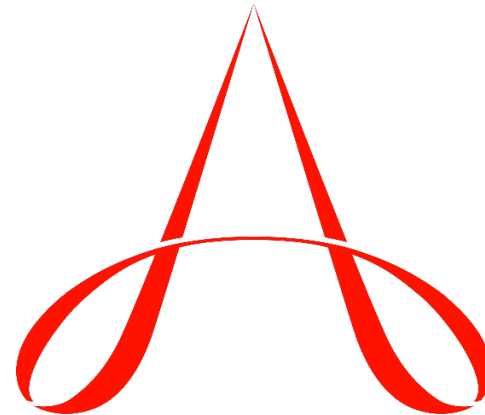




Supplemental Guide: Pediatric Dermatology



ACGME

March 2022

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Milestones Supplemental Guide

This document provides additional guidance and examples for the Pediatric 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
<p>Level 1 <i>Obtains basic pediatric dermatologic history and physical exam</i></p> <p><i>Identifies management options for common dermatologic conditions in children</i></p>	<ul style="list-style-type: none"> ● Obtains history from a 15-year-old patient with acne vulgaris ● Obtains history from parents of an eight-month-old patient with mild to moderate atopic dermatitis ● Identifies topical and systemic treatments for acne in a 15-year-old patient ● Identifies topical treatments for an infant with mild to moderate atopic dermatitis
<p>Level 2 <i>Evaluates pediatric patients with common dermatologic conditions, with assistance</i></p> <p><i>Manages pediatric patients with common dermatologic conditions, with assistance</i></p>	<ul style="list-style-type: none"> ● Evaluates an eight-year-old patient with acne, attending points out relevant aspects of exam in this pre-pubertal age group ● Evaluates infant with an intermediate-sized congenital nevus and, with assistance from faculty members, discusses natural history and prognosis ● Distinguishes historical points for an eight-year-old patient with acne versus a 15-year-old patient with acne ● Obtains history including development milestones relevant to presenting condition ● Performs age- and developmentally appropriate physical exam ● Knows when to perform lap exam on a toddler versus putting the patient on the table ● Decides to perform a shave or curettage on a 10-year-old patient with pyogenic granuloma ● Evaluates a 13-year-old female with a rapidly growing black lesion on the right leg; the attending points out key dermoscopic findings ● Assesses the lesion as a Spitz/Reed nevus and treatment options and biopsy discussed with assistance from a faculty member ● Decides to perform a skin biopsy on the right leg, with the attending supervising
<p>Level 3 <i>Independently evaluates pediatric patients with common dermatologic conditions</i></p> <p><i>Independently manages pediatric patients with common dermatologic conditions</i></p>	<ul style="list-style-type: none"> ● Evaluates and selects treatment for a four-year-old patient with mild psoriasis ● Counsels parents on the prognosis and treatment options for alopecia areata including age of patient in decision making (e.g., when intralesional steroid might be tolerated) ● Evaluates infant with a small or intermediate-sized congenital nevus and can independently make recommendations for management ● Evaluates a widespread, new onset itchy rash in a teenaged patient, generates a differential diagnosis and creates a diagnostic and management plan ● Evaluates three-year-old patient, suspects scabies, and confirms suspicion with dermoscopy and skin scraping; prescribes topical therapy to patient and family members

	<ul style="list-style-type: none"> ● Evaluates infant with infantile hemangioma and can accurately risk-stratify and make recommendations for treatment including anticipated natural history and discussion of risks and benefits with parents ● Evaluates a 14-year-old female with psoriasis affecting 10 percent of her body surface area ● Discusses need for topical therapy, options, and indications for photo and systemic therapy, as well as the need to connect for connection to primary care ● Selects biologic treatment from available options for the 14-year-old patient with psoriasis and appropriately counsels about the side effects and expected results of the treatment
<p>Level 4 <i>Independently evaluates pediatric patients with complex dermatologic conditions</i></p> <p><i>Independently manages pediatric patients with complex dermatologic conditions and/or comorbidities</i></p>	<ul style="list-style-type: none"> ● Evaluates a complex inpatient, diagnoses drug reaction with eosinophilia and systemic symptoms (DRESS), and determines a management plan ● Selects second-line option for a patient with severe psoriasis who has failed topical and phototherapy ● Evaluates an infant with a segmental infantile hemangioma of the face and can independently decide whether evaluation for PHACE syndrome is needed and the timing of this evaluation; counsels the family of a child with PHACE syndrome including anticipatory guidance about potential signs and symptoms as well as resources ● Independently determines comorbidity evaluation for a teen with hidradenitis ● Evaluates and determines work-up and plan for a newborn with a bullous disorder ● Recommends genetic work-up for a patient with a complex inflammatory skin condition of unknown cause ● Determines when a skin biopsy would be useful to differentiate graft versus host disease (GVHD) from drug rash or other entity on an ill bone marrow transplant patient ● Performs a consult on a hospitalized nine-year-old bone marrow transplant patient in the intensive care unit (ICU) 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 dermatopathology team, and gathers additional information from the interprofessional team ● Determines appropriate medication choices and prescribes first-line systemic medication for linear morphea in a 15-year-old patient ● Determines second-line therapy for a nine-year-old patient with severe psoriasis not responding to methotrexate
<p>Level 5 <i>Independently evaluates and manages pediatric patients with rare, atypical, or refractory dermatologic conditions</i></p>	<ul style="list-style-type: none"> ● Provides expert consultation on a patient with a complex vascular anomaly and overgrowth ● Identifies appropriate biologic therapy for a patient with psoriasis recalcitrant to first- and second-line systemic therapies based on patient-specific factors

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<p><i>Provides expert advice and consultation to other care practitioners on common and complex pediatric dermatologic conditions</i></p>	<ul style="list-style-type: none"> ● Evaluates a four-year-old patient with congenital skin rash, confirms the suspected diagnosis of Netherton syndrome with genetic tests, determines first-line management in this age group, and arranges a multidisciplinary evaluation ● Consults on a 12-year-old 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/grand rounds about how the diagnosis of pityriasis rubra pilaris (PRP) was determined, and starts patient on systemic retinoid therapy
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Direct observation ● Evaluation of case-based discussion ● Medical record (chart) audit/review ● Multisource feedback
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● 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 fellowship, when using the phrase “with assistance” with these Milestones and Supplemental Guide, it presumes 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. Accessed 2019.

Patient Care 2: Dermatologic Procedures and Surgery	
Overall Intent: To care for patients undergoing dermatologic procedures or surgery	
Milestones	Examples
<p>Level 1 <i>Performs pre- and post-operative assessment for common, office-based procedures on pediatric patients, with guidance</i></p> <p><i>Identifies indications and contraindications for procedures in pediatric patients</i></p> <p><i>Demonstrates awareness of potential procedural complications</i></p>	<ul style="list-style-type: none"> ● Evaluates the patient’s age, skin phototype and number of lesions to determine if cryotherapy for verruca vulgaris on the hands is appropriate in a nine-year-old patient, with guidance from attending physician ● Assesses a lesion on the arm as worrisome, with guidance ● Identifies that a diagnostic skin biopsy is appropriate ● Describes basic post-operative instructions to patient and family members regarding how to clean and care for a shave biopsy wound ● Explains potential risks of cryotherapy
<p>Level 2 <i>Performs pre-operative assessment for diagnostic and therapeutic (excisions, laser) procedures on pediatric patients including alternatives and/or deferral of procedural approaches</i></p> <p><i>Performs procedures on pediatric patients using patient comfort strategies, with assistance</i></p> <p><i>Identifies procedural complications, with assistance</i></p>	<ul style="list-style-type: none"> ● Defers curettage of multiple facial molluscum contagiosum lesions on a toddler ● Is aware of the fear of procedures in pediatric patients that may result in a complication if the patient is unable to be still for the procedure and decides to defer cryotherapy in a fearful four-year-old patient in lieu of home therapy, and discusses age as a relative contraindication of an elective procedure with parents ● Assesses the indication of pulse dye laser (PDL) for a small capillary malformation and performs pulsed dye laser on the small vascular lesion on the arm of a 12-year-old patient after applying topical anesthetic ● Performs pre-operative assessment and identifies that the patient has not been able to cooperate with liquid nitrogen at two other dermatology offices; defers procedure and prescribes topical therapy instead ● Determines need for comfort strategies and selects ice, or buzzy bee, or other distraction techniques for a child prior to a small excision ● Performs a shave biopsy of an atypical nevus on a 10-year-old patient using comfort strategies, with assistance from attending physician ● Provides a tablet device for comfort and distraction and sets up and performs a punch biopsy or small excision of an atypical nevus on the ankle of a teenager ● Identifies a wound infection after a small excision of an atypical Spitz nevus on the back
<p>Level 3 <i>Performs pre-operative assessment and counseling of risk for diagnostic and therapeutic (excisions, laser) procedures and deciding the</i></p>	<ul style="list-style-type: none"> ● Determines that pulsed dye laser is indicated for a stigmatizing extensive facial capillary malformation and determines that outpatient treatment is appropriate for a 14-year-old

