simulation for disclosing patient safety events ● 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	● Institute of Healthcare Improvement. http://www.ihi.org/Pages/default.aspx. 2019. (includes multiple choice tests, reflective writing samples, and more) ● Lolis M, Dunbar SW, Goldberg DJ, Hansen TJ, MacFarlane DF. Patient safety in procedural dermatology: part II. Safety related to cosmetic procedures. *Journal of the American Academy of Dermatology*. 2015;73(1):15-24. doi:10.1016/j.jaad.2014.11.036. ● Hansen TJ, Lolis M, Goldberg DJ, MacFarlane DF. Patient safety in dermatologic surgery: Part I. Safety related to surgical procedures. *J Am Acad Dermatol*. 2015;73(1):1-12. doi:10.1016/j.jaad.2014.10.047.

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*	● 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 teams*	● 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 drug rash, including illness severity, patient summary, action list, and contingency plans
Identifies specific population and community health needs and inequities for their 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 their interprofessional teams*	● Works with the social worker to coordinate care for a homeless patient with scabies 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 active toxic epidermal necrolysis (TEN), 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 which provides a sliding fee scale option 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*	● During inpatient rotations, 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 *Participates in changing and adapting practice to provide for the needs of specific populations*	● Prior to going on vacation, proactively informs the covering resident about a plan of care for a patient with HIV and an enlarging ulcer with a skin biopsy result pending ● 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* *Improves quality of transitions of care within and across health care delivery systems to optimize patient outcomes* *Leads innovations and advocates for populations and communities with health care inequities*	● Leads a program to ensure appropriate follow-up for teledermatology patients who need skin biopsies and potential cancer treatment ● Develops a protocol to improve dermatology clinic follow-up after inpatient consultations ● 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 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. 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 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. doi:10.1542/peds.2011-2966.

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* *Describes basic health payment systems and practice models* *Identifies basic practice management knowledge domains for effective transition to practice*	● Articulates the roles of primary care providers and dermatology specialists in the management of skin disease ● Understands the impact of health plan coverage on prescription drugs for individual patients ● 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* *Delivers care with consideration of each patient's payment model* *Describes core administrative knowledge needed for transition to practice*	● Explains that a patient who arrives through the emergency department may need to be seen at a different facility for follow-up care based on insurance status ● Takes into consideration patient's prescription drug coverage when choosing a treatment for acne vulgaris ● Describes the elements required for proper evaluation and management coding in the EHR
Level 3 *Discusses how individual practice affects the broader system* *Engages with patients in shared-decision making, informed by each patient's payment models* *Demonstrates use of information technology required for medical practice*	● Recognizes the need for dermatologic evaluation of bilateral cellulitis in the emergency department in order to correctly diagnose capillaritis and lymphedema and avoid inpatient admission and improper use of antibiotics ● Discusses risks and benefits of surgical treatment of an asymptomatic lipoma when a patient has a high out-of-pocket deductible ● 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 pemphigus including pertinent comorbidities and contraindications

Advocates for patient care needs with consideration of the limitations of each patient's payment model *Analyzes individual practice patterns and professional requirements in preparation for practice*	● Applies for patient assistance programs for prescription drugs on behalf of a patient with mycosis fungoides and limited resources ● Proactively compiles and reviews procedure log in anticipation of applying for hospital privileges
Level 5 *Advocates for or leads systems change that enhances high-value, efficient, and effective patient care* *Participates in health policy advocacy activities* *Educates others to prepare them for transition to practice*	● Works with community or professional organizations to advocate for restrictions on indoor tanning ● Improves informed consent process for non-English-speaking patients requiring interpreter services
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. 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: Topic: 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. doi:10.31478/201703e. ● 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. ● American Board of Dermatology. Focused Practice Improvement Modules. https://secure.dataharborsolutions.com/ABDermOrg/Default.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 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 mild psoriasis
Level 2 *Articulates clinical questions and elicits patient preferences and values in order to guide evidence-based care*	● In a patient with moderate to severe psoriasis, solicits patient perspective considering potential adverse reactions, time commitment and cost
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 psoriasis 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 moderate to severe psoriasis with HIV
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 methotrexate at their institution
Assessment Models or Tools	● Direct observation ● Oral or written examinations ● Presentation evaluation ● Quality improvement project ● Research portfolio
Curriculum Mapping	●
Notes or Resources	● 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. 2019. ● National Institutes of Health. US National Library of Medicine. PubMed Tutorial. https://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html. 2019. ● Institutional IRB guidelines ● Various journal submission guidelines ● Silverberg JI. Study designs in dermatology: Practical applications of study designs and their statistics in dermatology. *J Am Acad Dermatol*. 2015;73(5):733-40. doi:10.1016/j.jaad.2014.07.062.