<p><i>most appropriate setting for the procedure (e.g., office versus ambulatory surgery center) based on complexity of the planned procedure, with guidance</i></p> <p><i>Independently performs procedures on pediatric patients with routine conditions, using patient comfort strategies</i></p> <p><i>Manages procedural complications, with guidance</i></p>	<p>patient, and brief general anesthesia would be appropriate for the same lesion on a 6-year-old patient</p> <ul style="list-style-type: none"> ● Determines best approach for treatment of facial angiofibromas in a developmentally delayed patient with tuberous sclerosis ● Independently performs a punch biopsy with suture closure on a toddler using anticipatory guidance to parents, comfort strategies, and staff member support ● Performs excision and linear closure of a painful, rapidly enlarging pilomatrixoma on the arm, with guidance ● Evaluates a recent excision site and determines infection is present; prescribes appropriate antibiotics after obtaining a culture of the site ● Diagnoses a post-operative hematoma in surgery follow-up clinic and suggests evacuation of hematoma to attending physician; performs evacuation of hematoma with guidance
<p>Level 4 <i>Independently performs pre-operative assessment and counseling of risk for diagnostic and therapeutic (excisions, laser) procedures and deciding the most appropriate setting for the procedure (e.g., office versus ambulatory surgery center) based on complexity of the planned procedures(s)</i></p> <p><i>Independently performs a range of procedures on pediatric patients with complex conditions using patient comfort strategies</i></p> <p><i>Independently identifies and manages procedural complications</i></p>	<ul style="list-style-type: none"> ● Discusses risks and benefits of general anesthesia for laser treatment of a port-wine stain on the face on a four-year-old patient ● Assesses a patient with nevus of Ota and decides that laser treatment is appropriate given pain of the laser and the extensive area requiring pre-operative anesthesia ● Assesses an immune-suppressed patient with widespread molluscum and verrucae and determines that treatment under brief sedation is most appropriate given extent, patient age, and discomfort of the planned procedure ● Independently collects relevant patient’s medical history, including history of immunosuppression when determining most appropriate treatment of widespread verrucae ● Performs a punch biopsy with suture closure in the office, on a school-aged patient with significant developmental delay ● Performs laser treatment of facial port wine stain in-office (without sedation) on an infant ● Performs excision of an atypical Spitz nevus on the forehead and linear closure ● Identifies the appropriate indications for nail matrix biopsy in a child ● Assesses a purulent post-surgical wound, identifies a spitting suture and pus, cultures pus, removes spitting suture, prescribes antibiotics, and determines follow-up ● Identifies when an outpatient procedure should be stopped for safety or comfort reasons
<p>Level 5 <i>Provides expert advice and consultation to other care practitioners for complex procedural management (surgical or laser) of</i></p>	<ul style="list-style-type: none"> ● Develops expertise in nail procedures in pediatric patients (e.g., matrix biopsy) ● Performs staged excision of a medium-size congenital melanocytic nevus ● Performs dual laser therapy, when appropriate, for complex vascular anomalies

<p><i>pediatric patients with various dermatologic conditions</i></p> <p><i>Helps to develop improved procedure methodologies and management for complications of procedures</i></p>	<ul style="list-style-type: none"> ● Knows scope of practice or expertise and understands factors that would prompt deferral or referral of complex procedures based on patient age, size, lesion location, expected complications, and/or family/social dynamics ● Serves as an expert resource for procedural referrals from colleagues ● Performs a lateral nail unit excision for ingrown nails ● Enhances workflow for collaborative procedures with non-dermatology colleagues so children may undergo only one general anesthesia for multiple procedures
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Direct observation ● Evaluation of case review/discussion ● Medical record (chart) audit/review ● Multisource feedback
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● Examples of common procedures in pediatric dermatologic surgery: shave/punch biopsy, incision and drainage, liquid nitrogen application, curettage ● “With guidance” in pediatric dermatology procedures and surgery: with assistance from attending physician based on ACGME and institutional supervision policies. ● “Complex conditions” refers to patients with intrinsic or extrinsic factors that can make procedures and surgery more challenging (e.g., neurodevelopmental disorders, autism, intellectual disability), anxiety, social circumstances that make them mistrustful of medical providers, and complex pediatric dermatology conditions (e.g., epidermolysis bullosa, complex vascular anomalies, immunosuppression). ● 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. Accessed 2019.

Patient Care 3: Diagnostics

Overall Intent: To perform and interpret laboratory tests

Milestones	Examples
<p>Level 1 <i>Understands the indications, and selects and performs in-office tests, with assistance</i></p> <p><i>Selects laboratory, imaging, and other diagnostic tests for common presentations</i></p>	<ul style="list-style-type: none"> ● Performs skin scraping for scabies on a school-aged patient with assistance from attending physician ● 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 ● Reviews the proper baseline labs for initiation of systemic immune modulating therapy, with guidance
<p>Level 2 <i>Independently selects and performs in-office tests; interprets in-office diagnostic tests, with assistance</i></p> <p><i>Independently interprets laboratory, imaging, and other diagnostic tests for common presentations and communicates results to providers and families</i></p>	<ul style="list-style-type: none"> ● After scraping the inner thigh of a patient, while giving consideration for age and comfort level of the patient, prepares a slide with KOH independently, and reviews this with the attending at a multi-headed microscope ● Assesses suspicious lesions with dermoscopy to look for signs of scabies ● 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 ● Reviews lab results with a patient initiating methotrexate ● Communicates normal magnetic resonance imaging (MRI) report to a family whose child has linear morphea ● Interprets pathology results and discusses the diagnosis of granuloma annulare with the family
<p>Level 3 <i>Independently selects, performs, and interprets a full spectrum of in-office tests</i></p> <p><i>Interprets laboratory, imaging, and other diagnostic tests for complex or rare presentations with guidance</i></p>	<ul style="list-style-type: none"> ● Interprets and develops appropriate plan of care for a patient with a biopsy report of a melanocytic nevus with mild atypia ● Reviews a complete blood count (CBC), thyroid panel, and inflammatory markers result with the family of a child and concludes that it is not relevant to the patient’s chronic urticaria ● Reviews screening labs done for initiation of systemic immune suppressing therapy with family and determines dosing strategy and ongoing lab monitoring based on initial results
<p>Level 4 <i>Independently interprets laboratory, imaging, and other diagnostic tests for complex or rare presentations</i></p>	<ul style="list-style-type: none"> ● Interprets genetic testing results for an infant with dominant dystrophic epidermolysis bullosa ● Selects appropriate genomic testing panel for overgrowth syndrome

<p><i>Independently seeks further assistance or expertise for interpretation of discordant diagnostic results</i></p>	<ul style="list-style-type: none"> ● Seeks collaborative discussion of biopsy and lab results for a patient with erythromelalgia ● While evaluating a teen patient with groin rash, performs a KOH, that turns out negative; then performs a Wood’s lamp examination that reveals coral red fluorescence in the rash area, confirming a diagnosis of erythrasma; prescribes proper therapy ● In an adolescent patient presenting with retiform purpura and livedo reticularis, orders laboratory tests that, upon interpretation of results, confirm the patient has antiphospholipid antibody syndrome; arranges referral to hematology ● Identifies next steps for common genomic alterations on next-gen sequencing for PIK3CA or GNAQ ● Selects the proper imaging study for baseline central nervous system screening in a patient with giant congenital nevus, when indicated
<p>Level 5 <i>Evaluates the application of novel and emerging diagnostic tests</i></p> <p><i>Provides expert advice on the interpretation of discordant diagnostic results</i></p>	<ul style="list-style-type: none"> ● Provides expert consultation on a patient with an overgrowth syndrome with a genetic mutation of unknown significance ● Identifies next steps for genomic alterations on next-gen sequencing for multiple mutations or variants of unknown significance ● Assesses a patient with a complex inflammatory skin disease and determines the relative diagnostic value of tissue biopsy, genetic testing, and lab work based on the overall clinical scenario ● Presents a grand rounds lecture highlighting emerging application of genetic testing for psoriasiform skin conditions and answers audience questions with clear knowledge of the controversies, pros, and cons
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Case presentation ● Direct observation ● Proficiency testing ● Online self-assessments
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● Levitt J. How to perform a KOH scraping. https://www.youtube.com/watch?v=REAdCUkmBqM. Accessed 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. Accessed 2019.

Patient Care 4: Critical Thinking/Differential Diagnosis	
Overall Intent: To develop a prioritized differential diagnosis and explain clinical reasoning	
Milestones	Examples
Level 1 <i>Develops a differential diagnosis for common presentations of pediatric skin conditions, with guidance</i>	<ul style="list-style-type: none"> • When a six-year-old female with a history of asthma presents with pink papules around the mouth sparing the vermilion border, classifies the eruption as eczematous papules and lists contact dermatitis, folliculitis, and perioral dermatitis in the differential diagnosis, with assistance
Level 2 <i>Independently develops a differential diagnosis for common presentations of pediatric skin conditions</i>	<ul style="list-style-type: none"> • 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 • When a two-year-old patient presents with scaly patches in one axilla, recognizes a differential diagnosis of contact dermatitis, asymmetric eczema, and asymmetric periflexural exanthem • When a five-year-old patient presents with scaling on scalp and mild pruritus, recognizes a differential diagnosis of psoriasis and tinea capitis, eczema; recognizes that seborrheic dermatitis is unlikely given the age
Level 3 <i>Develops a prioritized differential diagnosis for complex presentations of pediatric conditions and recognizes nuances in clinical and diagnostic features</i>	<ul style="list-style-type: none"> • For a five-day-old female pre-term infant who presents with a red telangiectatic patch noted at birth, develops a ranked differential diagnosis that includes infantile hemangioma precursor and port-wine stain, discusses the differences in vascular pattern and suggests other diagnostic strategies (e.g., monitoring natural history for proliferation, use of dermoscopy to identify coarse telangiectatic vessels) to help rank differentiate etiologies • For a nine-year-old patient with a one-year history of scaly and hypopigmented papules, who is otherwise healthy, develops prioritized differential diagnoses, including pityriasis lichenoides, hypopigmented mycosis fungoides, and decides on approach, lesional selection for biopsy, and proposed follow-up/management
Level 4 <i>Pursues and synthesizes additional information to reach high-probability diagnoses with continuous re-appraisal</i>	<ul style="list-style-type: none"> • Calls for a consultation in the neonatal intensive care unit (NICU) for possible cellulitis in a three-day-old full-term infant with poor Apgar score born to a diabetic mother and showing signs of respiratory distress; notes erythematous nodules and plaques on the patient's posterior shoulders and mid back; recognizes features of the past medical history that helps rank differential diagnoses and orders imaging and laboratory tests to help distinguish between entities, and reassesses the situation as necessary • When a 10-year-old patient presents with a growing red/pink firm papule on the anterior thigh that has previously bled and was initially treated as a wart that has continued to grow, develops a differential diagnosis that includes a spitz nevus, atypical spitzoid proliferation, amelanotic melanoma, and pyogenic granuloma; uses dermoscopy and identifies morphologic features to help differentiate diagnoses; recognizes need for histologic evaluation; and selects appropriate biopsy method for management

<p>Level 5 <i>Seeks and integrates additional data and educates others to minimize clinical reasoning errors</i></p>	<ul style="list-style-type: none"> ● When seeing infant with early onset firm area on thigh, who has a non-diagnostic biopsy but increased fibroblasts, educates residents to consider DDX connective tissue nevus, stiff skin syndrome, myofibromatosis, and similar disorders; helps guide the management plan and whether there is a need for further biopsies and other ancillary studies
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Case discussions ● Chart audit ● Direct observation ● Multisource evaluation ● Written examination
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● Eichenfield L, Frieden I, Mathes E, Zaenglein A. <i>Neonatal and Infant Dermatology</i> 3rd ed. Elsevier; 2014. ● Paller A, Mancini AJ. <i>Hurwitz Clinical Pediatric Dermatology: A Textbook of Skin Disorders of Childhood and Adolescence</i> 5th ed. Elsevier; 2021. ● Bologna JL, Jorizzo JL, Schaffer JV. <i>Dermatology: 2-Volume Set: Expert Consult Premium Edition - Enhanced Online Features and Print</i> 3rd ed. 2009.

Patient Care 5: 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 plans for drug side effect and laboratory monitoring; and adjust therapeutic approach for refractory disease	
Milestones	Examples
<p>Level 1 <i>Identifies patients who are candidates for topical and systemic therapy</i></p> <p><i>Identifies available treatment options for common skin disorders based on patient age and underlying medical conditions</i></p> <p><i>Identifies therapeutic agents that require laboratory monitoring</i></p>	<ul style="list-style-type: none"> ● In a five-week-old female infant presents with a superficial infantile hemangioma on the lateral neck that is proliferating, identifies indications for active treatment with topical versus systemic therapy versus active observation, with assistance ● Identifies potential systemic options for acne (e.g., hormonal treatments versus antibiotics versus isotretinoin) based on patient age, pubertal status, and medical comorbidities, 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
<p>Level 2 <i>Provides appropriate counseling regarding adverse effects and reasonable risks</i></p> <p><i>Selects treatment options for common skin disorders, with guidance, based on patient age and underlying medical conditions</i></p> <p><i>Selects appropriate laboratory monitoring for systemic treatments for pediatric patients, with guidance</i></p>	<ul style="list-style-type: none"> ● Prior to initiation of treatment with isotretinoin, advises a teenage girl with nodulocystic acne about xerosis and cheilitis, phototoxicity, hypertriglyceridemia, and other rare reported adverse reactions; stresses the importance of compliance with risk evaluation and mitigation strategies (i.e., iPledge system) to avoid pregnancy while on therapy ● After evaluating a six-year-old male patient with a localized patch of alopecia areata and is treatment naïve, recognizes treatment options of a high potency topical corticosteroid versus intralesional Kenalog versus other topical therapies and selects age-appropriate therapy of the individual patient ● Prior to initiation of anti-tumor necrosis factor-α therapy in a patient with psoriasis, orders tuberculosis screening, but requires prompting by the supervising faculty member to order hepatitis B serologies based on risk factors
<p>Level 3 <i>Consistently evaluates treatment response and counsels patients on expectations of therapy</i></p> <p><i>Selects therapeutic modalities for common and uncommon pediatric skin disorders while balancing risks and benefits based on patient</i></p>	<ul style="list-style-type: none"> ● When evaluating a patient taking dupilumab for atopic dermatitis, advises the patient that clinical response of pruritus may improve sooner than more chronic skin changes such as lichenification and post inflammatory pigmentation, and they may still require intermittent use of topical therapies ● In a patient with widespread psoriasis and history of obesity, weighs the risks and benefits of methotrexate and biologic therapies

<p><i>age and underlying medical conditions, with guidance</i></p> <p><i>Selects appropriate laboratory monitoring for pediatric patients and manages adverse effects, with guidance</i></p>	<ul style="list-style-type: none"> ● In a patient taking isotretinoin, recognizes a significant increase in fasting triglyceride level over baseline after first month of treatment, but seeks guidance to determine whether dosage reduction or discontinuation should be recommended ● Sees patient with portwine stain previously treated with laser and identifies potential risks and benefits but gets assistance from supervising faculty member regarding timing, number of treatments, and expected outcomes
<p>Level 4 <i>Consistently identifies refractory disease and independently escalates therapy as necessary</i></p> <p><i>Independently selects from among all available therapeutic modalities for common and uncommon skin disorders based on patient age and underlying medical conditions</i></p> <p><i>Independently orders appropriate laboratory monitoring and manages adverse effects of therapeutics</i></p>	<ul style="list-style-type: none"> ● Selects therapy with ustekinumab for an adolescent patient with widespread plaque-type psoriasis previously refractory to phototherapy, high-potency topical steroids, and methotrexate ● Selects an oral antibiotic (e.g., doxycycline, pulsed azithromycin, erythromycin) for an eight-year-old patient with pityriasis lichenoides et varioliformis acuta (PLEVA) ● Evaluates high-risk infantile hemangioma and selects whether systemic or topical therapy is needed and counsels parents re: expected duration, possible adverse events, and their prevention (e.g., hypoglycemia) and selects appropriate interval for follow-up ● Following a laboratory evaluation one month after initiating methotrexate for a patient with generalized psoriasis, identifies transaminitis and plans to repeat evaluation and consider appropriate work-up and referral if levels are persistently elevated
<p>Level 5 <i>Independently manages rare and complex diseases based on emerging evidence</i></p> <p><i>Evaluates the application of novel and emerging therapeutic modalities or unique applications of existing drugs based on patient age and underlying medical conditions</i></p> <p><i>Develops systems for safety monitoring</i></p>	<ul style="list-style-type: none"> ● Discusses role of sirolimus with complex and mixed vascular anomalies of the skin and soft tissue and refers to oncology to help initiate, if needed ● Discusses potential enrollment in a clinical trial or off-label systemic treatment for a patient with alopecia areata ● Creates a reminder system within the electronic health record (EHR) to ensure appropriate laboratory screening prior to biologic therapy for psoriasis
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Case discussions/multidisciplinary conference ● Chart review ● Direct observation ● Multisource evaluation ● Written examinations
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●

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>. Accessed 2019.
- Litt's Drug Eruption and Reaction Database. <https://www.drugeruptiondata.com/>. Accessed 2019.
- American Academy of Dermatology. Clinical Guidelines. <https://www.aad.org/guidelines>. Accessed 2019.
- Krowchuk DP, Frieden IJ, Mancini AJ, et al. Clinical practice guideline for the management of infantile hemangiomas. *Pediatrics*. 2019;143(1):e20183475.
- Menter A, Cordoro KM, Davis DMR et al. Joint American Academy of Dermatology-National Psoriasis Foundation guidelines of care for the management and treatment of psoriasis in pediatric patients. *J Am Acad Dermatol*. 2020 Jan;82(1):161-201. doi: 10.1016/j.jaad.2019.08.049. Epub 2019 Nov 5. Erratum in: *J Am Acad Dermatol*. 2020 Mar;82(3):574. PMID: 31703821.

Medical Knowledge 1: Knowledge of Dermatologic Disease Overall Intent: To show knowledge of the science of dermatology	
Milestones	Examples
<p>Level 1 <i>Describes fundamental anatomy and physiology of neonatal, pediatric, and adolescent skin</i></p> <p><i>Demonstrates knowledge of the clinical features of common pediatric dermatologic disorders</i></p>	<ul style="list-style-type: none"> • Describes the structure and function of the epidermis, including neonatal skin and the effect on the patient due to a disrupted skin barrier • Identifies the areas of the body most commonly involved with atopic dermatitis, based on age at presentation
<p>Level 2 <i>Describes pathophysiology of common pediatric skin disorders</i></p> <p><i>Demonstrates knowledge of the clinical features, associations, treatments, and expected course of common pediatric dermatologic disorders</i></p>	<ul style="list-style-type: none"> • Explains the role of Th-2 cytokines in the pathophysiology of atopic dermatitis • Identifies the common comorbidities of psoriasis
<p>Level 3 <i>Demonstrates knowledge of the pathophysiology of complex pediatric skin disorders</i></p> <p><i>Demonstrates knowledge of the clinical features, associations, treatments, and expected course of uncommon and complex pediatric dermatologic disorders</i></p>	<ul style="list-style-type: none"> • Draws the key elements of the basement membrane zone and highlights different molecular areas of protein dysfunction in inherited autoimmune blistering diseases • Provides an overview of pediatric autoimmune disorders (e.g., Henoch-Schönlein Purpura, lupus, chronic bullous disorders, morphea), including other organ involvement, systemic treatments, and expected course
<p>Level 4 <i>Synthesizes knowledge of pathophysiology of pediatric skin disorders and applies this knowledge to management and counseling</i></p> <p><i>Demonstrates comprehensive knowledge of the clinical features, associations, treatments, and expected course of pediatric dermatologic disorders, including impact on overall physical and psychosocial well-being</i></p>	<ul style="list-style-type: none"> • Integrates current scientific evidence on the pathophysiology of toxic epidermal necrolysis into selecting treatment options • Recommends systemic medication for functional impairment of a segmental hemangioma near the eye in patient with suspected PHACE syndrome • Differentiates between different vascular malformations, use proper terminology, and understands the genetic pathways involved
<p>Level 5 <i>Teaches emerging concepts in cutaneous pathophysiology as it applies to the pediatric patient</i></p>	<ul style="list-style-type: none"> • Teaches about the mechanism of action of a promising new targeted therapy for treatment of severe atopic dermatitis