	● Silverberg JI. Study designs in dermatology: A review for the clinical dermatologist. *J Am Acad Dermatol*. 2015;73(5):721-31. doi:10.1016/j.jaad.2014.08.029. ● PCORI. Funding opportunities. https://www.pcori.org/funding-opportunities. 2020

Practice-based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth **Overall Intent:** To seek clinical performance information to improve patient care; reflect on all domains of practice, personal interactions, and behaviors, and their impact on colleagues and patients (reflective mindfulness); develop clear objectives and goals for improvement	
Milestones	**Examples**
Level 1 *Accepts responsibility for personal and professional development by establishing goals* *Identifies the factors which contribute to gap(s) between expectations and actual performance* *Actively seeks opportunities to improve*	● Sets a personal practice goal of learning and applying the necessary components of medical documentation required for coding and billing ● Identifies gaps in knowledge of recognizing dermatoscopic features ● Asks for feedback from patients, families, and patient care team members
Level 2 *Demonstrates openness to performance data (feedback and other input) in order to inform goals* *Analyzes and reflects on the factors which contribute to gap(s) between expectations and actual performance* *Designs and implements a learning plan, with prompting*	● Reviews patient satisfaction survey data prior to semiannual performance review to develop plans for improvement ● Assesses time management skills and how it impacts timely completion of clinic notes and literature reviews ● 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* *Analyzes, reflects on, and institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance* *Independently creates and implements a learning plan*	● 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 ● Independently assesses performance on in-training exam to identify areas of focus for individualized learning plan and reports progress to program director
Level 4 *Intentionally seeks performance data consistently with adaptability and humility* *Challenges own assumptions and considers alternatives in narrowing the gap(s) between expectations and actual performance*	● Completes a quarterly chart audit to ensure documentation of lymph node examination in patients with invasive melanoma ● After identifying challenge in developing rapport with young children, creates a plan for improving communication strategies and additional experiences in pediatric dermatology

Uses performance data to measure the effectiveness of the learning plan and when necessary, improves it	● Reviews personal performance metrics from the electronic medical record to track timeliness of completion of documentation and rectify deficiencies
Level 5 *Role models consistently seeking performance data with adaptability and humility* *Coaches others on reflective practice* *Facilitates the design and implementing learning plans for others*	● Reflects on suboptimal patient communication scores and enrolls in a relationship centered communication course ● Develops educational module for collaboration with other patient care team members ● Assists first-year residents in developing their individualized learning plans
Assessment Models or Tools	● Chart audit ● Direct observation ● EHR reports ● Patient feedback ● Review of learning plan ● 360-degree evaluations
Curriculum Mapping	●
Notes or Resources	● Hojat M, Veloski JJ, Gonnella JS. Measurement and correlates of physicians' lifelong learning. *Acad Med.* 2009;84(8):1066-74. doi:10.1097/ACM.0b013e3181acf25f. ● Burke AE, Benson B, Englander R, Carraccio C, Hicks PJ. Domain of competence: Practice-based learning and improvement. *Acad Pediatr.* 2014;14(2 Suppl):S38-S54. doi:10.1016/j.acap.2013.11.018. ● 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. *Acad Med.* 2013;88(10):1558-63. doi: 10.1097/ACM.0b013e3182a352e6.

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
Describes when and how to appropriately report professionalism lapses, including strategies for addressing common barriers	● Identifies that not answering pages has adverse effects on patient care and on professional relationships
Demonstrates knowledge of medical ethical principles	● 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
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 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 medication reaction
Recognizes need to seek help in managing and resolving complex ethical situations	● Requests ethics committee involvement regarding decisions to withhold care in terminal hospitalized junctional epidermolysis bullosa pediatric patient
Analyzes complex situations using ethical principles	● Offers treatment options for a 3cm 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 self 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, as needed	● Recognizes and uses ethics consults, literature, risk-management/legal counsel in order to resolve ethical dilemmas

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* *Serves as resource for colleagues who face ethical dilemmas*	● 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 decrease patient and provider frustrations that lead to unprofessional behavior
Assessment Models or Tools	● Direct observation ● Global evaluation ● Multisource feedback ● Oral or written self-reflection ● 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. ISBN:978-1-5323-6516-4. ● APD. Journal Entry Competency Assessment. https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/ProCom%20JECA_modified%20092413%20v3.pdf. 2019.