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<p><i>Teaches emerging concepts in clinical features, associations, treatments, or expected course of common, uncommon, and complex pediatric dermatologic disorders</i></p>	<ul style="list-style-type: none"> ● Teaches about cutaneous adverse reactions to novel anti-cancer agents used in pediatric oncology ● Conducts a research study that has an impact on patient care and therapeutic guidelines
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Case conference ● Didactic lecture participation ● Direct observation ● Conference presentations
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● American Board of Dermatology. Clinical core and didactic curriculum for pediatric dermatology fellowship. https://www.abderm.org/residents-and-fellows/fellowship-training/pediatric-dermatology.aspx. Accessed 2021. ● 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. Accessed 2019. ● Dermatology texts and review books

Medical Knowledge 2: Visual Recognition	
Overall Intent: To identify classic and subtle morphologic findings and visual patterns within dermatology	
Milestones	Examples
<p>Level 1 <i>Identifies common pediatric skin diseases with characteristic findings</i></p> <p><i>Describes morphology with fluency</i></p>	<ul style="list-style-type: none"> ● Recognizes atopic dermatitis across various age groups ● Recognizes umbilicated papules as molluscum contagiosum ● Describes morphology as blaschkolinear linear flat-topped papules in a patient with lichen striatus ● Identifies a segmental versus localized infantile hemangioma
<p>Level 2 <i>Identifies uncommon pediatric skin diseases with characteristic findings</i></p> <p><i>Identifies subtle morphologic features that distinguish among entities</i></p>	<ul style="list-style-type: none"> ● Recognizes Gottron’s papules as a finding in a patient with known juvenile dermatomyositis ● Describes features associated with a smooth muscle hamartoma (pseudo-Darier’s sign, hypertrichosis) ● Described the teetertotter sign and blue hue associated with pilomatrixoma
<p>Level 3 <i>Identifies variable presentations of common pediatric skin disease</i></p> <p><i>Integrates visual diagnostic tools (e.g., dermoscopy) for basic diagnoses</i></p>	<ul style="list-style-type: none"> ● Recognizes variable patterns of psoriasis, including plaque, pustular, guttate, palmoplantar, and partially treated variants, in addition to medication-induced psoriasis (e.g., tumor necrosis factor- alpha inhibitor psoriasis with palmoplantar and pustular variants) and describes the features clearly and concisely ● Identifies demodex on slide preparation ● Recognizes features of syndromic hair disorders (e.g., trichorexis invaginata) on hair mounted slide ● Identifies classic presentations of infantile hemangioma, including differentiating from mimicker ● Uses telemedicine and evaluation of images in provider patient care
<p>Level 4 <i>Identifies variable presentations of uncommon and rare pediatric skin disease</i></p> <p><i>Integrates visual diagnostic tools for a wide range of diagnoses of the skin, hair, and nails</i></p>	<ul style="list-style-type: none"> ● Performs dermoscopy/trichoscopy for alopecia areata and identifies yellow dots on exam ● Recognizes patterns and cutaneous findings that are at highest risk for spinal dysraphism
<p>Level 5 <i>Mentors others in recognizing pediatric skin disease, including the use of visual diagnostic tools</i></p>	<ul style="list-style-type: none"> ● Uses dermoscopy to differentiate between various vascular anomalies ● Teaches dermoscopic features that help identify higher and lower risk pigmented lesions (e.g., starburst pattern for Spitz nevi and acral nevi in children)
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Case conference ● Clinical pathologic correlation ● Clinical unknowns

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	<ul style="list-style-type: none">• Direct observation
Curriculum Mapping	<ul style="list-style-type: none">•
Notes or Resources	<ul style="list-style-type: none">• Dermoscopedia. Online Dermoscopy Modules. https://dermoscopedia.org/Main_Page. Accessed 2019.• Dermoscopy and Kodachrome lectures

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
<p>Level 1 <i>Demonstrates knowledge of common safety events</i></p> <p><i>Demonstrates knowledge of how to report patient safety events</i></p> <p><i>Demonstrates knowledge of basic quality improvement methodologies and metrics</i></p>	<ul style="list-style-type: none"> ● Lists patient misidentification or medication errors as common patient safety events ● Identifies use of personal protective equipment as a safety precaution
<p>Level 2 <i>Identifies system factors that lead to safety events</i></p> <p><i>Reports patient safety events through institutional reporting systems with guidance from fellowship mentor</i></p> <p><i>Describes local quality improvement initiatives (e.g., handwashing, needle stick prevention, masking, laser eye protection)</i></p>	<ul style="list-style-type: none"> ● Identifies that a lack of hand sanitizer dispensers for each clinical exam room may lead to increased infection rates ● Reports lack of hand sanitizer dispensers at each clinical exam room via online reporting system ● Describes how to report errors or near misses in your environment ● Identifies laser goggles as an important safety measure during laser procedures
<p>Level 3 <i>Participates in analysis of safety events (simulated or actual)</i></p> <p><i>Participates in disclosure of patient safety events to patients and their families (simulated or actual)</i></p> <p><i>Participates in local quality improvement initiatives</i></p>	<ul style="list-style-type: none"> ● Prepares for dermatological events in morbidity and mortality presentations ● Role plays a discussion with families, or has the discussion, with guidance, with patients/families about a lost specimen error ● Simulates, or has the discussion with families, about a dosage error and proper course of action thereafter ● Participates in project identifying the root cause of rooming inefficiency
<p>Level 4 <i>Conducts analysis of safety events and offers error prevention strategies (simulated or actual)</i></p>	<ul style="list-style-type: none"> ● Collaborates with a team to conduct the analysis of a lost specimen error and can effectively communicate with patients/families about those events

<p><i>Discloses patient safety events to patients and their families (simulated or actual) with guidance from mentor</i></p> <p><i>Demonstrates understanding of the skills required to identify, develop, implement, and analyze a quality improvement project</i></p>	<ul style="list-style-type: none"> ● Identifies the components for completion of a QI project, including assessing the problem, articulating a broad goal, developing a SMART (Specific, Measurable, Attainable, Relevant, Time-bound) objective plan, and monitoring progress and challenges
<p>Level 5 <i>Actively engages teams and processes to modify systems to prevent safety events</i></p> <p><i>Independently discloses patient safety events to patients and families (simulated or actual)</i></p> <p><i>Creates, implements, and assesses quality improvement initiatives at the institutional or community level</i></p>	<ul style="list-style-type: none"> ● Assumes a leadership role at the departmental or institutional level for patient safety ● Leads 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
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Direct observation ● E-module multiple choice tests ● Medical record (chart) audit ● Multisource feedback ● Reflection ● Simulation
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● Institute of Healthcare Improvement. http://www.ihl.org/Pages/default.aspx. Accessed 2019. Note: This site includes multiple choice tests, reflective writing samples, and more. ● Patient Safety Modules ABMS/NPSF National Patient Safety Foundation: On-line patient safety curriculum. http://npsf.site-ym.com/event/abms. ● American Academy of Dermatology Quality and Patient Safety education modules and resources. https://www.aad.org/member/clinical-quality/patient-safety.

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
<p>Level 1 <i>Demonstrates knowledge of care coordination</i></p> <p><i>Identifies key elements for safe and effective transitions of care and hand-offs</i></p> <p><i>Demonstrates knowledge of population and community health needs and inequities</i></p>	<ul style="list-style-type: none"> ● Identifies nurses, other physicians, and support staff as members of the team ● Lists the essential components of proper care transitions and hand-offs ● Identifies social determinants of health and access, explains that patients in rural areas may have different needs, resources, and limitations than urban or suburban patients
<p>Level 2 <i>Coordinates care of patients in routine clinical situations effectively using the roles of interprofessional team members</i></p> <p><i>Performs safe and effective transitions of care/hand-offs in routine clinical situations</i></p> <p><i>Identifies specific population and community health needs and inequities for the local population</i></p>	<ul style="list-style-type: none"> ● Coordinates care with the primary care physician and relevant specialists after an outpatient visit/consultation ● Communicates directly with inpatient team when giving recommendations for a critically ill inpatient with DRESS (drug rash with eosinophilia and systemic symptoms) syndrome ● Provides sign-out on a stable hospitalized patient with atopic dermatitis, including illness severity, patient summary, action list, and contingency plans ● Identifies that limited transportation options may be a factor in rural patients getting to frequent visits and may necessitate alternative modalities of evaluation and treatment (e.g., use of telemedicine, use of treatments that do not require frequent laboratory monitoring)
<p>Level 3 <i>Coordinates care of patients in complex clinical situations effectively using the roles of interprofessional team members</i></p> <p><i>Performs safe and effective transitions of care/hand-offs in complex clinical situations</i></p> <p><i>Uses local resources effectively to meet the needs of a patient population and community</i></p>	<ul style="list-style-type: none"> ● Identifies resources available for financial assistance for patients unable to pay for needed treatments ● Helps to arrange (by engaging local resources) overnight housing for patient needing to be at medical center for multispecialty care ● Provides sign-out on a critically ill hospitalized patient with active toxic epidermal necrolysis, including illness severity, patient summary, action list, and contingency plans ● Coordinates with social worker or care manager to identify transportation resources for a patient getting multiple dermatology appointments
<p>Level 4 <i>Leads effective coordination of patient-centered care among different disciplines and specialties</i></p>	<ul style="list-style-type: none"> ● During inpatient rotations, leads team members in approaching consultants to review cases/recommendations and arranges multispecialty conferences for the team

<p><i>Advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems including outpatient settings</i></p> <p><i>Participates in changing and adapting practice to provide for the needs of specific populations</i></p>	<ul style="list-style-type: none"> • Prior to going on vacation, proactively informs the covering resident about a plan of care for a patient travelling from a distance; plan includes starting propranolol and wanting the pediatrician to follow up and make the patient and family aware of possible adverse events, things to watch for, etc. • Assists in the design of protocols for clinic check-in of transgender patients • Uses telemedicine for patients with chronic illnesses who live far from the medical center
<p>Level 5 <i>Analyzes the process of care coordination and leads in the design and implementation of improvements</i></p> <p><i>Improves quality of transitions of care within and across health care delivery systems to optimize patient outcomes</i></p> <p><i>Leads innovations and advocates for populations and communities with health care inequities</i></p>	<ul style="list-style-type: none"> • Develops a triage system for telemedicine patients who need in-person urgent evaluations • Develops a protocol to improve dermatology clinic follow-up after inpatient consultations • Leads development of telemedicine services for a rural site • Advocates for iPledge system changes to be inclusive of all patients, including transgender youth
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> • Direct observation • Medical record (chart) audit • Multisource feedback • Quality metrics and goals mined from EHR • Review of sign-out tools, use and review of checklists
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> •
<p>Notes or Resources</p>	<ul style="list-style-type: none"> • CDC. Population health training in place program (PH-TIPP). https://www.cdc.gov/pophealthtraining/whatis.html. Accessed 2019. • American Academy of Dermatology telederm and health tech toolkits. https://www.aad.org/member/practice/telederm. • National Resources Center for Patient/Family-Centered Medical Home. https://medicalhomeinfo.aap.org/Pages/default.aspx.

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
<p>Level 1 <i>Identifies key components of the complex health care delivery system</i></p> <p><i>Describes basic health payment systems and practice models</i></p>	<ul style="list-style-type: none"> ● 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
<p>Level 2 <i>Describes how components of a complex health care delivery system are interrelated, and how this impacts patient care</i></p> <p><i>Delivers care with consideration of each patient’s payment model</i></p>	<ul style="list-style-type: none"> ● Understands 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 ● Proactively takes into consideration patient’s prescription drug coverage when choosing a treatment for acne vulgaris ● Discusses risks and benefits of simple office procedures such as cryotherapy for warts in patient with high out-of-pocket deductible
<p>Level 3 <i>Identifies various components of the complex health care delivery system and their role in efficient and effective patient care</i></p> <p><i>Engages with patients in shared-decision making, informed by each patient’s payment models</i></p>	<ul style="list-style-type: none"> ● Ensures proper EHR documentation for prior authorization for topical and systemic medications ● Discusses shared decision making for medications or timing of elective procedures when a patient has a high out-of-pocket deductible
<p>Level 4 <i>Modifies individual practice to optimize the effects on the broader health care delivery system</i></p> <p><i>Advocates for patient care needs within the limitations of each patient’s payment model</i></p>	<ul style="list-style-type: none"> ● Applies for patient assistance programs for prescription drugs on behalf of a patient who has previously tried other medications unsuccessfully and has limited resources ● Writes a letter of medical necessity for a treatment that is being denied by medical insurance
<p>Level 5 <i>Advocates for or leads systems change that enhances high-value, efficient, and effective patient care</i></p>	<ul style="list-style-type: none"> ● Works with community or professional organizations to advocate for restrictions on indoor tanning ● Works with patient advocacy organizations to help improve patient education materials and other ways to improve disease-specific care

<i>Participates in health policy advocacy activities</i>	<ul style="list-style-type: none"> ● Improves informed consent process for non-English-speaking patients requiring interpreter services
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation ● Medical record (chart) audit ● Patient satisfaction data
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● Agency for Healthcare Research and Quality (AHRQ). Measuring the Quality of Physician Care. https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/physician/challenges.html. Accessed 2019. ● American Academy of Dermatology Advocacy. https://www.aad.org/member/advocacy#. The Commonwealth Fund. Health System Data Center. http://datacenter.commonwealthfund.org/?_ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1. Accessed 2019. ● Dzau VJ, McClellan M, Burke S, et al. Vital directions for health and health care: priorities from a National Academy of Medicine Initiative. <i>NAM Perspectives</i>. Discussion Paper, National Academy of Medicine, Washington, DC. doi:10.31478/201703e. ● The Kaiser Family Foundation: Topic: health reform. https://www.kff.org/topic/health-reform/. Accessed 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 <i>Demonstrates how to access and use available evidence, and incorporate patients' and patients' families' preferences and values to the care of a routine patient</i>	<ul style="list-style-type: none"> ● Identifies evidence-based guidelines for the management of mild psoriasis
Level 2 <i>Articulates clinical questions and elicits the patient's and patient's family's preferences and values to guide evidence-based care</i>	<ul style="list-style-type: none"> ● In a patient with moderate to severe psoriasis, solicits patient perspective considering potential adverse reactions, time commitment and cost ● Provides patient and family with evidence-based outcomes of a new atopic dermatitis therapy, including adverse effects seen in clinical trials
Level 3 <i>Locates and applies the best available evidence, integrated with the patient's and patient's family's preference, to the care of complex patients</i>	<ul style="list-style-type: none"> ● Obtains, discusses, and applies clinical practice guidelines for the treatment of a patient with psoriasis and metabolic syndrome while eliciting patient preferences
Level 4 <i>Critically appraises and applies evidence, even in the face of uncertainty and conflicting evidence, to guide care, tailored to the individual patient</i>	<ul style="list-style-type: none"> ● Accesses the primary literature to identify alternative treatments for patients with moderate to severe psoriasis with human immunodeficiency virus (HIV) ● Reviews risks and benefits of topical calcineurin inhibitors for atopic dermatitis, including a summary of the data from various post-market safety studies
Level 5 <i>Coaches others to critically appraise and apply evidence for complex patients, and/or participates in the development of guidelines</i>	<ul style="list-style-type: none"> ● As part of a team, develops standardizing management protocol for methotrexate at their institution
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation ● Oral or written examinations ● Presentation evaluation ● Quality improvement project
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● National Institutes of Health. US National Library of Medicine. PubMed Tutorial. https://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html. Accessed 2019. ● 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. doi:10.1016/j.jaad.2014.07.062. ● Silverberg JI. Study designs in dermatology: A review for the clinical dermatologist. <i>J Am Acad Dermatol</i>. 2015;73(5):721-31. doi:10.1016/j.jaad.2014.08.029. ● JAMAevidence. Using Evidence to Improve Care. https://jamaevidence.mhmedical.com/.

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 <i>Accepts responsibility for personal and professional development by establishing goals</i> <i>Acknowledges limits and gaps between expectations and performance; demonstrates self-awareness</i>	<ul style="list-style-type: none"> ● 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 <i>Demonstrates openness to feedback and performance data to inform goals</i> <i>Analyzes the factors that contribute to limits and gaps in performance; demonstrates appropriate help-seeking behaviors</i>	<ul style="list-style-type: none"> ● Reviews feedback prior to semi-annual performance review to develop plans for improvement ● Assesses time management skills and how they impact 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 <i>Occasionally seeks feedback and performance data and responds with adaptability and self-reflection</i> <i>Creates a learning plan in response to feedback</i>	<ul style="list-style-type: none"> ● Engages in discussion with faculty members about feedback and formulates a practice improvement plan ● Completes a comprehensive literature review prior to a complex patient encounter in an unfamiliar diagnosis
Level 4 <i>Systematically seeks feedback and performance data and responds with adaptability and self-reflection</i> <i>Uses performance data to assess the learning plan and modifies it when necessary</i>	<ul style="list-style-type: none"> ● Proactively seeks feedback after surgical procedures from faculty and staff members and incorporates into future procedures ● After identifying challenge in developing rapport with young children, creates a plan for improving communication strategies and additional experiences in pediatric dermatology ● Reviews personal performance metrics from the electronic medical record to track timeliness of completion of documentation and rectify deficiencies
Level 5 <i>Models adaptability and self-reflection and coaches others to seek feedback and performance data</i> <i>Mentors others on the design and implementation of learning plans</i>	<ul style="list-style-type: none"> ● Leads 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	<ul style="list-style-type: none"> ● Chart audit ● Direct observation

	<ul style="list-style-type: none"> ● EHR reports ● Patient feedback ● Review of learning plan ● Multisource feedback evaluations
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● 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. doi:10.1016/j.acap.2013.11.018. ● Hojat M, Veloski JJ, Gonnella JS. Measurement and correlates of physicians' lifelong learning. <i>Acad Med.</i> 2009;84(8):1066-74. doi:10.1097/ACM.0b013e3181acf25f. ● 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):1558-63. doi: 10.1097/ACM.0b013e3182a352e6.