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* *Takes responsibility for failure to complete tasks and responsibilities*	● Responds promptly to reminders from program administrator to complete work-hour logs ● Demonstrates timely attendance at conferences ● Completes end-of-rotation evaluations
Level 2 *Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations* *Recognizes situations that may impact own ability to complete tasks and responsibilities in a timely manner*	● Completes administrative tasks, safety modules, procedure log, and licensing requirements by specified due date ● Before going on leave, 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* *Proactively ensures that the needs of patients are met*	● Notifies attending of multiple competing demands while on call, appropriately triages tasks, and asks for assistance from other residents or faculty members as needed ● In preparation for being out of the office, 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 4 *Mitigates situations that may impact others' ability to complete tasks and responsibilities in a timely manner* *Implements strategies to enhance accountability of team members involved in patient care*	● Takes responsibility for inadvertently omitting key patient information during sign-out and proposes a plan for standardized hand-offs with the interprofessional team
Level 5 *Takes ownership of system outcomes and revises systems to enhance accountability*	● Sets up a meeting with the nurse manager to streamline phototherapy referrals 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%20Ethics%20for%20Dermatologists.pdf 2019. ● Code of conduct from fellow/resident institutional manual ● Expectations of residency program regarding accountability and professionalism ● APD. Journal Entry Competency Assessment. https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/ProCom%20JECA_modified%20092413%20v3.pdf. 2019.

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* *Recognizes limits in one's own knowledge/ skills, with assistance*	● Acknowledges own response to patient's diagnosis of metastatic melanoma ● Receives feedback on missed emotional cues during a shave biopsy with a patient experiencing anxiety
Level 2 *Independently recognizes status of personal and professional well-being* *Independently recognizes limits in one's own knowledge/skills and seeks help when appropriate*	● Independently identifies and communicates impact of a personal family tragedy on ability to provide patient care ● After receiving a low score on the ABD Basic exam, identifies barriers to effective study habits
Level 3 *Proposes a plan to optimize personal and professional well-being, with assistance* *Proposes a plan to remediate or improve limits in one's own knowledge/skills, with assistance*	● Works with program director to develop a strategy to support breast feeding after returning from maternity leave ● Develops a plan with program director to improve study habits
Level 4 *Independently develops a plan to optimize personal and professional well-being* *Independently develops a plan to remediate or improve limits in one's own knowledge/skills*	● Independently identifies ways to manage personal stress ● Attends a hands-on surgical course after identifying weakness in complex suturing technique
Level 5 *Coaches others to optimize personal and professional well-being*	● Assists in organizational efforts to address resident 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	● Local resources, including Employee Assistance ● Hicks PJ, Schumacher D, Guralnick S, Carraccio C, Burke AE. Domain of competence: Personal and professional development. *Acad Pediatr*. 2014;14(2 Suppl):S80-97. doi:10.1016/j.acap.2013.11.017.

	● ACGME. Tools and Resources on Physician Well-Being. https://www.acgme.org/What-We-Do/Initiatives/Physician-Well-Being/Resources. 2019. ● AAIM. Annotated Bibliography of Evidence Based Well-Being Interventions. https://www.im.org/resources/wellness-resiliency/charm/best-practice-group. 2019. ● APD. Journal Entry Competency Assessment. https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/ProCom%20JECA_modified%20092413%20v3.pdf. 2019.

Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication **Overall Intent:** To deliberately use language and behaviors to form constructive relationships with patients, to identify communication barriers including self-reflection on personal biases, and minimize them in the doctor-patient relationships; organize and lead communication around shared decision making	
Milestones	**Examples**
Level 1 *Uses language and nonverbal behavior to demonstrate respect and establish rapport* *Identifies common barriers (e.g., language) to effective communication* *Identifies the importance of engaging in shared decision making*	● Introduces self and faculty member, identifies patient and others in the room, and engages all parties in health care discussion ● Requests trained interpreter with non-English-speaking patients prior to obtaining informed consent for shave biopsy ● Acknowledges the importance of including the child when discussing treatment for atopic dermatitis
Level 2 *Establishes a therapeutic relationship in straightforward encounters using active listening and clear language* *Identifies complex barriers (e.g., health literacy) to effective communication* *Identifies elements of shared decision making*	● Avoids medical jargon and restates patient perspective when discussing treatment for plantar warts ● Recognizes the need for handouts with diagrams and pictures to communicate information on bleach baths to a patient who is unable to read ● Works with elderly patient and their care team to identify barriers to topical treatment for bullous pemphigoid
Level 3 *Establishes a therapeutic relationship in challenging patient encounters, with guidance* *When prompted, reflects on personal biases while attempting to minimize communication barriers* *Uses shared decision making to make a personalized care plan, with guidance*	● Acknowledges patient's request for biologic therapy for localized plaque psoriasis and explains the rationale for stepwise therapy while maintaining patient rapport ● In a discussion with the faculty member, acknowledges discomfort in caring for a patient with skin cancer who continues to tan ● 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* *Independently recognizes personal biases while attempting to proactively minimize communication barriers*	● Schedules ongoing follow-ups to support a contentious patient with delusions of parasitosis ● 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 a parent opposed to birth control to plan therapy for a teenager interested in isotretinoin for nodulocystic acne
Level 5 *Mentors others in situational awareness and critical self-reflection to consistently develop positive therapeutic relationships* *Independently uses shared decision making to make a personalized care plan when there is a high degree of uncertainty*	● Develops a residency curriculum on implicit bias ● 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	● 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. 2019. ● Makoul G. The SEGUE Framework for teaching and assessing communication skills. *Patient Educ Couns*. 2001;45(1):23-34. ● 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. doi:10.1186/1472-6920-9-1. ● 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. doi:10.1016/j.jaad.2012.10.060. ● 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. doi:10.1016/j.jaad.2012.10.059. ● AAD. Simulated Patient Encounters. https://store.aad.org/products/12923. 2019.