Practice-Based Learning and Improvement 3: Scholarly Activity	
Overall Intent: To identify areas worthy of investigation, design and implement a plan for investigation, and disseminate the findings of scholarly work	
Milestones	Examples
Level 1 <i>Identifies areas worthy of scholarly investigation, with supervision</i>	<ul style="list-style-type: none"> • After reviewing the literature, identifies the gaps in knowledge for future investigation
Level 2 <i>Designs a scholarly activity with a mentor(s)</i>	<ul style="list-style-type: none"> • With assistance of a mentor, outlines a hypothesis and plan to investigate gaps in knowledge
Level 3 <i>Engages in scholarly work, incorporates feedback, and participates in critical appraisal and analysis of project data</i>	<ul style="list-style-type: none"> • In collaboration with a statistician or supervisor, reviews the data collected during the study, writes an abstract, and presents as a poster at a local educational forum
Level 4 <i>Produces scholarly work suitable for dissemination as an abstract or presentation</i>	<ul style="list-style-type: none"> • After making a significant contribution to an educational research project, submits an abstract to a nationally recognized educational meeting
Level 5 <i>Disseminates independent scholarly work that generates new medical knowledge, educational programs, or process improvement</i>	<ul style="list-style-type: none"> • Publishes research in peer-reviewed journal • Provides expert advice regarding educational research
Assessment Models or Tools	<ul style="list-style-type: none"> • Direct observation
Curriculum Mapping	<ul style="list-style-type: none"> •
Notes or Resources	<ul style="list-style-type: none"> • National Cancer Institute. Clinical Trials Information for Patients and Caregivers. https://www.cancer.gov/about-cancer/treatment/clinical-trials. Accessed 2019. • Schünemann HJ, Wiercioch W, Brozek J, et al. GRADE Evidence to Decision (EtD) frameworks for adoption, adaptation, and de novo development of trustworthy recommendations: GRADE-ADOLOPMENT. <i>Journal of Clinical Epidemiology</i>. 2017;81:101-110. doi:10.1016/j.jclinepi.2016.09.009. • Blome C, Sondermann H, Augustin M. Accepted standards on how to give a Medical Research Presentation: a systematic review of expert opinion papers. <i>GMS Journal for Medical Education</i>. 2017;34(1):Doc11. doi:10.3205/zma001088.

Professionalism 1: Professional Behavior	
Overall Intent: To identify triggers for lapses in professional behavior in self and others; and role models and coaches professionalism	
Milestones	Examples
<p>Level 1 <i>Identifies and describes potential triggers for professionalism lapses</i></p> <p><i>Describes when and how to report professionalism lapses</i></p>	<ul style="list-style-type: none"> ● 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 ● Understands that a reporting system (institutional or otherwise) exists to report professionalism lapses
<p>Level 2 <i>Demonstrates insight into professional behavior in routine situations</i></p> <p><i>Takes responsibility for one's own professionalism lapses</i></p>	<ul style="list-style-type: none"> ● Informs faculty members when they will be arriving late to clinic due to delay from inpatient consultation ● Accepts responsibility for being late to teaching conference, without making excuses or blaming others
<p>Level 3 <i>Demonstrates professional behavior in complex or stressful situations</i></p> <p><i>Identifies individual and institutional barriers to professionalism</i></p>	<ul style="list-style-type: none"> ● Appropriately responds to a distraught family member, following an adverse medication reaction ● Requests ethics committee involvement regarding decisions to withhold care in terminal hospitalized junctional epidermolysis bullosa pediatric patient
<p>Level 4 <i>Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in oneself and others</i></p>	<ul style="list-style-type: none"> ● Recognizes own frustration but models composure and humility when a patient challenges the fellow's opinion and shares the experience with peers ● Serves as a role model for other learners in self-awareness and can discuss disappointments or stress in patient care situations
<p>Level 5 <i>Coaches others when their behavior fails to meet professional expectations</i></p>	<ul style="list-style-type: none"> ● Identifies a more junior resident who fails to complete documentation or recognizes gaps in communicating with interdisciplinary teams in a timely manner, and helps to create a performance improvement plan
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Direct observation ● Global evaluation ● Multisource feedback ● Oral or written self-reflection ● Simulation
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● Check with Institutional, GME, and departmental policies and procedures ● American Medical Association. Ethics. https://www.ama-assn.org/delivering-care/ama-code-medical-ethics. Accessed 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%20JE%20CA_modified%20092413%20v3.pdf. Accessed 2019.

Professionalism 2: Ethical Principles	
Overall Intent: To recognize and address ethical issues and use appropriate resources for managing ethical dilemmas	
Milestones	Examples
Level 1 <i>Demonstrates knowledge of medical ethical principles</i>	<ul style="list-style-type: none"> • Articulates how the principle of “do no harm” applies to a patient who does not need a systemic medication to manage their limited plaque psoriasis
Level 2 <i>Analyzes straightforward situations using ethical principles</i>	<ul style="list-style-type: none"> • Offers alternative therapies to invasive treatments for warts in a child who is combative and refusing treatment despite parent’s desire to treat with cryotherapy • Understands the factors which may result in patients being late or missing their appointments
Level 3 <i>Analyzes complex situations using ethical principles</i>	<ul style="list-style-type: none"> • As an advocate for the patient, offers education and treatment plan options for family members with steroid phobia who refuse to treat atopic dermatitis in their school-aged child • Uses colleagues and faculty members to get advice on complex family dynamics that may be affecting patient care
Level 4 <i>Recognizes and uses appropriate resources for managing and resolving ethical dilemmas as needed</i>	<ul style="list-style-type: none"> • Recognizes and uses ethics consults, literature, risk-management, and/or legal counsel to resolve ethical dilemmas
Level 5 <i>Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution</i> <i>Serves as resource for colleagues who face ethical dilemmas</i>	<ul style="list-style-type: none"> • Engages stakeholders to address ethical considerations around lengthy wait times and triage for timely urgent dermatologic care at a systems level • Engages in discussions regarding an unvaccinated 12-year-old patient with psoriasis who needs a biologic and parents decline vaccinations • Identifies and discusses real-life examples of ethical considerations of patient treatment when patient/family is unable or unwilling to take standard precautions
Assessment Models or Tools	<ul style="list-style-type: none"> • Direct observation • Global evaluation • Multisource feedback • Oral or written self-reflection • Simulation
Curriculum Mapping	<ul style="list-style-type: none"> •
Notes or Resources	<ul style="list-style-type: none"> • American Medical Association. Ethics. https://www.ama-assn.org/delivering-care/ama-code-medical-ethics. Accessed 2019. • APD. Journal Entry Competency Assessment. https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/ProCom%20JE_CA_modified%20092413%20v3.pdf. Accessed 2019.

- 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.
- Levinson W, Ginsburg S, Hafferty FW, Lucey CR. *Understanding Medical Professionalism*. 1st ed. New York, NY: McGraw-Hill Education; 2014.

Professionalism 3: 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
<p>Level 1 <i>Responds promptly to requests or reminders to complete tasks</i></p> <p><i>Takes responsibility for failure to complete tasks and responsibilities</i></p>	<ul style="list-style-type: none"> ● Responds promptly to reminders from program administrator to complete administrative tasks ● Demonstrates timely attendance at conferences and clinic ● Acknowledges lapse and completes mid-year and annual evaluations when directed
<p>Level 2 <i>Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations</i></p> <p><i>Recognizes situations that may impact one’s own ability to complete tasks and responsibilities in a timely manner</i></p>	<ul style="list-style-type: none"> ● Completes administrative tasks, safety modules, procedure log, and licensing requirements by specified due date ● Completes routine visit notes in a timely fashion ● Before going on leave, completes tasks in anticipation of lack of computer access while traveling
<p>Level 3 <i>Performs tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations</i></p> <p><i>Proactively ensures the needs of patients are met during and after a visit</i></p>	<ul style="list-style-type: none"> ● Notifies attending of multiple competing demands while on call, appropriately triages tasks, and asks for assistance from other residents or faculty members as needed ● Communicates with outside providers (e.g., via sending summary of visit) to assist in making the primary care physician aware of findings and continuity of care ● Directly communicates (e.g., phone call) with primary care provider to coordinate and assure initiation and monitoring of oral propranolol ● In preparation for being out of the office, notifies a patient with a pending key biopsy result that the report is not yet available and arranges for a colleague to discuss the results with the patient during absence
<p>Level 4 <i>Mitigates situations that may impact the ability of other members of the health care team to complete tasks and responsibilities in a timely manner</i></p> <p><i>Identifies strategies to enhance accountability of team members involved in patient care</i></p>	<ul style="list-style-type: none"> ● Communicates with wound care team in a patient with blistering disorder ● Communicates with other health care providers regarding a changed/revised diagnosis that impacts overall health and needs ongoing care ● Communicates with the primary care physician or specialist (e.g., psychiatrist) that the patient is having severe depression and may need semi-urgent assistance ● Takes responsibility for inadvertently omitting key patient information during sign-out and proposes a plan for standardized hand-offs with the interprofessional team ● Recognizes an issue with incomplete notes and returning phones calls and guides more junior residents to improvement

<p>Level 5 <i>Takes ownership of system outcomes and revises systems to enhance accountability</i></p> <p><i>Implements strategies to enhance accountability of team members involved in patient care</i></p>	<ul style="list-style-type: none"> ● Recognizes and issue referrals (e.g., phototherapy, radiology), and sets up a meeting with relevant leaders to find solutions to the problem ● Works with the call center to ensure prescription information, appointment times, and appointment locations are accurately given to patients ● Helps trains medical assistants to assist in iPledge enrollment and follow-ups
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Compliance with deadlines and timelines ● Direct observation ● Global evaluations ● Multisource feedback ● Self-evaluations and reflective tools ● Simulation
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● AAD. Code of Medical Ethics https://server.aad.org/Forms/Policies/Uploads/AR/AR%20Code%20of%20Medical%20Ethics%20for%20Dermatologists.pdf. Accessed 2019. ● APD. Journal Entry Competency Assessment. https://www.dermatologyprofessors.org/files/2013%20Annual%20Meeting/ProCom%20JECA_modified%20092413%20v3.pdf. Accessed 2019. ● Code of conduct from fellow/resident institutional manual ● Expectations of fellowship program regarding accountability and professionalism

Professionalism 4: Self-Awareness and Help-Seeking Behaviors Overall Intent: To identify, use, manage, improve, and seek help for personal and professional well-being for self and others	
Milestones	Examples
Level 1 <i>Recognizes the status of personal and professional well-being, when prompted</i> <i>Recognizes personal and professional limits, when prompted</i>	<ul style="list-style-type: none"> ● Acknowledges own response to patient’s death ● Receives feedback on situational awareness after a missed emotional cue during a shave biopsy with a patient experiencing anxiety
Level 2 <i>Independently recognizes the status of personal and professional well-being</i> <i>Independently recognizes personal and professional limits and seeks help when appropriate</i>	<ul style="list-style-type: none"> ● Independently identifies and communicates impact of a personal family tragedy on ability to provide patient care ● Independently identifies when suffering from burnout and seems more callous with patients; seeks help to address the issue
Level 3 <i>Proposes a plan to optimize personal and professional well-being, with assistance</i> <i>Proposes a plan to remediate or improve personal and professional wellbeing and set limits, with assistance</i>	<ul style="list-style-type: none"> ● Acknowledges early stages of depression and works with program director for time off ● Works with the program director to balance patient care responsibilities, academic requirements, and personal well-being ● Works with program director to establish work hours after return to work from a personal health challenge
Level 4 <i>Independently develops a plan to optimize personal and professional well-being</i> <i>Independently develops a plan to remediate or improve personal and professional well-being and set limits</i>	<ul style="list-style-type: none"> ● Independently identifies ways to manage personal stress ● Attends a time management seminar to better optimize patient care responsibilities, academic requirements, and personal well being
Level 5 <i>Coaches others to optimize personal and professional well-being and set limits</i>	<ul style="list-style-type: none"> ● Assists in organizational efforts to address and advise regarding multiple aspects of resident/fellow well-being
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation ● Group interview or discussions for team activities ● Individual interview ● Institutional online training modules ● Self-assessment and personal learning plan
Curriculum Mapping	<ul style="list-style-type: none"> ●

Notes or Resources	<ul style="list-style-type: none">● 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.● Local resources, including Employee Assistance Programs and GME Well-Being Initiatives● 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. Accessed 2019.
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Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication	
Overall Intent: To deliberately use language and behaviors to form constructive relationships with patients, to identify communication barriers including self-reflection on personal biases, and minimize them in the doctor-patient relationships; organize and lead communication around shared decision making	
Milestones	Examples
<p>Level 1 <i>Uses language and nonverbal behavior to demonstrate respect and establish rapport</i></p> <p><i>Identifies common barriers (e.g., language) to effective communication</i></p>	<ul style="list-style-type: none"> ● Introduces self, faculty member, and other members of the team ● Identifies patient and others in the room, and engages all parties in health care discussion ● Requests trained interpreter with non-English-speaking patients and families
<p>Level 2 <i>Establishes a therapeutic relationship in straightforward encounters using active listening and clear language</i></p> <p><i>Identifies complex barriers (e.g., health literacy) to effective communication</i></p>	<ul style="list-style-type: none"> ● 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
<p>Level 3 <i>Establishes a therapeutic relationship in challenging patient encounters, with guidance</i></p> <p><i>When prompted, reflects on personal biases while attempting to minimize communication barriers</i></p>	<ul style="list-style-type: none"> ● Acknowledges patient and family’s request for systemic therapy for mild disease (e.g., acne, psoriasis, atopic dermatitis) and explains the rationale for stepwise therapy while maintaining patient rapport ● In a discussion with the faculty member, acknowledges discomfort in caring for a child needing systemic therapy whose parents refuse routine immunizations
<p>Level 4 <i>Independently establishes a therapeutic relationship in challenging patient encounters</i></p> <p><i>Independently recognizes personal biases while attempting to proactively minimize communication barriers</i></p>	<ul style="list-style-type: none"> ● Acknowledges parental concern regarding use of topical corticosteroids and addresses those concerns ● Acknowledges personal frustration when using an interpreter during a patient encounter and allows for a longer visit time to facilitate communication ● Reflects on implicit bias after a challenging patient encounter and seeks local institutional resources for personal and professional growth
<p>Level 5 <i>Mentors others in situational awareness and critical self-reflection to consistently develop positive therapeutic relationships</i></p> <p><i>Independently uses shared decision-making to make a personalized care plan when there is a high degree of uncertainty</i></p>	<ul style="list-style-type: none"> ● Articulates journey of self-reflection and directs others to resources to help in their development of critical self-reflection and its impact on relationships with patients and colleagues ● Leads a discussion with patient and family members regarding treatment strategies for a child with a rare skin disorder that lacks a defined standard of care

Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation ● Self-assessment including self-reflection exercises ● Multisource feedback
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● AAD. Simulated Patient Encounters. https://store.aad.org/products/12923. Accessed 2019. ● Hong J, Nguyen TV, Prose NS. Compassionate care: enhancing physician-patient communication and education in dermatology: Part II: Patient education. <i>J Am Acad Dermatol</i>. 2013;68(3):364.e1-10. doi:10.1016/j.jaad.2012.10.060. ● Laidlaw A, Hart J. Communication skills: an essential component of medical curricula. Part I: Assessment of clinical communication: AMEE Guide No. 51. <i>Med Teach</i>. 2011;33(1):6-8. doi: 10.3109/0142159X.2011.531170. ● Makoul G. Essential elements of communication in medical encounters: the Kalamazoo consensus statement. <i>Acad Med</i>. 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. <i>Patient Educ Couns</i>. 2001;45(1):23-34. ● Nguyen TV, Hong J, Prose NS. Compassionate care: enhancing physician-patient communication and education in dermatology: Part I: Patient-centered communication. <i>J Am Acad Dermatol</i>. 2013;68(3):353.e1-8. doi:10.1016/j.jaad.2012.10.059. ● Symons AB, Swanson A, McGuigan D, Orrange S, Akl EA. A tool for self-assessment of communication skills and professionalism in residents. <i>BMC Med Educ</i>. 2009;9:1. doi:10.1186/1472-6920-9-1.

Interpersonal and Communication Skills 2: Patient and Family Education and Counseling Overall Intent: To organize and lead communication around shared decision making	
Milestones	Examples
<p>Level 1 <i>Recognizes the link between patient outcomes and patient and patient family education</i></p> <p><i>Identifies the importance of engaging in shared decision-making</i></p> <p><i>Identifies the process for achieving informed consent based on patient age and developmental level</i></p>	<ul style="list-style-type: none"> ● Acknowledges the importance of including both the parent and the child when discussing treatment for psoriasis ● Identifies institutional requirements for providing informed consent for skin biopsy in a 12-year-old child
<p>Level 2 <i>Describes methods for effective patient family and family education</i></p> <p><i>Identifies elements of shared decision-making</i></p> <p><i>Communicates procedural expectations to patients' families with appropriate pre-procedural counseling, guided by the age and developmental stage of the patient</i></p>	<ul style="list-style-type: none"> ● Uses methods like teach-back and sitting down when speaking with patients to improve patient communication and education ● Works with an adolescent and parents to identify barriers and ability to adhere to topical treatment for atopic dermatitis and asks family members for their preferences ● Discusses treatment plan for a four-year-old patient with family who requests cryotherapy for multiple warts; talks with parents and recommends alternative approaches as this will include multiple painful treatments; jointly decide on alternative treatment ● Counsels patient's family on what to expect after pulsed dye laser treatment ● Acknowledges that conscious sedation or general anesthesia may be needed to perform an excision on an eight-year-old patient with anxiety and cognitive delays
<p>Level 3 <i>Educates patients and their families effectively in straightforward situations, including eliciting understanding of information provided</i></p> <p><i>Uses shared decision-making to make a personalized care plan, with guidance</i></p> <p>Counsels patients and their families through the decision-making process for straightforward</p>	<ul style="list-style-type: none"> ● Communicates biopsy result of an atypical nevus with positive margins to patient's family members, including discussion of when re-excision is appropriate ● Elicits understanding of family members regarding information provided (e.g., teach-back) and uses shared decision making to determine plan of care ● Counsels family on the pros and cons of topical and oral beta blockers for infantile hemangioma, with guidance ● Counsels 12-year-old patient and her family on the pros and cons of treatment with pulsed dye laser for a facial port wine stain with or without general anesthesia