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 *Respectfully requests a consultation* *Respectfully receives a consultation request* *Uses language that values all members of the health care team*	● Requests a rheumatology consultation for a patient with lupus ● Receives consult request for a patient with a potential drug eruption, asks clarifying questions politely, and expresses gratitude for the consult ● Acknowledges the contribution of each member of support staff in clinic
Level 2 *Clearly and concisely requests a consultation* *Clearly and concisely responds to a consultation request* *Solicits feedback on performance as a member of the health care team*	● When asking for a rheumatology consultation for a patient with plaque psoriasis and joint pain, relays the diagnosis and clinical question of possible psoriatic arthritis ● Returns consult page in a timely manner, listens carefully to requesting provider, confirms clinical question, and affirms that request will be addressed promptly ● Contacts the wound care nurse to elicit feedback on multidisciplinary plan of care regarding their shared management of a diabetic patient with a non-healing ulcer
Level 3 *Checks own understanding of consultant recommendations* *Checks understanding of recommendations when providing consultation* *Communicates concerns and provides feedback to peers and learners*	● When receiving treatment recommendations from an attending physician, repeats back the plan to ensure understanding ● After a consultation has been completed, communicates with the primary care team to verify they have received and understand the recommendations ● Discusses opportunities for improvement on quality of in clinic presentation to rotating medical student
Level 4 *Coordinates recommendations from different members of the health care team to optimize patient care* *Communicates feedback and constructive criticism to superiors*	● Participates in a multidisciplinary tumor board to develop a shared care plan for a patient with advanced squamous cell carcinoma with lymph node metastasis ● After an attending recommends conventional immunosuppression for a newly diagnosed patient with pemphigus vulgaris, the resident discusses the rationale for first-line use of rituximab
Level 5 *Role models flexible communication strategies that value input from all health care team members, resolving conflict when needed*	● When faced with discordant treatment recommendations for toxic epidermal necrolysis from multiple consultation services, a senior resident coordinates and helps lead a multidisciplinary meeting to clarify and align clinical decision making

Facilitates regular health care team-based feedback in complex situations	● 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 ● Multi-source feedback ● Simulation ● Self-reflection
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. doi:10.1080/0142159X.2018.1481499. ● Green M, Parrott T, Cook G., Improving your communication skills. *BMJ*. 2012;344:e357. Doi:10.1136/bmj.e357. ● 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. doi:10.3109/0142159X.2013.769677. ● 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. ● Fay D, Mazzone M, Douglas L, Ambuel B. A validated, behavior-based evaluation instrument for family medicine residents. *MedEdPORTAL*. 2007;3:622. doi:10.15766/mep_2374-8265.622. ● Dehon E, Simpson K, Fowler D, Jones A. Development of the faculty 360. *MedEdPORTAL*. 2015;11:10174. doi:10.15766/mep_2374-8265.10174. ● 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. ● 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. doi:10.1001/jama.282.24.2313. ● 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. doi:10.12788/j.sder.2017.002.

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* *Safeguards protected health information by using appropriate communication channels*	● Documents in the medical record accurately, but documentation may include extraneous information ● Shreds written notes with patient identifiers after clinic ● 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* *Uses documentation tools and short cuts (e.g., copy/paste) accurately and appropriately, per institutional policy*	● Outlines clinical reasoning that supports the treatment plan in an organized and accurate document ● Utilizes documentation templates appropriately for full-body skin exams ● Writes a note for a patient on isotretinoin, copying forward last month's visit and updating cumulative dose, current side effects, exam, and plan
Level 3 *Concisely reports diagnostic and therapeutic reasoning in the EHR* *Appropriately selects and uses direct (e.g., telephone, in-person) and indirect (e.g., progress notes, text and inbox messages) forms of communication based on context*	● Concisely documents complex clinical thinking, but may not contain anticipatory guidance ● 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* *Achieves written or verbal communication (e.g., patient notes, email) that serves as an example for others to follow*	● Documentation for a patient with an infantile hemangioma currently being treated with oral propranolol is accurate, organized and concise and includes documentation of parent counseling on dosing and safety monitoring ● Composes exemplary notes that are used by the chief resident to teach others
Level 5 *Coaches others to improve written communication* *Guides departmental or institutional communication around policies and procedures*	● Leads a work group established by the department to improve the quality of documentation in resident clinic notes ● Leads a quality and patient safety committee to communicate biopsy results in a timely manner
Assessment Models or Tools	● Direct observation ● Medical record (chart) audit

	● Multisource feedback
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. doi:10.1080/10401334.2017.1303385. ● Starmer AJ, et al. I-pass, a mnemonic to standardize verbal handoffs. *Pediatrics*. 2012;129(2):201-204. doi:10.1542/peds.2011-2966. ● Haig KM, Sutton S, Whittington J. SBAR: a shares mental model for improving communications between clinicians. *Jt Comm J Qual Patient Saf*. 2006;32(3):167-75. https://www.jointcommissionjournal.com/article/S1553-7250(06)32022-3/fulltext. 2019. ● AAD. Simulated Patient Encounters. https://store.aad.org/products/12923. 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: History, Examination and Presentation	PC1: Medical Dermatology
PC2: Diagnostic Tests	PC6: Diagnostics
PC3: Dermatopathology Application	PC4: Dermatopathology
PC4: Medical Treatment	PC8: Therapeutics Management
PC5: Pediatric Treatment	PC2: Pediatric Dermatology
PC6: Surgical Treatment	PC3: Dermatologic Procedures and Surgery
PC7: Diagnosis, Management Decision, and Patient Education	PC7: Critical Thinking/Differential Diagnosis
No match	PC5: Cosmetic Care
MK1: Medical Dermatology	MK1: Knowledge of Dermatologic Disease
MK2: Pediatric Dermatology	No match
MK3: Dermatologic Surgery	No match
MK4: Dermatopathology	No match
MK5: Application of Basic Science Knowledge to Clinical Care	No match
No match	MK2: Visual Recognition
SBP1: Adapts Easily and Works Effectively in Various Health Care Delivery Settings and Systems	SBP2: System Navigation for Patient-Centered Care
SBP2: Works Effectively Within an Interprofessional Team	SBP2: System Navigation for Patient-Centered Care ICS2: Interprofessional and Team Communication
SBP3: Improves Healthcare Delivery by Identifying System Errors and Implementing Potential Systems Solutions; Advocates For Quality Patient Care and Optimal Patient Care Systems	SBP1: Patient Safety and Quality Improvement SBP3: Physician Role in Health Care Systems
SBP4: Practices Cost-Conscience Care	SBP3: Physician Role in Health Care Systems
PBLI1: Appraise and Assimilate Scientific Evidence	PBLI1: Evidence-Based and Informed Practice
PBLI2: Continuously Improve Through Self-Assessment of Competence	PBLI2: Reflective Practice and Commitment to Personal Growth

PBLI3: Integrate Quality Improvement Concepts and Activities in Practice	SBP1: Patient Safety and Quality Improvement
PBLI4: Teach Others	No match
PROF1: Practices Medicine Ethically	PROF1: Professional Behavior and Ethical Principles PROF2: Accountability/ Conscientiousness
PROF2: Committed to Lifelong Learning and Improvement	PBLI2: Reflective Practice and Commitment to Personal Growth
PROF3: Patient care is the first priority	PROF1: Professional Behavior and Ethical Principles
No match	PROF3: Self-Awareness and Well-Being
ICS1: Communication and Rapport with Patients and Families	ICS1: Patient and Family-Centered Communication
ICS2: Having Difficult Conversations	ICS2: Interprofessional and Team Communication
ICS3: Team Member Respect and Care Coordination	ICS2: Interprofessional and Team Communication
ICS4: Communication and Consultation with Other Physicians	ICS2: Interprofessional and Team Communication
ICS5: Medical Documentation	ICS3: Communication within Health Care Systems