<p>procedures, guided by the age and developmental stage of the patient</p>	
<p>Level 4 <i>Educates patients and their families effectively in complex situations</i></p> <p><i>Independently uses shared decision-making to make a personalized care plan</i></p> <p>Counsels patients and their families through the decision-making process for complex procedures, guided by the age and developmental stage of the patient</p>	<ul style="list-style-type: none"> ● Addresses input from a parent opposed to birth control to plan therapy for a teenager interested in isotretinoin for nodulocystic acne ● Discusses with patient and family the risks and benefits of Co2 laser treatment of refractory symptomatic periungual warts in a 13-year-old patient with developmental delay ● Uses shared decision making, involving the patient and family, when considering systemic medications for severe atopic dermatitis in patients of various ages ● Reviews with the patient and family the risks and benefits of staged excision of an intermediate-sized congenital nevus, including a discussion of risks, benefits, and alternatives to surgery based on age
<p>Level 5 <i>Educates patients and their families in self-advocacy and community outreach</i></p> <p>Counsels patients and their families through the decision-making process for high-risk procedures, guided by the age and developmental stage of the patient, as well as the long-term prognosis of the condition</p>	<ul style="list-style-type: none"> ● Works with patients/care givers on self-advocacy for use of off-label treatments or when they are denied coverage by insurance ● Helps families of children with visible differences develop strategies for coping and directs them to resources for education and support ● Leads a discussion with patient and family members regarding treatment strategies for a child with an intermediate-grade tumor (e.g., atypical Spitz) without clear guidelines for standard of care ● Navigates accepted gender terminology and iPledge registration in a non-binary child who needs and desires isotretinoin therapy for severe nodulocystic acne
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Direct observation ● Multisource feedback ● Self-assessment including self-reflection exercises
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● AAD. Simulated Patient Encounters. https://store.aad.org/products/12923. Accessed 2019. ● Hong J, Nguyen TV, Prose NS. Compassionate care: enhancing physician-patient communication and education in dermatology: Part II: Patient education. <i>J Am Acad Dermatol.</i> 2013;68(3):364.e1-10. doi:10.1016/j.jaad.2012.10.060. ● Laidlaw A, Hart J. Communication skills: an essential component of medical curricula. Part I: Assessment of clinical communication: AMEE Guide No. 51. <i>Med Teach.</i> 2011;33(1):6-8. doi: 10.3109/0142159X.2011.531170. ● Makoul G. Essential elements of communication in medical encounters: the Kalamazoo consensus statement. <i>Acad Med.</i> 2001;76(4):390-393.

https://journals.lww.com/academicmedicine/Fulltext/2001/04000/Essential_Elements_of_Communication_in_Medical.21.aspx#pdf-link.

- 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.
- 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.

Interpersonal and Communication Skills 3: Interprofessional and Team Communication Overall Intent: To effectively communicate with the health care team, including consultants, in both straightforward and complex situations	
Milestones	Examples
<p>Level 1 <i>Respectfully requests and responds to a consultation request</i></p> <p><i>Uses language that values all members of the health care team</i></p>	<ul style="list-style-type: none"> ● Requests a rheumatology consultation for a patient with lupus ● Receives consult request for a patient with a potential drug eruption and asks clarifying questions politely and respectfully ● Acknowledges the contribution of each member of support staff in clinic
<p>Level 2 <i>Clearly and concisely requests and responds to a consultation request</i></p> <p><i>Solicits feedback on performance as a member of the health care team</i></p>	<ul style="list-style-type: none"> ● 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 ● Performs consult in a timely manner, listens carefully to requesting provider, confirms clinical question, and solicits feedback on the clarity of the recommendations provided
<p>Level 3 <i>Checks understanding of recommendations when providing consultations</i></p> <p><i>Communicates concerns and provides feedback to peers and learners</i></p>	<ul style="list-style-type: none"> ● When communicating recommendations, clarifies any recommendations that are unclear to the consulting team ● Discusses opportunities for improvement on rotating medical student's or resident's presentation of a patient and provides feedback to a resident on patient care management
<p>Level 4 <i>Coordinates recommendations from different members of the health care team to optimize patient care</i></p> <p><i>Communicates feedback and constructive criticism to superiors</i></p>	<ul style="list-style-type: none"> ● Participates in an interdisciplinary clinic or patient care conference and helps to develop and initiate a management plan for a patient with a complex disorder (e.g., vascular anomalies, patient with DRESS, patient with Epstein-Barr virus) ● After an attending recommends conventional immunosuppression for an inflammatory skin disease, fellow articulates concerns and solicits additional discussion about using a broader immunosuppressant vs a targeted therapy ● After attending recommends intravenous immunoglobulin for toxic epidermal necrolysis, the fellow brings up the newest research that suggests something else ● After observing a patient encounter the fellow provides feedback about the attending committing a microaggression and engages in discussion about the event
<p>Level 5 <i>Role models flexible communication strategies that value input from all health care team members, resolving conflicts when needed</i></p> <p><i>Facilitates regular health care team-based feedback in complex situations</i></p>	<ul style="list-style-type: none"> ● When faced with discordant treatment recommendations for toxic epidermal necrolysis from multiple consultation services, coordinates and helps lead a multidisciplinary meeting to clarify and align clinical decision making

<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Direct observation ● Global assessment ● Medical record (chart) audit ● Multi-source feedback ● Simulation ● Self-reflection
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● Afifi L, Shinkai K. Communication strategies for a successful inpatient dermatology consultative service: a narrative review. <i>Semin Cutan Med Surg.</i> 2017;36(1):23-27. doi:10.12788/j.sder.2017.002. ● Braddock CH, Edwards KA, Hasenberg NM, Laidley TL, Levinson W. Informed decision making in outpatient practice: time to get back to basics. <i>JAMA.</i> 1999;282(24):2313-2320. doi:10.1001/jama.282.24.2313. ● Dehon E, Simpson K, Fowler D, Jones A. Development of the faculty 360. <i>MedEdPORTAL.</i> 2015;11:10174. doi:10.15766/mep_2374-8265.10174. ● Fay D, Mazzone M, Douglas L, Ambuel B. A validated, behavior-based evaluation instrument for family medicine residents. <i>MedEdPORTAL.</i> 2007;3:622. doi:10.15766/mep_2374-8265.622. ● François J. Tool to assess the quality of consultation and referral request letters in family medicine. <i>Can Fam Physician.</i> 2011;57(5):574–575. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093595/. ● Roth CG, Eldin KW, Padmanabhan V, Freidman EM. Twelve tips for the introduction of emotional intelligence in medical education. <i>Med Teach.</i> 2019;41(7):1-4. doi:10.1080/0142159X.2018.1481499. ● Green M, Parrott T, Cook G., Improving your communication skills. <i>BMJ.</i> 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. <i>Med Teach.</i> 2013;35(5):395-403. doi:10.3109/0142159X.2013.769677. ● Lane JL, Gottlieb RP. Structured clinical observations: a method to teach clinical skills with limited time and financial resources. <i>Pediatrics.</i> 2000;105(4):973-7. https://pdfs.semanticscholar.org/8a78/600986dc5cfcab89146df67fe81aebeaecc.pdf.

Interpersonal and Communication Skills 4: Communication within Health Care Systems Overall Intent: To effectively communicate using a variety of methods	
Milestones	Examples
<p>Level 1 <i>Accurately records information in the electronic health record (EHR) in a timely manner</i></p> <p><i>Safeguards protected health information by using appropriate communication channels</i></p>	<ul style="list-style-type: none"> ● Documents in the medical record accurately, but documentation may include extraneous information ● Shreds any documentation that includes patient identifiers after clinic ● In public areas, defers conversation with peer about a recent mutual patient in clinic ● Uses appropriate and secure methods of communications that align with patient privacy policies
<p>Level 2 <i>Demonstrates organized diagnostic and therapeutic reasoning through notes in the EHR</i></p> <p><i>Uses documentation tools (e.g., EHR templates, smart phrases) accurately and appropriately, per institutional policy</i></p>	<ul style="list-style-type: none"> ● Outlines clinical reasoning that supports the treatment plan in an organized and accurate document ● Uses documentation templates appropriately for full-body skin exams ● Ensures accuracy of documentation when using preformed templates (e.g., dot phrases, smart phrases) ● Writes a note for a patient on isotretinoin, if copying forward last month’s visit, updates cumulative dose, current side effects, exam, and plan and discards information that is no longer relevant
<p>Level 3 <i>Concisely reports diagnostic and therapeutic reasoning in the EHR</i></p> <p><i>Appropriately selects and uses direct (e.g., telephone, in-person) and indirect (e.g., progress notes, text, inbox messages) forms of communication based on context</i></p>	<ul style="list-style-type: none"> ● Concisely documents complex clinical thinking without extraneous information, but may not contain documentation of anticipatory guidance ● Calls patient (versus an electronic message) in a timely manner about skin biopsy result of discoid lupus and documents telephone encounter
<p>Level 4 <i>Communicates clearly, concisely, and in an organized written form, including providing anticipatory guidance</i></p> <p><i>Produces written or verbal communication (e.g., patient notes, email) that serves as an example for others to follow</i></p>	<ul style="list-style-type: none"> ● 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 may be used to teach others ● Creates well-informed diagnostic and therapeutic reasoning that is understandable by the patient’s family
<p>Level 5 <i>Coaches others to improve their written communication</i></p>	<ul style="list-style-type: none"> ● Leads a work group established by the department to improve the quality of documentation in clinic notes

<p><i>Guides departmental or institutional communication around policies and procedures</i></p>	<ul style="list-style-type: none"> ● Leads a quality and patient safety committee to communicate biopsy results in a timely manner
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Direct observation ● Medical record (chart) audit ● Multisource feedback
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● AAD. Simulated Patient Encounters. https://store.aad.org/products/12923. Accessed 2019. 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. doi:10.1080/10401334.2017.1303385. ● 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. ● Starmer AJ, et al. I-pass, a mnemonic to standardize verbal handoffs. <i>Pediatrics.</i> 2012;129(2):201-204. doi:10.1542/peds.2011-2966.

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/>